UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2

DATE:

SUBJECT: H.M. Quackenbush Site Final Report

FROM: Diane Salkie, Environmental Scientist
DESA/Hazardous Waste Support Branch

TO: Andrew Confortini, On-Scene Coordinator
ERRD/Removal Action Branch

Attached please find the February 2006, surface and sub-surface soil and ground water sampling report for the H.M. Quackenbush site in Herkimer, Herkimer County, New York. If you have any questions, please contact me at (732) 321-4423.

Attachment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
2890 WOODBRIDGE AVENUE
EDISON, NEW JERSEY 08837-3679

October 23, 2006

RECEIVED
OCT 26 2006
ENVIRONMENTAL QUALITY
REGION 6

Mark Ainsworth, Mayor
120 Green Street
Herkimer, NY 13350

Re: H.M. Quackenbush, Inc. Property
220 North Prospect Street, Herkimer

Dear Mayor Ainsworth:

The United States Environmental Protection Agency (EPA) has completed its evaluation of the assessment sampling conducted at the above-referenced Site. A copy of the complete analytical results package has been included for your records. Based upon the assessment results, no further response actions are anticipated at this time.

In summary, the soil samples collected from beneath the building floor throughout the facility identified the presence of various heavy metals, including arsenic, lead, chromium, cadmium and nickel. However, the concentrations are below established guidelines which would cause EPA to take corrective action.

In addition, EPA collected two (2) representative samples of the "oil stained" wooden flooring within the HMQ office/production building to determine whether polychlorinated biphenyl's (PCBs) were used and discharged onto the floors. Each sample consisted of obtaining drill cuttings from five (5) individual sampling points on each of the two floors levels. The analytical results obtained did not identify the presence of PCB-containing oil. As a precautionary measure, EPA directed the removal of all standing oil located adjacent to machines in the second floor production area. However, the machines remain oily and may contain internal components or areas which still contain residual lubricating oils. Should these machines be removed, care should be taken to collect, containerize and properly dispose of these oils.

As part of the assessment, EPA collected groundwater samples from the on-site monitoring wells. The wells were installed within the southwestern portion of the property by HMQ during the underground storage tank removal program. During the monitoring well sampling event, two (2) wells (MW-1 and MW-3), where observed to contain free-standing oil product and thus unable to be sampled.

The remaining three (3) wells were sampled and submitted for analyses. The analytical results obtained identified slightly elevated concentrations of several metals at the MW-5 location. MW-5 is located within the roadway pavement on North Prospect Street.

The results obtained during this investigation have been provided to the appropriate New York State Department of Environmental Conservation representative for this Site. Should you have any questions or require additional information regarding this assessment, please feel free to contact me at your earliest convenience.

Yours truly,

Andrew L. Confortini, USEPA
On-Scene Coordinator
(732) 906-6827

cc: Mr. Peter Ouderkirk, NYSDEC
Mr. Michael Stevens, Esq., Kernan & Kernan – summary pages only



SUPERFUND CONTRACT SUPPORT TEAM

SAMPLING REPORT

for the

H.M. QUACKENBUSH SITE

VILLAGE OF HERKIMER, NEW YORK

February 21 – 24, 2006

Participating Personnel:	United States Environmental Protection Agency Diane Salkie, Environmental Scientist Joseph Hudek, Superfund Contract Support Team Leader Pat Sheridan, Project Quality Assurance Officer
Report Prepared by:	_____ Diane Salkie, Environmental Scientist
Date Prepared:	August 02, 2006
Approved for the Director by:	_____ Robert Runyon, Chief, Hazardous Waste Support Branch



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Diane Salkie, Environmental Scientist

Date Prepared: August 02, 2006

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Robert Runyon, Chief, Hazardous Waste Support Branch

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APPENDIX A:	Site Maps
APPENDIX B:	Quality Assurance Project Plan
APPENDIX C:	Contract Laboratory Program Organic Data Package
APPENDIX D:	Contract Laboratory Program Cyanide Data Package
APPENDIX E:	U.S. EPA Mobile Analytical Laboratory Branch Inorganic Data Package
APPENDIX F:	Soil and Well Data Sheets
APPENDIX G:	N.Y.D.E.C. (New York Department of Environmental Conservation). Division Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. January 1994. *Tables 1 - 4 Recommended Soil Cleanup Objectives.*
APPENDIX H:	U.S. EPA Superfund. *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Exhibit A-2 Generic SSLs for Commercial/Industrial Scenario: Outdoor Worker Receptor.* Peer Review Draft. March 2001.
APPENDIX I:	U.S. Code of Federal Regulations (CFR). Title 40: Protection of Environment. Part 141: National Primary Drinking Water Regulations. Subpart G: National Revised Primary Drinking Water Regulations: Maximum Contaminant Levels. Section 61: *Maximum Contaminant Levels for Organic Contaminants.* 7-1-97 Edition
APPENDIX J:	New York State Department of Environmental Conservation: 6 NYCRR Part 703 *Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations*
APPENDIX K:	Quackenbush Site Trip Report

1.0 BACKGROUND

The H.M. Quackenbush (HMQ) site is located at 220 North Prospect Street in the Village of Herkimer, Herkimer County, New York. The site encompasses approximately one and half acres within a residential/commercial area. Residential properties are located to the west of the site, a bank and hotel are to the south and a New York State Department of Environmental Conservation field office is located to the east. The north is bordered by a municipal parking lot. The Village Library adjoins a portion of the northern building wall. The facility has been owned and operated by HMQ since 1874 with its sole shareholder as the former Chief Executive Officer, Mr. Frederick Hager. The 56,000 square feet facility consists of three connected building. The first building was constructed in 1874 and the last is from 1988.

HMQ was a manufacturing and plating operation which produced products such as nutcrackers, automotive parts, nails and gun parts. The manufacturing process required the extensive use of concentrated acids, bases and cutting oils. Each on-site building contains a chemical storage area used to house the raw materials used in the plating bath solutions or spent waste solutions.

On March 16, 2005, HMQ and three affiliated companies filed voluntary petitions under Chapter 11 of the Bankruptcy Code in the United States Bankruptcy Court for the Northern District of New York. HMQ continued to operate as a Debtor-in-Possession until its primary creditors sought an auction of the assets. On July 22, 2005, the Bankruptcy Court issued an order approving the sale of HMQ's assets, including various equipment and other property located at the Site. Shortly thereafter, all employees at the facility were fired by Quackenbush. On the day the company ceased operations, the facility was abandoned after the completion of a production line run. No steps were taken to remove, contain or segregate the hazardous materials that were present and all operations were left in place.

On August 4, 2005, personnel from the NYSDEC Division of Solid and Hazardous Materials (DSHM) conducted an inspection of the premises following a local media report indicating that the company had shut down as a result of the bankruptcy sale. The inspectors discovered tanks and drums containing various amounts of electroplating wastes, open-topped plating bath solutions, sodium cyanide, laboratory chemicals, hundreds of drums containing unknown materials and noted that portions of the building appeared to have a fog-like appearance. The NYSDEC also discovered process materials, unlabeled drums in various stages of decay and spilled products on the floor. Other rooms of the facility revealed additional decaying drums staged in an unsafe manner and drums that had leaked their contents onto the facility floors.

On August 8, 2005, DSHM inspectors conducted a follow-up inspection accompanied by personnel from NYSDEC's Division of Environmental Remediation, the state's Superfund program. The NYSDEC notified the EPA and requested assistance on August 15, 2005. EPA personnel responded to this request on August 17, 2005 by dispatching representatives from the Emergency Remedial and Response Division (ERRD). In the subsequent months, EPA removed all hazardous materials with the exception of drums

which are presently awaiting disposal. There are presently five monitoring wells in the vicinity of the site that were installed because of a leaking storage tank.

The Division of Environmental Science and Assessment (DESA), Hazardous Waste Support Branch (HWSB), Superfund Contract Support Team (SCST) has been requested by the EPA Emergency Remedial and Response Division (ERRD) to conduct a soil and ground water sampling event at the H.M. Quackenbush, Inc. Site. The purpose of the soil sampling is to delineate the levels of contaminants underneath the buildings and in the perimeter of the buildings to determine if any metal or base neutral extractable compounds have leaked from past operations. The purpose of the ground water investigation is to determine if the contaminants have reached the ground water in the vicinity of the site.

2.0 SAMPLING PROCEDURES

The sampling procedures were in accordance with the guidelines set forth in the Quality Assurance Project Plan (QAPP) which is located in Appendix B.

3.0 DESCRIPTION OF EVENTS

On February 21, 2006 three members from the U.S. EPA, Division of Environmental Science and Assessment (DESA), Superfund Contract Support Team (SCST) met with the U. S. EPA On-Scene Coordinator (OSC) of the project. They conducted a site reconnaissance and delineated approximately where all samples would be collected from. A contractor, hired by the OSC, collected all of the soil samples via a Geoprobe™ direct push method from 0 – 4 feet, 4 – 8 feet and 8 – 12 feet deep. The sample denotation will be B for borehole, a corresponding number and A for surface, B for the next sub-surface depth and C for the deepest location. All of the samples were collected for target analyte list (TAL) – total metals including cyanide analysis and a portion were analyzed for target compound list (TCL) – base, neutral acid extractable compounds (BNA) and volatile organic compounds (VOCs). The contractor began in the Plating Department basement which can be seen on Figure 1 in Appendix A. The following table describes the sample locations, depths and time of sample collection for samples collected on February 21, 2006. For a more detailed description of the samples, refer to the soil data sheets in Appendix F.

Sample Number	Sample Depth (ft)	Recovery (ft)	Time	Analysis	Location
B-1A	1 – 3	2	1415	Total metals, CN	West side of Plating Basement
B-1B	5 – 7	2	1432	Total metals, CN	
B-1C	10 – 11	1	1442	Total metals, CN	
B-2A	3 – 4	1	1450	Total metals, CN	North/middle of the Plating Basement
B-2B	6 – 7	2	1457	Total metals, CN	
B-3A	3 – 4	< 1	1502	Total metals, CN	NE side of Plating Basement, east end of north trench
B-3B	6.5 – 8	1.5	1510	Total metals, CN	
B-4A	2 – 4	2	1521	Total metals, CN	West/southern side of the Plating Basement, in the west side of the north trench
B-4B	4 – 6.5	2.5	1527	Total metals, CN	
B-4C	9 – 11	2.5	1541	Total metals, CN	
B-6A	2.5 – 4	1.5	1554	Total metals, CN	Southeast side of the Plating Basement, east end of the northern trench
B-6B	6 – 8	2.5	1613	Total metals, CN	
B-6C	10 – 12	2	1620	Total metals, CN	
B-6D Duplicate of B-6C	10 – 12	2	1620	Total metals, CN	
B-5A	3 – 4	1	1640	Total metals, CN	South side of the Plating Basement, between 2 trenches.
B-5B	6 – 8	2	1652	Total metals, CN, BNAs	
SS-Hole1	0 – 6 inches	----	1700	Total metals, CN, BNAs	South side of Basement, next to location, B-5, in southern trench

The samples were held in a secure location on ice overnight by EPA personnel. On February 22, 2006, the same personnel met at the site and began the next round of sampling. The contractors began sampling at location, B-7. They sampled B-7A from 2.5 – 4 feet deep at 0827 with an MS/MSD for metals only. They sampled B-7B with 2 feet of recovery at 0841 from 7 – 8 feet deep. They sampled B-7C at 0850 from 10 – 12 feet deep for metals and VOCs. Once complete, they attempted to collect a sample at location B-8. However, they hit rejection at the surface after several attempts. The Geoprobe sampling rig had mechanical difficulties during most of the morning, so the EPA personnel began to sample the monitoring wells. They began sampling at MW-5 via low flow methodology with a Grundfos pump. The total depth is 18.1 feet and the depth to water is 13.7 feet which only yields about 4 feet of water. The EPA personnel purged from 1005 until 1155 after several difficulties with the pump. They collected the sample at 1200 for metals and BNAs. Due to the difficulties with the first well, the personnel will use a three well volume methodology to sample the remaining wells with bailers. When attempting to retrieve a depth to water reading from wells MW-1 and MW-3, the recover water level meter displayed only a viscous, black oily substance. Therefore, no samples were collected at these two wells. At 1300 hours the Geoprobe was back in service and the following soil samples were collected.

Sample Number	Sample Depth (ft)	Recovery (ft)	Time	Analysis	Location
B-9A	3 – 4	2	1345	Total metals, CN	Main floor in western end of room with overhead door leading to driveway.
B-9B	7 – 8	2	1351	Total metals, CN	
B-9C	9 – 10	2.5	1356	Total metals, CN, BNAs	
B-9D	15 – 16	2	1400	Total metals, CN	
B-10A	3 – 4	1	1408	Total metals, CN	East side of room on main floor with overhead door leading to driveway.
B-10B	6 – 8	3	1416	Total metals, CN, VOCs	
B-10C	11 – 12	1	1422	Total metals, CN	
B-11A	2 – 4	1.5	1434	Total metals, CN, BNAs	Northwest side of room on main floor with overhead door leading to driveway.
B-11B	6 – 8	2.5	1445	Total metals, CN	
B-11D Duplicate of B-11B	6 – 8	2.5	1445	Total metals, CN	
B-11C	6 – 7	3	1453	Total metals, CN, BNAs	
B-12A	3 – 4	2	1515	Total metals, CN	East side of Courtyard
B-12B	6 – 8	2	1525	Total metals, CN	
B-12C	9 – 10	2	1520	Total metals, CN	

During the afternoon, the EPA personnel collected a sample from MW-2. They purged three well volumes from 1405 until 1435 and then collected a sample utilizing a disposable bailer. A sample was collected for total metals and cyanide and BNA analysis at 1445 with a duplicate called, MW-6. They also began to sample MW-4, however, the recovery was very slow and the well went dry after two bails. They allowed the well to recover overnight and collect a sample the next day. The EPA personnel shipped the organic samples to a CLP laboratory at 1800 via UPS. See the trip report in Appendix K for shipment details. The remaining samples were held in a secure location on ice overnight by EPA personnel. On February 23, 2006, the same personnel met at the site and began the next round of sampling. The contractors began sampling at location B-13. See the following table for samples collected on this day.

Sample Number	Sample Depth (ft)	Recovery (ft)	Time	Analysis	Location
B-13A	2 – 4	2	0820	Total metals, CN	Northwest side of Courtyard
B-13B	6 – 8	2	0833	Total metals, CN, BNAs	
B-13C	8 – 9.5	1.5	0838	Total metals, CN	
B-14A	2 – 4	2	0909	Total metals, CN, VOCs	NE corner of large, processing room with acid vats
B-14C	10 – 12	2	0930	Total metals, CN	
B-14D	13 – 16	3	0940	Total metals, CN, BNAs	
B-14E Duplicate of B-14D	13 - 16	3	0940	BNAs	
B-15A	2 – 4	2	1019	Total metals, CN, VOCs	SW corner of large, processing room with acid vats
B-15B	6 – 8	2	1030	Total metals, CN, BNAs	
B-15C	10 - 12	2	1037	Total metals, CN	
B-16A	0 – 2	< 2	1045	Total metals, CN	Center/NE end of large, processing room with acid vats
CSR-1A	0 – 6 inches	----	1055	Total metals, CN	SE end of the Chemical Storage Area "B"
CSR-1B	2 - 3	----	1108	Total metals, CN, BNAs	
CSR-2A	0 – 6 inches	----	1112	Total metals, CN, BNAs	NW end of the Chemical Storage Area "B"
CSR-2B	1.5 - 2	----	1120	Total metals, CN	
B-17A	1 – 2	2.5	1130	Total metals, CN	Center/East of large, processing room with acid vats, west of B-16
B-17B	6 – 7	2	1135	Total metals, CN	
B-17C	8 - 10	4	1140	Total metals, CN, BNAs	
B-18A	2 – 4	2.5	1150	Total metals, CN, BNAs	Center of large, processing room with acid vats,
B-18B MS/MSD	7 – 8	< 1	1153	Total metals, CN	
B-18C	8 - 10	3	1210	Total metals, CN, VOCs	
B-19A	2 – 4	3	1318	Total metals, CN	Northeast side of large, processing room with acid vats
B-19B	6 – 8	2	1323	Total metals, CN, VOCs	
B-19D Duplicate of B-19B	6 - 8	2	1323	Total metals, CN	

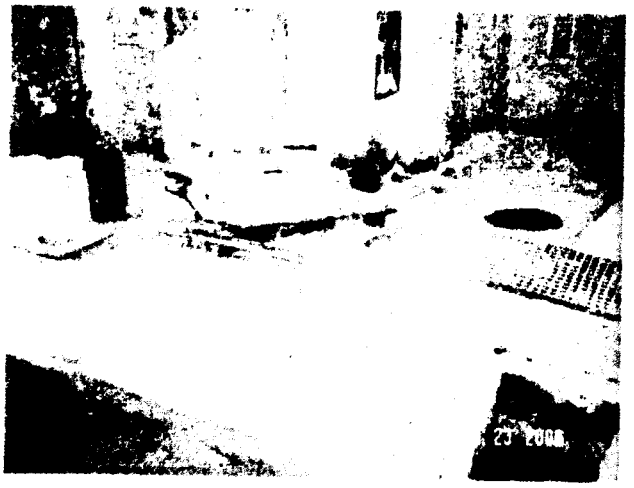
Sample Number	Sample Depth (ft)	Recovery (ft)	Time	Analysis	Location
B-19C	11 - 12	1.5	1330	Total metals, CN, BNAs	
B-20A	3 – 4	1.5	1345	Total metals, CN	East corner of large, processing room with acid vats
B-20B	6 – 8	2	1350	Total metals, CN	
B-20C	9 - 12	3	1355	Total metals, CN, BNAs	
B-20D Duplicate of B-20C	9 - 12	3	1355	BNAs	
S-3A	0 – 6 inches	---	1402	Total metals, CN, BNAs	Sump pit marked S-3 in the NW corner of large, processing room with acid vats
S-4A	0 – 6 inches	---	1414	Total metals, CN, BNAs	Sump pit marked S-4 in the NW corner of large, processing room with acid vats
DB-1	0 – 1	----	1449	Total metals, CN, BNAs	Drainage basin to the east of the Wastewater Treatment room
B-21A	2 - 4	2	1500	Total metals, CN	East side of large, processing room with acid vats
B-21B	7 – 8	1.5	1506	Total metals, CN	
B-22A	0 – 2	2	1510	Total metals, CN	East corner of large, processing room with acid vats
B-22B	7 – 8	1.5	1520	Total metals, CN	
B-23A	2 – 4	2	1532	Total metals, CN, BNAs	South corner of large, processing room with acid vats
B-23B	6 – 8	2	1538	Total metals, CN	
B-24A	2 – 4	2	1550	Total metals, CN	SW corner of large, processing room with acid vats
B-24B	6 – 8	2	1555	Total metals, CN, BNAs	
B-24C	10 - 12	2	1600	Total metals, CN, BNAs	
B-25A	2 – 4	2.5	1610	Total metals, CN, VOCs	Center of large, processing room with acid vats
B-25B	6 – 7	1.5	1615	Total metals, CN	
DB-2A	0 – 6 inches	-----	1620	Total metals, CN, BNAs	Drainage basin located in the driveway
DB-2B	1 - 2	-----	1630	Total metals, CN, BNAs	

As previously stated, EPA had evacuated monitoring well MW-4 on February 22, 2006. They collected the sample at 1150 on February 23, 2006 for total metals, cyanide and base neutral acid extractable analysis. At 1545, a rinsate blank was collected by pouring distilled water over a stainless steel bowl, auger and scoop. An additional

decontamination event occurred in the field and an additional rinsate blank, RB-02 was collected at 1600. Once again, the EPA personnel shipped the samples for organic analysis to a CLP laboratory at the conclusion of the day as can be seen in the Trip Report located in Appendix K. The inorganic samples were held on ice overnight in a secure location. On February 24, 2006, the EPA personnel completed the sampling at the site as follows.

Sample Number	Sample Depth (ft)	Recovery (ft)	Time	Analysis	Location
B-26A	3 – 4	1	0830	Total metals, CN	West side of Wastewater Treatment room
B-26B MS/MSD	5 – 7	2	0845	Total metals, CN, VOCs	
B-26C Duplicate of B-26B	5 - 7	2	0845	VOCs	
B-27A	2 – 4	2	0850	Total metals, CN	East side of Wastewater Treatment room
B-27D Duplicate of B-27A	2 – 4	2	0850	Total metals, CN	
B-27B	6 – 8	2	0900	Total metals, CN	
B-27C	10 - 12	2	0910	Total metals, CN	
BG-1A	0 – 6 inches	----	0950	Total metals, CN, BNAs, VOCs	Background location to the NW of the site building
BG-1B	1.5 - 2	----	1000	Total metals, CN, BNAs, VOCs	
S-3B	1 – 2	----	1015	Total metals, CN	Sump pit marked S-3 in the NW corner of large, processing room with acid vats
S-4B	1 - 2	-----	1020	Total metals, CN, BNAs	Sump pit marked S-4 in the NW corner of large, processing room with acid vats
DB-3A	0 – 6 inches	----	1030	Total metals, CN	Drainage basin located in the courtyard
DB-3B	1 - 2	----	1040	Total metals, CN	

The SCST personnel shipped the organic soil samples and all of the cyanide samples to CLP laboratories on February 24, 2006 at 1700. The mobile laboratory accepted all of the inorganic samples on February 24, 2006 as well. All soil and ground water data sheets can be found as Appendix F and the Trip Report can be found as Appendix K. Maps of the soil sample locations and the well locations can be found as Appendix A. The following eight pages consist of a picture log of some of the soil sample locations.



Location B-1, West corner of Plating Basement



Location B-4, south end of Plating Basement in the west side of the north trench



Location SS hole 1, next to B-5, mid south side of Plating Basement between trenches



Location B-8, southwest end of Plating Basement



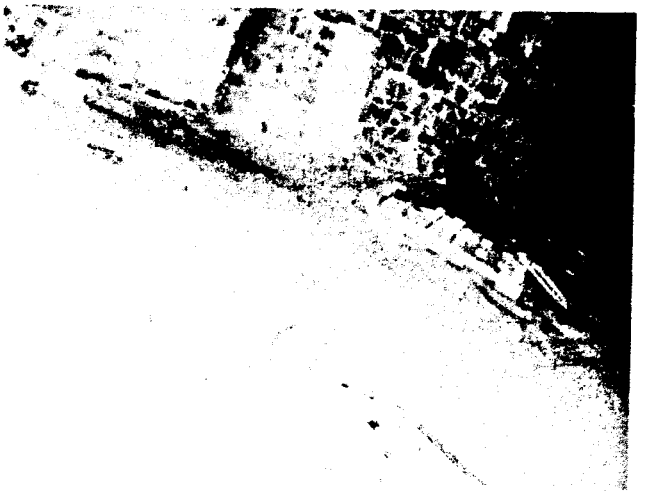
Location B-9, Main floor in western end of room with overhead door leading to driveway.



Location B-10, East side of room on main floor with overhead door leading to driveway.



Location B-16, Center/NE end of large, processing room with acid vats



Location CSR-1, south side of chemical storage room 1



Location B-18, Center of large, processing room with acid vats,



Location B-19, Northeast side of large, processing room with acid vats



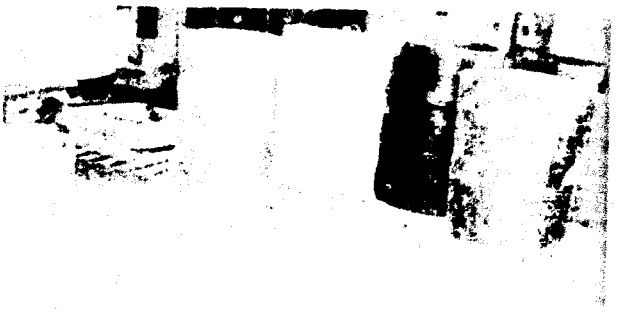
Location B-20, East corner of large processing room with acid vats



Location B-23, South corner of large, processing room with acid vats

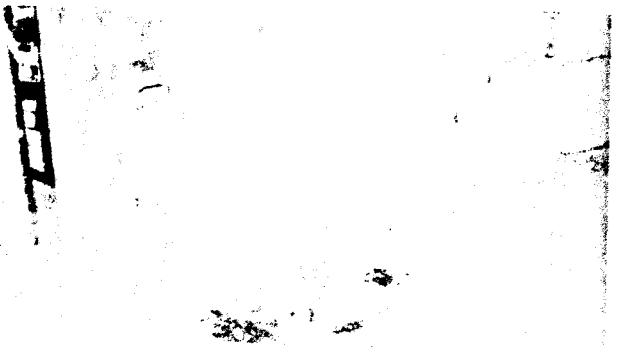


Location B-27, East side of Wastewater Treatment room



Location B-26, West side of Wastewater Treatment room

Location DB-02, Drainage basin located in the driveway



Location S-3, Sump pit marked S-3 in the NW corner of large, processing room with acid vats

4.0 RESULTS

A rinsate blank sample was collected for Quality Control and to ensure that none of the contamination found in the soil samples had originated from the sampling equipment. Two rinsate blank samples were collected for total metals and cyanide and BNA analysis during this sampling event based on the equipment utilized for the soil sample collection. There were no organic contaminants found in the rinsate blank samples. A number of inorganic analytes were detected above the detection limits in the blank samples. The analytes are not contaminants of concern at this site and therefore, they did not, according to the U.S. EPA Region II criteria, adversely affect the rest of the samples. This can be seen from the last pages of Table 3 and 4 on pages 28 and 44, respectively and The Quality Assurance/Quality Control sample information can be found in Table 1 on page 21.

Soil Sample Results

All soil samples collected during this sampling event were collected for the purpose of determining contamination below the on site buildings. The samples were compared to the New York State Department of Environmental Conservation (NYSDEC) *Division Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels Water Regulations* which can be found as Appendix G and the U.S. EPA *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Exhibit A-2: Generic SSLs for Commercial/Industrial Scenario: Outdoor Worker Receptor*, dated March 2001 which can be found as Appendix H. The results can be seen on Tables 2 – 4 on pages 21 – 56.

Volatile Organic Compounds (VOC) – There were no volatile organic compound found above either the state or federal criteria as can be seen on Table 2 on page 22 and Appendix C.

Base Neutral Acid Extractable (BNAs) - The following compounds were above the state and/or federal ARARs in nine soil samples: phenol, benzo(a)anthracene, chrysene, bis(2-ethylhexyl)phthalate, benzo(b)fluoranthene, benzo(k) fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)-pyrene and dibenzo(a,h) anthracene. The nine sample locations are B-5B, SS-hole1,B-11A, B-18A, DB-1, B-23A, DB-2A, DB-2B and BG-1B. The sample locations with the most compounds above the ARARs are DB-2, B-18A and the background location at depth, BG-1B. These results can be found in the highlighted sections of Table 3 on page 41 and Appendix C.

Inorganic – At least one of the following analytes: arsenic, beryllium, cadmium, chromium, cobalt, copper, iron, lead, nickel and zinc, was found to be above the state and/or federal ARARs in every soil sample. Arsenic had the highest results which was greater than 20 mg/kg in samples B-27A, B-27D, B-5B and B-10A. Beryllium was found above the conservative state ARAR of 0.16 mg/kg in 33 samples. The highest

results, greater than 1 mg/kg, was found in samples B-24B and DB-2B. Cadmium was found to be a the highest concentrations in the samples collected from the three drainage basins. Sample DB-1 demonstrated the highest result at 2210 mg/kg. Cobalt was above the state ARAR of 1.0 mg/kg in five samples; B-4A, B-5B and in particular, all of the samples collected from the sump pits. S-3A had the highest result of 1760 mg/kg. The highest copper result was found in sample S-5B at 12,500 mg/kg. The next highest result was found in the sump samples and drainage basin 1 and 3. Sample location B-5 showed the highest result for iron as well, 129,000 mg/kg, followed by the drainage basins and sump holes. Lead is above the federal ARAR in a total of nine soil samples. The highest concentration of 2370 mg/kg was found at location B-3B followed once again by B-5B. The highest nickel concentration was found in sample B-5B which exceeded both the state and federal ARARs. All three samples from location B-4 had the next highest results. Finally, zinc was found above the state ARAR of 20 mg/kg in every sample except B-20B. The highest concentrations were found in sample location S-3 and the depth of S-4. These results can be found on Table 4 on page 21 and Appendices E and D.

Ground Water Sample Results

A total of three monitoring wells were sampled for BNAs and total metals during the sampling event. These samples were compared to the following ARARS: *National Primary Drinking Water Regulations* (Title 40 CFR - Part 141, 1997) which can be found as Appendix I and the NYSDEC *Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations* (6 NYCRR Part 703) which can be found in Appendix J. None of the organic samples results were above either ARAR. This can be seen from Table 5 on page 57 and in Appendix C. The inorganic samples exceeded the NYSDEC ARAR for antimony, cadmium, iron, manganese, nickel and sodium. This can be seen in the highlighted portion of Table 6 on page 40 and in Appendices D and E.

Data Usability

Three different laboratories were utilized for the analysis of the samples collected at the H.M. Quackenbush site. The U.S. EPA Mobile Analytical Trailer (Mobile Lab) analyzed all of the samples for TAL – total metals, except cyanide. Two Contract Laboratory Program (CLP) laboratories analyzed the remainder of the samples; one laboratory analyzed the samples for TCL – VOCs and BNAs and one for TAL – cyanide analysis only. The Mobile Lab uses a different type and definition of qualifiers from the CLP labs. For example, the Mobile Lab uses a "B" which indicates that the result was lower than the contract required quantitation limit, and the low numerical result is estimated. Whereas CLP uses a "J" qualifier to indicate this same result as well as for a number of additional reasons. These reasons can be seen in the Data Assessment statements for the CLP packages in Appendices C and D. For example, trichloroethene in samples B-7C, toluene in sample B-20A, 1,1,1-trichloroethane in sample B-25A and trichloroethene and tetrachloroethene in sample B-26C were all estimated because the spiked sample recoveries were outside of the criteria window. This same reason applies to the BNA results for fluoranthene in sample B-24C and a list of compounds in sample BG-1A.

Cyanide was also estimated with a "J" qualifier due to discrepancies with the laboratory duplicate samples, the matrix spike recoveries and calibration blanks. None of the data was rejected and it is therefore all usable.

5.0 CONCLUSION:

A total of 85 soil samples were collected for target analyte list – total metals including cyanide analysis. Of those 85 samples, eleven samples were analyzed for target compound list (TCL) – volatile organic compounds and 26 samples were analyzed for TCL – base neutral acid extractable analysis. As expected based on visual observation, the highest results were generally found in the drainage basins and sump pits. However, another sample location with significant contamination was at location B-5, in particular at 4 – 8 feet in depth. This sample was collected from the southeastern side of the Plating Basement. Most of the soil samples exceeded the more conservative NY state guidelines for metals and a few for polyaromatic hydrocarbons. The raw data can be found in Appendices C, D and E, however for a summary of the data demonstrating the results above the ARARs can be found on the following Tables 2 through 6.

TABLE 1
QA/QC SAMPLE DATA

TYPE OF SAMPLE	ANALYSIS	SAMPLE NUMBERS	SAMPLE LOCATION
EQUIPMENT BLANK	Organic	B3LA8	RB-01
	Inorganic	MB3LA8	
	Organic	B3LA9	RB-02
	Inorganic	MB3LA9	
BLIND DUPLICATE	Volatile Organic Compounds	B3LB6 is a duplicate of B3LB5	B-26C is a duplicate of B-26B
	Base Neutral Acid Extractable	B3L73is a duplicate of B3L72 B3L95 is a duplicate of B3L94 B3L62 is a duplicate of B3L61	B-14E is a duplicate of B-14D B-20D is a duplicate of B-20C MW-6 is a duplicate of MW-2
	Inorganic	MB3L42 is a duplicate of MB3L41 MB3L59 is a duplicate of MB3L57 MB3L91 is a duplicate of MB3L89 MB3LC0 is a duplicate of MB3LB7 MB3L62 is a duplicate of MB3L61	B-6D is a duplicate of B-6C B-11D is a duplicate of B-11B B-19D is a duplicate of B-19B B-27D is a duplicate of B-27A MW-6 is a duplicate of MW-2
MATRIX SPIKE/ MATRIX SPIKE DUPLICATE	Organic	-------	-------
	Inorganic	MB3L46 MB3L67 MB3L86 MB3LB5 MB3L63	B-7A B-13A B-18B B-26B MW-4

Table 2: Volatile Organic Compound Soil Sample Data (mg/kg)

	B-7C	Qualifier	B-10B	Qualifier	B-14A	Qualifier	B-15A	Qualifier	Commercial	NY TAGM
	B3L48		B3L54		B3L70		B3L74		SSLs	SCOs
Dichlorodifluoromethane	ND	U	ND	U	ND	U	ND	U		
Chloromethane	ND	U	ND	U	ND	U	ND	U		
Vinyl Chloride	ND	U	ND	U	ND	U	ND	U	4	0.2
Bromomethane	ND	U	ND	U	ND	U	ND	U		
Chloroethane	ND	U	ND	U	ND	U	ND	U		1.9
Trichlorofluoromethane	ND	U	ND	U	ND	U	ND	U		
1,1-Dichloroethene	ND	U	ND	U	ND	U	ND	U	5	0.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	ND	U	ND	U	ND	U		6
Acetone	0.006	J	ND	U	0.028		ND	U	110,000	0.2
Carbon disulfide	ND	U	ND	U	ND	U	ND	U	110,000	2.7
Methyl acetate	ND	U	ND	U	ND	U	ND	U		
Methylene chloride	ND	U	ND	U	ND	U	ND	U	420	0.1
trans-1,2-Dichloroethene	ND	U	ND	U	ND	U	ND	U	23,000	0.3
Methyl tert-butyl ether	ND	U	ND	U	ND	U	ND	U		
1,1-Dichloroethane	ND	U	ND	U	ND	U	ND	U	110,000	0.2
cis-1,2-Dichloroethene	ND	U	ND	U	ND	U	ND	U	11,000	
2-Butanone	ND	U	ND	U	ND	U	ND	U		0.3
Chloroform	ND	U	ND	U	ND	U	ND	U	520	0.3
1,1,1-Trichloroethane	ND	U	ND	U	ND	U	ND	U		0.8
Cyclohexane	ND	U	ND	U	ND	U	ND	U		
Carbon tetrachloride	ND	U	ND	U	ND	U	ND	U	24	0.6
Benzene	ND	U	ND	U	ND	U	ND	U	58	0.06
1,2-Dichloroethane	ND	U	ND	U	ND	U	ND	U	35	0.1
Trichloroethene	0.012	J	0.035		ND	U	ND	U	290	0.7
Methylcyclohexane	ND	U	ND	U	ND	U	ND	U		
1,2-Dichloropropane	ND	U	ND	U	ND	U	ND	U	47	
Bromodichloromethane	ND	U	ND	U	ND	U	ND	U	51	
cis-1,3-Dichloropropene	ND	U	ND	U	ND	U	ND	U		
4-Methyl-2-pentanone	ND	U	ND	U	ND	U	ND	U		1
Toluene	ND	U	ND	U	ND	U	ND	U	230,000	1.5
trans-1,3-Dichloropropene	ND	U	ND	U	ND	U	ND	U		
1,1,2-Trichloroethane	ND	U	ND	U	ND	U	ND	U	56	

ND/U - Non detect
J - Estimated

Table 2: Volatile Organic Compound Soil Sample Data (mg/kg)

Samples Continued:	B-7C	Qualifier	B-10B	Qualifier	B-14A	Qualifier	B-15A	Qualifier	Commercial	NY TAGM
	B3L48		B3L54		B3L70		B3L74		SSLs	SCOs
Tetrachloroethene	ND	U	ND	U	ND	U	ND	U	61	1.4
2-Hexanone	ND	U	ND	U	ND	U	ND	U		
Dibromochloromethane	ND	U	ND	U	ND	U	ND	U		
1,2-Dibromoethane	ND	U	ND	U	ND	U	ND	U		
Chlorobenzene	ND	U	ND	U	ND	U	ND	U	23,000	1.7
Ethyl benzene	ND	U	ND	U	ND	U	ND	U	110,000	5.5
Xylenes (total)	ND	U	ND	U	ND	U	ND	U	1,000,000	1.2
Styrene	ND	U	ND	U	ND	U	ND	U	230,000	
Bromoform	ND	U	ND	U	ND	U	ND	U	400	
Isopropylbenzene	ND	U	ND	U	ND	U	ND	U		
1,1,2,2-Tetrachloroethane	ND	U	ND	U	ND	U	ND	U	16	0.6
1,3-Dichlorobenzene	ND	U	ND	U	ND	U	ND	U		1.6
1,4-Dichlorobenzene	ND	U	ND	U	ND	U	ND	U	80	8.5
1,2-Dichlorobenzene	ND	U	ND	U	ND	U	ND	U	62,000	7.9
1,2-Dibromo-3-chloropropane	ND	U	ND	U	ND	U	ND	U		
1,2,4-Trichlorobenzene	ND	U	ND	U	ND	U	ND	U	6800	3.4

ND/U - Non detect

J - Estimated

Table 2: Volatile Organic Compound Soil Sample Data (mg/kg)

	B-18C	Qualifier	B-19B	Qualifier	B-20A	Qualifier	B-25A	Qualifier	Commercial	NY TAGM
	B3L87		B3L89		B3L92		B3LB0		SSLs	SCOs
Dichlorodifluoromethane	ND	U	ND	U	ND	U	ND	U		
Chloromethane	ND	U	ND	U	ND	U	ND	U		
Vinyl Chloride	ND	U	ND	U	ND	U	ND	U	4	0.2
Bromomethane	ND	U	ND	U	ND	U	ND	U		
Chloroethane	ND	U	ND	U	ND	U	ND	U		1.9
Trichlorofluoromethane	ND	U	ND	U	ND	U	ND	U		
1,1-Dichloroethene	ND	U	ND	U	ND	U	ND	U	5	0.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	ND	U	ND	U	ND	U		6
Acetone	0.019		0.014		0.013		0.021		110,000	0.2
Carbon disulfide	ND	U	ND	U	ND	U	ND	U	110,000	2.7
Methyl acetate	ND	U	ND	U	ND	U	ND	U		
Methylene chloride	ND	U	ND	U	ND	U	ND	U	420	0.1
trans-1,2-Dichloroethene	ND	U	ND	U	ND	U	ND	U	23,000	0.3
Methyl tert-butyl ether	ND	U	ND	U	ND	U	ND	U		
1,1-Dichloroethane	ND	U	ND	U	ND	U	ND	U	110,000	0.2
cis-1,2-Dichloroethene	ND	U	ND	U	ND	U	ND	U	11,000	
2-Butanone	ND	U	ND	U	ND	U	ND	U		0.3
Chloroform	ND	U	ND	U	ND	U	ND	U	520	0.3
1,1,1-Trichloroethane	ND	U	ND	U	ND	U	0.005	J		0.8
Cyclohexane	ND	U	ND	U	ND	U	ND	U		
Carbon tetrachloride	ND	U	ND	U	ND	U	ND	U	24	0.6
Benzene	ND	U	ND	U	ND	U	ND	U	58	0.06
1,2-Dichloroethane	ND	U	ND	U	ND	U	ND	U	35	0.1
Trichloroethene	ND	U	ND	U	ND	U	ND	U	290	0.7
Methylcyclohexane	ND	U	ND	U	ND	U	ND	U		
1,2-Dichloropropane	ND	U	ND	U	ND	U	ND	U	47	
Bromodichloromethane	ND	U	ND	U	ND	U	ND	U	51	
cis-1,3-Dichloropropene	ND	U	ND	U	ND	U	ND	U		
4-Methyl-2-pentanone	ND	U	ND	U	ND	U	ND	U		1
Toluene	ND	U	ND	U	0.002	J	ND	U	230,000	1.5
trans-1,3-Dichloropropene	ND	U	ND	U	ND	U	ND	U		
1,1,2-Trichloroethane	ND	U	ND	U	ND	U	ND	U	56	

ND/U - Non detect
J - Estimated

Table 2: Volatile Organic Compound Soil Sample Data (mg/kg)

Samples Continued:	B-18C	Qualifier	B-19B	Qualifier	B-20A	Qualifier	B-25A	Qualifier	Commercial	NY TAGM
	B3L87		B3L89		B3L92		B3LB0		SSLs	SCOs
Tetrachloroethene	ND	U	ND	U	ND	U	ND	U	61	1.4
2-Hexanone	ND	U	ND	U	ND	U	ND	U		
Dibromochloromethane	ND	U	ND	U	ND	U	ND	U		
1,2-Dibromoethane	ND	U	ND	U	ND	U	ND	U		
Chlorobenzene	ND	U	ND	U	ND	U	ND	U	23,000	1.7
Ethyl benzene	ND	U	ND	U	ND	U	ND	U	110,000	5.5
Xylenes (total)	ND	U	ND	U	ND	U	ND	U	1,000,000	1.2
Styrene	ND	U	ND	U	ND	U	ND	U	230,000	
Bromoform	ND	U	ND	U	ND	U	ND	U	400	
Isopropylbenzene	ND	U	ND	U	ND	U	ND	U		
1,1,2,2-Tetrachloroethane	ND	U	ND	U	ND	U	ND	U	16	0.6
1,3-Dichlorobenzene	ND	U	ND	U	ND	U	ND	U		1.6
1,4-Dichlorobenzene	ND	U	ND	U	ND	U	ND	U	80	8.5
1,2-Dichlorobenzene	ND	U	ND	U	ND	U	ND	U	62,000	7.9
1,2-Dibromo-3-chloropropane	ND	U	ND	U	ND	U	ND	U		
1,2,4-Trichlorobenzene	ND	U	ND	U	ND	U	ND	U	6800	3.4
ND/U - Non detect										
J - Estimated										

Table 2: Volatile Organic Compound Soil Sample Data (mg/kg)

	B-26B	Qualifier	B-26C	Qualifier	BG-1A	Qualifier	BG-1B	Qualifier	Commercial	NY TAGM
	B3LB5		B3LB6	Duplicate	B3LC1		B3LC2		SSLs	SCOs
Dichlorodifluoromethane	ND	U	ND	U	ND	U	ND	U		
Chloromethane	ND	U	ND	U	ND	U	ND	U		
Vinyl Chloride	ND	U	ND	U	ND	U	ND	U	4	0.2
Bromomethane	ND	U	ND	U	ND	U	ND	U		
Chloroethane	ND	U	ND	U	ND	U	ND	U		1.9
Trichlorofluoromethane	ND	U	ND	U	ND	U	ND	U		
1,1-Dichloroethene	ND	U	ND	U	ND	U	ND	U	5	0.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	ND	U	ND	U	ND	U		6
Acetone	ND	U	0.017		ND	U	ND	U	110,000	0.2
Carbon disulfide	ND	U	ND	U	ND	U	ND	U	110,000	2.7
Methyl acetate	ND	U	ND	U	ND	U	ND	U		
Methylene chloride	ND	U	ND	U	ND	U	ND	U	420	0.1
trans-1,2-Dichloroethene	ND	U	ND	U	ND	U	ND	U	23,000	0.3
Methyl tert-butyl ether	ND	U	ND	U	ND	U	ND	U		
1,1-Dichloroethane	ND	U	ND	U	ND	U	ND	U	110,000	0.2
cis-1,2-Dichloroethene	ND	U	ND	U	ND	U	ND	U	11,000	
2-Butanone	ND	U	ND	U	ND	U	ND	U		0.3
Chloroform	ND	U	ND	U	ND	U	ND	U	520	0.3
1,1,1-Trichloroethane	ND	U	ND	U	ND	U	ND	U		0.8
Cyclohexane	ND	U	ND	U	ND	U	ND	U		
Carbon tetrachloride	ND	U	ND	U	ND	U	ND	U	24	0.6
Benzene	ND	U	ND	U	ND	U	ND	U	58	0.06
1,2-Dichloroethane	ND	U	ND	U	ND	U	ND	U	35	0.1
Trichloroethene	0.19		0.15	J	ND	U	ND	U	290	0.7
Methylcyclohexane	ND	U	ND	U	ND	U	ND	U		
1,2-Dichloropropane	ND	U	ND	U	ND	U	ND	U	47	
Bromodichloromethane	ND	U	ND	U	ND	U	ND	U	51	
cis-1,3-Dichloropropene	ND	U	ND	U	ND	U	ND	U		
4-Methyl-2-pentanone	ND	U	ND	U	ND	U	ND	U		1
Toluene	ND	U	ND	U	ND	U	ND	U	230,000	1.5
trans-1,3-Dichloropropene	ND	U	ND	U	ND	U	ND	U		
1,1,2-Trichloroethane	ND	U	ND	U	ND	U	ND	U	56	

ND/U - Non detect
J - Estimated

Table 2: Volatile Organic Compound Soil Sample Data (mg/kg)

Samples Continued:	B-26B	Qualifier	B-26C	Qualifier	BG-1A	Qualifier	BG-1B	Qualifier	Commercial	NY TAGM
	B3LB5		B3LB6	Duplicate	B3LC1		B3LC2		SSLs	SCOs
Tetrachloroethene	0.004	J	0.004	J	ND	U	ND	U	61	1.4
2-Hexanone	ND	U	ND	U	ND	U	ND	U		
Dibromochloromethane	ND	U	ND	U	ND	U	ND	U		
1,2-Dibromoethane	ND	U	ND	U	ND	U	ND	U		
Chlorobenzene	ND	U	ND	U	ND	U	ND	U	23,000	1.7
Ethyl benzene	ND	U	ND	U	ND	U	ND	U	110,000	5.5
Xylenes (total)	ND	U	ND	U	ND	U	ND	U	1,000,000	1.2
Styrene	ND	U	ND	U	ND	U	ND	U	230,000	
Bromoform	ND	U	ND	U	ND	U	ND	U	400	
Isopropylbenzene	ND	U	ND	U	ND	U	ND	U		
1,1,2,2-Tetrachloroethane	ND	U	ND	U	ND	U	ND	U	16	0.6
1,3-Dichlorobenzene	ND	U	ND	U	ND	U	ND	U		1.6
1,4-Dichlorobenzene	ND	U	ND	U	ND	U	ND	U	80	8.5
1,2-Dichlorobenzene	ND	U	ND	U	ND	U	ND	U	62,000	7.9
1,2-Dibromo-3-chloropropane	ND	U	ND	U	ND	U	ND	U		
1,2,4-Trichlorobenzene	ND	U	ND	U	ND	U	ND	U	6800	3.4

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Soil Sample Data (mg/kg)

	B-5B B3L44	Qualifier	SS-Hole1 B3L45	Qualifier	B-9C B3L51	Qualifier	B-11A B3L56	Qualifier	Commercial SSLs	NY TAGM SCOs
Benzaldehyde	ND	U	ND	U	ND	U	ND	U		
Phenol	0.51	J	4.2	J	ND	U	ND	U	410,000	0.03
Bis-(2-chloroethyl)ether	ND	U	ND	U	ND	U	ND	U	2	
2-Chlorophenol	ND	U	ND	U	ND	U	ND	U	3400	0.8
2-Methylphenol	ND	U	ND	U	ND	U	ND	U	34,000	0.1
2,2'-Oxybis(1-chloropropane)	ND	U	ND	U	ND	U	ND	U		
Acetophenone	2.4	J	2.6	J	0.072	J	ND	U		
4-Methylphenol	ND	U	ND	U	ND	U	ND	U		0.9
N-Nitroso-di-n propylamine	ND	U	ND	U	ND	U	ND	U	0.3	
Hexachloroethane	ND	U	ND	U	ND	U	ND	U	140	
Nitrobenzene	ND	U	ND	U	ND	U	ND	U	340	0.2
Isophorone	ND	U	ND	U	ND	U	ND	U	2000	4.4
2-Nitrophenol	ND	U	ND	U	ND	U	ND	U		0.33
2,4-Dimethylphenol	ND	U	ND	U	ND	U	ND	U	14,000	
Bis(2-chloroethoxy)methane	ND	U	ND	U	ND	U	ND	U		
2,4-Dichlorophenol	ND	U	ND	U	ND	U	ND	U	2100	0.4
Naphthalene	ND	U	ND	U	ND	U	ND	U	12,000	13
4-Chloroaniline	ND	U	ND	U	ND	U	ND	U	2700	0.22
Hexachlorobutadiene	ND	U	ND	U	ND	U	ND	U	25	
Caprolactam	ND	U	ND	U	ND	U	ND	U		
4-Chloro-3-methylphenol	ND	U	ND	U	ND	U	ND	U		0.24
2-Methylnaphthalene	ND	U	ND	U	ND	U	ND	U		36.4
Hexachlorocyclo-pentadiene	ND	U	ND	U	ND	U	ND	U	4800	
2,4,6-Trichlorophenol	ND	U	ND	U	ND	U	ND	U	170	
2,4,5-Trichlorophenol	ND	U	ND	U	ND	U	ND	U	68,000	0.1
1,1-Biphenyl	ND	U	ND	U	ND	U	ND	U		
2-Chloronaphthalene	ND	U	ND	U	ND	U	ND	U		
2-Nitroaniline	ND	U	ND	U	ND	U	ND	U		0.43
Dimethylphthalate	ND	U	ND	U	ND	U	ND	U		2
2,6-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U	3	1
Acenaphthylene	ND	U	ND	U	ND	U	ND	U		41
3-Nitroaniline	ND	U	ND	U	ND	U	ND	U		0.5
Acenaphthene	ND	U	ND	U	ND	U	ND	U	37,000	50
2,4-Dinitrophenol	ND	U	ND	U	ND	U	ND	U	1400	0.2

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Soil Sample Data (mg/kg)

	B-5B B3L44	Qualifier	SS-Hole1 B3L45	Qualifier	B-9C B3L51	Qualifier	B-11A B3L56	Qualifier	Commercial SSLs	NY TAGM SCOs
4-Nitrophenol	ND	U	ND	U	ND	U	ND	U		0.1
Dibenzofuran	ND	U	ND	U	ND	U	ND	U		6.2
2,4-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U	3	
Diethylphthalate	ND	U	ND	U	ND	U	ND	U	550,000	7.1
Fluorene	0.28	J	ND	U	ND	U	ND	U	24,000	50
4-Chlorophenyl-phenyl ether	ND	U	ND	U	ND	U	ND	U		
4-Nitroaniline	ND	U	ND	U	ND	U	ND	U		
4,6-Dinitro-2-methylphenol	ND	U	ND	U	ND	U	ND	U		
N-Nitroso diphenylamine	ND	U	ND	U	ND	U	ND	U	390	
1,2,4,5-Tetrachlorobenzene	ND	U	ND	U	ND	U	ND	U		
4-Bromophenyl-phenylether	ND	U	ND	U	ND	U	ND	U		
Hexachlorobenzene	ND	U	ND	U	ND	U	ND	U		0.41
Atrazine	ND	U	ND	U	ND	U	ND	U		
Pentachlorophenol	ND	U	ND	U	ND	U	ND	U	10	1
Phenanthrene	0.43	J	ND	U	ND	U	ND	U		50
Anthracene	ND	U	ND	U	ND	U	ND	U	180,000	50
Di-n-butylphthalate	ND	U	ND	U	ND	U	ND	U	68,000	8.1
Fluoranthene	ND	U	ND	U	ND	U	0.022	J	24,000	50
Pyrene	ND	U	ND	U	ND	U	0.023	J	18,000	50
Butylbenzylphthalate	ND	U	ND	U	ND	U	0.024	J	140,000	50
3,3-Dichlorobenzidine	ND	U	ND	U	ND	U	ND	U	4	
Benzo(a)anthracene	ND	U	ND	U	ND	U	0.026	J	2	0.224
Chrysene	ND	U	ND	U	0.019	J	0.038	J	230	0.4
Bis(2-ethylhexyl)phthalate	30		31		ND	U	ND	U	140	50
Di-n-octylphthalate	0.44	J	2.7	J	ND	U	ND	U	14,000	50
Benzo(b)fluoranthene	ND	U	ND	U	ND	U	0.02	J	2	1.1
Benzo(k)fluoranthene	ND	U	ND	U	ND	U	0.021	J	23	1.1
Benzo(a)pyrene	ND	U	ND	U	ND	U	0.022	J	0.2	0.061
Indeno(1,2,3-cd)-pyrene	ND	U	ND	U	ND	U	0.022	J	2	3.2
Dibenzo(a,h)-anthracene	ND	U	ND	U	ND	U	0.021	J	0.2	0.014
Benzo(g,h,i)perylene	ND	U	ND	U	ND	U	0.024	J		50
2,3,4,6-Tetrachlorophenol	ND	U	ND	U	ND	U	ND	U		
Carbazole	ND	U	ND	U	ND	U	0.024	J	96	

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Soil Sample Data (mg/kg)

	B-11C B3L58	Qualifier	B-13B B3L68	Qualifier	B-14D B3L72	Qualifier	B-14E B3L73	Qualifier Duplicate	Commercial SSLs	NY TAGM SCOs
Benzaldehyde	ND	U	ND	U	ND	U	ND	U		
Phenol	ND	U	ND	U	ND	U	ND	U	410,000	0.03
Bis-(2-chloroethyl)ether	ND	U	ND	U	ND	U	ND	U	2	
2-Chlorophenol	ND	U	ND	U	ND	U	ND	U	3400	0.8
2-Methylphenol	ND	U	ND	U	ND	U	ND	U	34,000	0.1
2,2'-Oxybis(1-chloropropane)	ND	U	ND	U	ND	U	ND	U		
Acetophenone	ND	U	0.12	J	ND	U	0.023	J		
4-Methylphenol	ND	U	ND	U	ND	U	ND	U		0.9
N-Nitroso-di-n propylamine	ND	U	ND	U	ND	U	ND	U	0.3	
Hexachloroethane	ND	U	ND	U	ND	U	ND	U	140	
Nitrobenzene	ND	U	ND	U	ND	U	ND	U	340	0.2
Isophorone	ND	U	ND	U	ND	U	ND	U	2000	4.4
2-Nitrophenol	ND	U	ND	U	ND	U	ND	U		0.33
2,4-Dimethylphenol	ND	U	ND	U	ND	U	ND	U	14,000	
Bis(2-chloroethoxy)methane	ND	U	ND	U	ND	U	ND	U		
2,4-Dichlorophenol	ND	U	ND	U	ND	U	ND	U	2100	0.4
Naphthalene	ND	U	ND	U	ND	U	ND	U	12,000	13
4-Chloroaniline	ND	U	ND	U	ND	U	ND	U	2700	0.22
Hexachlorobutadiene	ND	U	ND	U	ND	U	ND	U	25	
Caprolactam	ND	U	ND	U	ND	U	ND	U		
4-Chloro-3-methylphenol	ND	U	0.062	J	ND	U	ND	U		0.24
2-Methylnaphthalene	ND	U	ND	U	ND	U	ND	U		36.4
Hexachlorocyclo-pentadiene	ND	U	ND	U	ND	U	ND	U	4800	
2,4,6-Trichlorophenol	ND	U	ND	U	ND	U	ND	U	170	
2,4,5-Trichlorophenol	ND	U	ND	U	ND	U	ND	U	68,000	0.1
1,1-Biphenyl	ND	U	ND	U	ND	U	ND	U		
2-Chloronaphthalene	ND	U	ND	U	ND	U	ND	U		
2-Nitroaniline	ND	U	ND	U	ND	U	ND	U		0.43
Dimethylphthalate	0.036	J	ND	U	ND	U	ND	U		2
2,6-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U	3	1
Acenaphthylene	ND	U	ND	U	ND	U	ND	U		41
3-Nitroaniline	ND	U	ND	U	ND	U	ND	U		0.5
Acenaphthene	ND	U	ND	U	ND	U	ND	U	37,000	50
2,4-Dinitrophenol	ND	U	ND	U	ND	U	ND	U	1400	0.2

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Soil Sample Data (mg/kg)

Samples Continued:	B-11C B3L58	Qualifier	B-13B B3L68	Qualifier	B-14D B3L72	Qualifier	B-14E B3L73	Qualifier Duplicate	Commercial SSLs	NY TAGM SCOs
4-Nitrophenol	ND	U	ND	U	ND	U	ND	U		0.1
Dibenzofuran	ND	U	ND	U	ND	U	ND	U		6.2
2,4-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U	3	
Diethylphthalate	ND	U	ND	U	ND	U	ND	U	550,000	7.1
Fluorene	ND	U	ND	U	ND	U	ND	U	24,000	50
4-Chlorophenyl-phenyl ether	ND	U	ND	U	ND	U	ND	U		
4-Nitroaniline	ND	U	ND	U	ND	U	ND	U		
4,6-Dinitro-2-methylphenol	ND	U	ND	U	ND	U	ND	U		
N-Nitroso diphenylamine	ND	U	ND	U	ND	U	ND	U	390	
1,2,4,5-Tetrachlorobenzene	ND	U	ND	U	ND	U	ND	U		
4-Bromophenyl-phenylether	ND	U	ND	U	ND	U	ND	U		0.41
Hexachlorobenzene	ND	U	ND	U	ND	U	ND	U		
Atrazine	ND	U	ND	U	ND	U	ND	U	10	1
Pentachlorophenol	ND	U	ND	U	ND	U	ND	U		50
Phenanthrene	0.026	J	0.055	J	ND	U	ND	U	180,000	50
Anthracene	ND	U	ND	U	ND	U	ND	U	68,000	8.1
Di-n-butylphthalate	ND	U	ND	U	ND	U	ND	U	24,000	50
Fluoranthene	ND	U	0.1	J	ND	U	ND	U	18,000	50
Pyrene	ND	U	0.076	J	ND	U	ND	U	140,000	50
Butylbenzylphthalate	ND	U	ND	U	ND	U	ND	U	4	
3,3-Dichlorobenzidine	ND	U	ND	U	ND	U	ND	U	2	0.224
Benzo(a)anthracene	ND	U	0.056	J	ND	U	ND	U	230	0.4
Chrysene	0.04	J	0.068	J	ND	U	ND	U	140	50
Bis(2-ethylhexyl)phthalate	0.35		ND	U	ND	U	ND	U	14,000	50
Di-n-octylphthalate	ND	U	ND	U	ND	U	ND	U	2	1.1
Benzo(b)fluoranthene	ND	U	0.066	J	ND	U	ND	U	23	1.1
Benzo(k)fluoranthene	ND	U	0.061	J	ND	U	ND	U	0.2	0.061
Benzo(a)pyrene	ND	U	0.056	J	ND	U	ND	U	2	3.2
Indeno(1,2,3-cd)-pyrene	ND	U	0.041	J	ND	U	ND	U	0.2	0.014
Dibenzo(a,h)-anthracene	ND	U	ND	U	ND	U	ND	U		50
Benzo(g,h,i)perylene	ND	U	ND	U	ND	U	ND	U		
2,3,4,6-Tetrachlorophenol	ND	U	ND	U	ND	U	ND	U	96	
Carbazole	ND	U	ND	U	ND	U	ND	U		

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Soil Sample Data (mg/kg)

	B-15B B3L75	Qualifier	CSR-1B B3L79	Qualifier	CSR-2A B3L80	Qualifier	B-17C B3L84	Qualifier	Commercial SSLs	NY TAGM SCOs
Benzaldehyde	ND	U	ND	U	ND	U	0.02	J		
Phenol	ND	U	ND	U	ND	U	ND	U	410,000	0.03
Bis-(2-chloroethyl)ether	ND	U	ND	U	ND	U	ND	U	2	
2-Chlorophenol	ND	U	ND	U	ND	U	ND	U	3400	0.8
2-Methylphenol	ND	U	ND	U	ND	U	ND	U	34,000	0.1
2,2'-Oxybis(1-chloropropane)	ND	U	ND	U	ND	U	ND	U		
Acetophenone	ND	U	ND	U	ND	U	ND	U		
4-Methylphenol	ND	U	ND	U	ND	U	ND	U		0.9
N-Nitroso-di-n propylamine	ND	U	ND	U	ND	U	ND	U	0.3	
Hexachloroethane	ND	U	ND	U	ND	U	ND	U	140	
Nitrobenzene	ND	U	ND	U	ND	U	ND	U	340	0.2
Isophorone	ND	U	ND	U	ND	U	ND	U	2000	4.4
2-Nitrophenol	ND	U	ND	U	ND	U	ND	U		0.33
2,4-Dimethylphenol	ND	U	ND	U	ND	U	ND	U	14,000	
Bis(2-chloroethoxy)methane	ND	U	ND	U	ND	U	ND	U		
2,4-Dichlorophenol	ND	U	ND	U	ND	U	ND	U	2100	0.4
Naphthalene	ND	U	ND	U	ND	U	ND	U	12,000	13
4-Chloroaniline	ND	U	ND	U	ND	U	ND	U	2700	0.22
Hexachlorobutadiene	ND	U	ND	U	ND	U	ND	U	25	
Caprolactam	ND	U	ND	U	ND	U	ND	U		
4-Chloro-3-methylphenol	ND	U	ND	U	ND	U	ND	U		0.24
2-Methylnaphthalene	ND	U	ND	U	ND	U	ND	U		36.4
Hexachlorocyclo-pentadiene	ND	U	ND	U	ND	U	ND	U	4800	
2,4,6-Trichlorophenol	ND	U	ND	U	ND	U	ND	U	170	
2,4,5-Trichlorophenol	ND	U	ND	U	ND	U	ND	U	68,000	0.1
1,1-Biphenyl	ND	U	ND	U	ND	U	ND	U		
2-Chloronaphthalene	ND	U	ND	U	ND	U	ND	U		
2-Nitroaniline	ND	U	ND	U	ND	U	ND	U		0.43
Dimethylphthalate	ND	U	ND	U	ND	U	ND	U		2
2,6-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U	3	1
Acenaphthylene	ND	U	ND	U	ND	U	ND	U		41
3-Nitroaniline	ND	U	ND	U	ND	U	ND	U		0.5
Acenaphthene	ND	U	ND	U	ND	U	ND	U	37,000	50
2,4-Dinitrophenol	ND	U	ND	U	ND	U	ND	U	1400	0.2

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Soil Sample Data (mg/kg)

Samples Continued:	B-15B B3L75	Qualifier	CSR-1B B3L79	Qualifier	CSR-2A B3L80	Qualifier	B-17C B3L84	Qualifier	Commercial SSLs	NY TAGM SCOs
4-Nitrophenol	ND	U	ND	U	ND	U	ND	U		0.1
Dibenzofuran	ND	U	ND	U	ND	U	ND	U		6.2
2,4-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U	3	
Diethylphthalate	ND	U	ND	U	ND	U	ND	U	550,000	7.1
Fluorene	ND	U	ND	U	ND	U	ND	U	24,000	50
4-Chlorophenyl-phenyl ether	ND	U	ND	U	ND	U	ND	U		
4-Nitroaniline	ND	U	ND	U	ND	U	ND	U		
4,6-Dinitro-2-methylphenol	ND	U	ND	U	ND	U	ND	U		
N-Nitroso diphenylamine	ND	U	ND	U	ND	U	ND	U	390	
1,2,4,5-Tetrachlorobenzene	ND	U	ND	U	ND	U	ND	U		
4-Bromophenyl-phenylether	ND	U	ND	U	ND	U	ND	U		
Hexachlorobenzene	ND	U	ND	U	ND	U	ND	U		0.41
Atrazine	ND	U	ND	U	ND	U	ND	U		
Pentachlorophenol	ND	U	ND	U	ND	U	ND	U	10	1
Phenanthrene	0.036	J	ND	U	0.11	J	0.025	J		50
Anthracene	ND	U	ND	U	ND	U	ND	U	180,000	50
Di-n-butylphthalate	ND	U	ND	U	ND	U	ND	U	68,000	8.1
Fluoranthene	0.049	J	ND	U	ND	U	0.072	J	24,000	50
Pyrene	0.04	J	ND	U	0.16	J	0.068	J	18,000	50
Butylbenzylphthalate	ND	U	ND	U	ND	U	ND	U	140,000	50
3,3-Dichlorobenzidine	ND	U	ND	U	ND	U	ND	U	4	
Benzo(a)anthracene	0.028	J	ND	U	0.13	J	0.046	J	2	0.224
Chrysene	0.024	J	ND	U	0.17	J	0.05	J	230	0.4
Bis(2-ethylhexyl)phthalate	ND	U	ND	U	ND	U	ND	U	140	50
Di-n-octylphthalate	ND	U	ND	U	ND	U	ND	U	14,000	50
Benzo(b)fluoranthene	0.019	J	ND	U	ND	U	0.047	J	2	1.1
Benzo(k)fluoranthene	0.023	J	ND	U	ND	U	0.059	J	23	1.1
Benzo(a)pyrene	0.024	J	ND	U	ND	U	0.056	J	0.2	0.061
Indeno(1,2,3-cd)-pyrene	ND	U	ND	U	ND	U	0.057	J	2	3.2
Dibenzo(a,h)-anthracene	ND	U	ND	U	ND	U	ND	U	0.2	0.014
Benzo(g,h,i)perylene	ND	U	ND	U	ND	U	0.047	J		50
2,3,4,6-Tetrachlorophenol	ND	U	ND	U	ND	U	ND	U		
Carbazole	ND	U	ND	U	ND	U	ND	U	96	

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extract[illegible]oil Sample Data (mg/kg)

	B-18A B3L85	Qualifier	B-19C B3L90	Qualifier	B-20C B3L94	Qualifier	B-20D B3L95	Qualifier Duplicate	Commercial SSLs	NY TAGM SCOs
Benzaldehyde	ND	U	ND	U	ND	U	ND	U		
Phenol	ND	U	ND	U	ND	U	ND	U	410,000	0.03
Bis-(2-chloroethyl)ether	ND	U	ND	U	ND	U	ND	U	2	
2-Chlorophenol	ND	U	ND	U	ND	U	ND	U	3400	0.8
2-Methylphenol	ND	U	ND	U	ND	U	ND	U	34,000	0.1
2,2'-Oxybis(1-chloropropane)	ND	U	ND	U	ND	U	ND	U		
Acetophenone	ND	U	ND	U	ND	U	0.019	J		
4-Methylphenol	ND	U	ND	U	ND	U	ND	U		0.9
N-Nitroso-di-n propylamine	ND	U	ND	U	ND	U	ND	U	0.3	
Hexachloroethane	ND	U	ND	U	ND	U	ND	U	140	
Nitrobenzene	ND	U	ND	U	ND	U	ND	U	340	0.2
Isophorone	ND	U	ND	U	ND	U	ND	U	2000	4.4
2-Nitrophenol	ND	U	ND	U	ND	U	ND	U		0.33
2,4-Dimethylphenol	ND	U	ND	U	ND	U	ND	U	14,000	
Bis(2-chloroethoxy)methane	ND	U	ND	U	ND	U	ND	U		
2,4-Dichlorophenol	ND	U	ND	U	ND	U	ND	U	2100	0.4
Naphthalene	ND	U	ND	U	ND	U	ND	U	12,000	13
4-Chloroaniline	ND	U	ND	U	ND	U	ND	U	2700	0.22
Hexachlorobutadiene	ND	U	ND	U	ND	U	ND	U	25	
Caprolactam	ND	U	ND	U	ND	U	ND	U		
4-Chloro-3-methylphenol	ND	U	ND	U	ND	U	ND	U		0.24
2-Methylnaphthalene	ND	U	ND	U	ND	U	ND	U		36.4
Hexachlorocyclo-pentadiene	ND	U	ND	U	ND	U	ND	U	4800	
2,4,6-Trichlorophenol	ND	U	ND	U	ND	U	ND	U	170	
2,4,5-Trichlorophenol	ND	U	ND	U	ND	U	ND	U	68,000	0.1
1,1-Biphenyl	ND	U	ND	U	ND	U	ND	U		
2-Chloronaphthalene	ND	U	ND	U	ND	U	ND	U		
2-Nitroaniline	ND	U	ND	U	ND	U	ND	U		0.43
Dimethylphthalate	ND	U	ND	U	ND	U	ND	U		2
2,6-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U	3	1
Acenaphthylene	ND	U	ND	U	ND	U	ND	U		41
3-Nitroaniline	ND	U	ND	U	ND	U	ND	U		0.5
Acenaphthene	ND	U	ND	U	ND	U	ND	U	37,000	50
2,4-Dinitrophenol	ND	U	ND	U	ND	U	ND	U	1400	0.2

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Soil Sample Data (mg/kg)

Samples Continued:	B-18A B3L85	Qualifier	B-19C B3L90	Qualifier	B-20C B3L94	Qualifier	B-20D B3L95	Qualifier Duplicate	Commercial SSLs	NY TAGM SCOs
4-Nitrophenol	ND	U	ND	U	ND	U	ND	U		0.1
Dibenzofuran	ND	U	ND	U	ND	U	ND	U		6.2
2,4-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U	3	
Diethylphthalate	ND	U	ND	U	ND	U	ND	U	550,000	7.1
Fluorene	ND	U	ND	U	ND	U	ND	U	24,000	50
4-Chlorophenyl-phenyl ether	ND	U	ND	U	ND	U	ND	U		
4-Nitroaniline	ND	U	ND	U	ND	U	ND	U		
4,6-Dinitro-2-methylphenol	ND	U	ND	U	ND	U	ND	U		
N-Nitroso diphenylamine	ND	U	ND	U	ND	U	ND	U	390	
1,2,4,5-Tetrachlorobenzene	ND	U	ND	U	ND	U	ND	U		
4-Bromophenyl-phenylether	ND	U	ND	U	ND	U	ND	U		
Hexachlorobenzene	ND	U	ND	U	ND	U	ND	U		0.41
Atrazine	ND	U	ND	U	ND	U	ND	U		
Pentachlorophenol	ND	U	ND	U	ND	U	ND	U	10	1
Phenanthrene	0.27	J	0.024	J	ND	U	ND	U		50
Anthracene	0.064	J	ND	U	ND	U	ND	U	180,000	50
Di-n-butylphthalate	ND	U	ND	U	ND	U	ND	U	68,000	8.1
Fluoranthene	0.48		0.032	J	ND	U	ND	U	24,000	50
Pyrene	0.38	J	0.026	J	ND	U	ND	U	18,000	50
Butylbenzylphthalate	ND	U	ND	U	ND	U	ND	U	140,000	50
3,3-Dichlorobenzidine	ND	U	ND	U	ND	U	ND	U	4	
Benzo(a)anthracene	0.23	J	ND	U	ND	U	ND	U	2	0.224
Chrysene	0.27	J	ND	U	ND	U	ND	U	230	0.4
Bis(2-ethylhexyl)phthalate	ND	U	ND	U	ND	U	ND	U	140	50
Di-n-octylphthalate	0.52		ND	U	ND	U	ND	U	14,000	50
Benzo(b)fluoranthene	0.26	J	ND	U	ND	U	ND	U	2	1.1
Benzo(k)fluoranthene	0.24	J	ND	U	ND	U	ND	U	23	1.1
Benzo(a)pyrene	0.24	J	0.019	J	ND	U	ND	U	0.2	0.061
Indeno(1,2,3-cd)-pyrene	0.19	J	ND	U	ND	U	ND	U	2	3.2
Dibenzo(a,h)-anthracene	0.051	J	ND	U	ND	U	ND	U	0.2	0.014
Benzo(g,h,i)perylene	0.16	J	ND	U	ND	U	ND	U		50
2,3,4,6-Tetrachlorophenol	ND	U	ND	U	ND	U	ND	U		
Carbazole	0.052	J	ND	U	ND	U	ND	U	96	

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Soil Sample Data (mg/kg)

	S-3A B3L96	Qualifier	S-4A B3L97	Qualifier	DB-1 B3L98	Qualifier	B-23A B3LA3	Qualifier	Commercial SSLs	NY TAGM SCOs
Benzaldehyde	ND	U	ND	U	0.94	J	ND	U		
Phenol	ND	U	ND	U	ND	U	ND	U	410,000	0.03
Bis-(2-chloroethyl)ether	ND	U	ND	U	ND	U	ND	U	2	
2-Chlorophenol	ND	U	ND	U	ND	U	ND	U	3400	0.8
2-Methylphenol	ND	U	ND	U	ND	U	ND	U	34,000	0.1
2,2'-Oxybis(1-chloropropane)	ND	U	ND	U	ND	U	ND	U		
Acetophenone	ND	U	ND	U	0.57	J	0.1	J		
4-Methylphenol	ND	U	ND	U	ND	U	ND	U		0.9
N-Nitroso-di-n propylamine	ND	U	ND	U	ND	U	ND	U	0.3	
Hexachloroethane	ND	U	ND	U	ND	U	ND	U	140	
Nitrobenzene	ND	U	ND	U	ND	U	ND	U	340	0.2
Isophorone	ND	U	ND	U	ND	U	ND	U	2000	4.4
2-Nitrophenol	ND	U	ND	U	ND	U	ND	U		0.33
2,4-Dimethylphenol	ND	U	ND	U	ND	U	ND	U	14,000	
Bis(2-chloroethoxy)methane	ND	U	ND	U	ND	U	ND	U		
2,4-Dichlorophenol	ND	U	ND	U	ND	U	ND	U	2100	0.4
Naphthalene	ND	U	ND	U	0.22	J	ND	U	12,000	13
4-Chloroaniline	ND	U	ND	U	ND	U	ND	U	2700	0.22
Hexachlorobutadiene	ND	U	ND	U	ND	U	ND	U	25	
Caprolactam	ND	U	ND	U	ND	U	ND	U		
4-Chloro-3-methylphenol	ND	U	ND	U	ND	U	ND	U		0.24
2-Methylnaphthalene	ND	U	ND	U	ND	U	ND	U		36.4
Hexachlorocyclo-pentadiene	ND	U	ND	U	ND	U	ND	U	4800	
2,4,6-Trichlorophenol	ND	U	ND	U	ND	U	ND	U	170	
2,4,5-Trichlorophenol	ND	U	ND	U	ND	U	ND	U	68,000	0.1
1,1-Biphenyl	ND	U	ND	U	ND	U	ND	U		
2-Chloronaphthalene	ND	U	ND	U	ND	U	ND	U		
2-Nitroaniline	ND	U	ND	U	ND	U	ND	U		0.43
Dimethylphthalate	ND	U	ND	U	0.25	J	ND	U		2
2,6-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U	3	1
Acenaphthylene	ND	U	ND	U	ND	U	ND	U		41
3-Nitroaniline	ND	U	ND	U	ND	U	ND	U		0.5
Acenaphthene	ND	U	ND	U	0.22	J	ND	U	37,000	50
2,4-Dinitrophenol	ND	U	ND	U	ND	U	ND	U	1400	0.2

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Soil Sample Data (mg/kg)

Samples Continued:	S-3A B3L96	Qualifier	S-4A B3L97	Qualifier	DB-1 B3L98	Qualifier	B-23A B3LA3	Qualifier	Commercial SSLs	NY TAGM SCOs
4-Nitrophenol	ND	U	ND	U	ND	U	ND	U		0.1
Dibenzofuran	ND	U	ND	U	ND	U	ND	U		6.2
2,4-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U	3	
Diethylphthalate	ND	U	ND	U	ND	U	ND	U	550,000	7 1
Fluorene	ND	U	ND	U	0.27	J	ND	U	24,000	50
4-Chlorophenyl-phenyl ether	ND	U	ND	U	ND	U	ND	U		
4-Nitroaniline	ND	U	ND	U	ND	U	ND	U		
4,6-Dinitro-2-methylphenol	ND	U	ND	U	ND	U	ND	U		
N-Nitroso diphenylamine	ND	U	ND	U	ND	U	ND	U	390	
1,2,4,5-Tetrachlorobenzene	ND	U	ND	U	ND	U	ND	U		
4-Bromophenyl-phenylether	ND	U	ND	U	ND	U	ND	U		
Hexachlorobenzene	ND	U	ND	U	ND	U	ND	U		0.41
Atrazine	ND	U	ND	U	ND	U	ND	U		
Pentachlorophenol	ND	U	ND	U	ND	U	ND	U	10	1
Phenanthrene	ND	U	ND	U	1.7	J	0.33	J		50
Anthracene	ND	U	ND	U	0.39	J	0.081	J	180,000	50
Di-n-butylphthalate	ND	U	ND	U	ND	U	ND	U	68,000	8.1
Fluoranthene	ND	U	ND	U	1.9		0.7		24,000	50
Pyrene	ND	U	ND	U	0.36	J	0.6		18,000	50
Butylbenzylphthalate	1.8	J	ND	U	1.5	J	ND	U	140,000	50
3,3-Dichlorobenzidine	ND	U	ND	U	ND	U	ND	U	4	
Benzo(a)anthracene	ND	U	ND	U	0.94	J	0.38		2	0.224
Chrysene	ND	U	ND	U	0.74	J	0.39		230	0.4
Bis(2-ethylhexyl)phthalate	48		30		20	DL	ND	U	140	50
Di-n-octylphthalate	2.5	J	6.1	J	2.1		ND	U	14,000	50
Benzo(b)fluoranthene	ND	U	ND	U	0.65	J	0.42		2	1.1
Benzo(k)fluoranthene	ND	U	ND	U	0.65	J	0.44		23	1.1
Benzo(a)pyrene	ND	U	ND	U	ND	U	0.43		0.2	0.061
Indeno(1.2,3-cd)-pyrene	ND	U	ND	U	ND	U	0.34	J	2	3.2
Dibenzo(a,h)-anthracene	ND	U	ND	U	ND	U	0.077	J	0.2	0.014
Benzo(g,h,i)perylene	ND	U	ND	U	ND	U	0.28	J		50
2,3,4,6-Tetrachlorophenol	ND	U	ND	U	ND	U	ND	U		
Carbazole	ND	U	ND	U	0.19	J	0.064	J	96	

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Soil Sample Data (mg/kg)

	B-24B B3LA6	Qualifier	B-24C B3LA7	Qualifier	DB-2A B3LB2	Qualifier	DB-2B B3LB3	Qualifier	Commercial SSLs	NY TAGM SCOs
Benzaldehyde	ND	U	ND	U	ND	U	ND	U		
Phenol	ND	U	ND	U	ND	U	ND	U	410,000	0.03
Bis-(2-chloroethyl)ether	ND	U	ND	U	ND	U	ND	U	2	
2-Chlorophenol	ND	U	ND	U	ND	U	ND	U	3400	0.8
2-Methylphenol	ND	U	ND	U	ND	U	ND	U	34,000	0.1
2,2'-Oxybis(1-chloropropane)	ND	U	ND	U	ND	U	ND	U		
Acetophenone	ND	U	ND	U	ND	U	ND	U		
4-Methylphenol	ND	U	ND	U	ND	U	ND	U		0.9
N-Nitroso-di-n propylamine	ND	U	ND	U	ND	U	ND	U	0.3	
Hexachloroethane	ND	U	ND	U	ND	U	ND	U	140	
Nitrobenzene	ND	U	ND	U	ND	U	ND	U	340	0.2
Isophorone	ND	U	ND	U	ND	U	ND	U	2000	4.4
2-Nitrophenol	ND	U	ND	U	ND	U	ND	U		0.33
2,4-Dimethylphenol	ND	U	ND	U	ND	U	ND	U	14,000	
Bis(2-chloroethoxy)methane	ND	U	ND	U	ND	U	ND	U		
2,4-Dichlorophenol	ND	U	ND	U	ND	U	ND	U	2100	0.4
Naphthalene	ND	U	ND	U	0.49	J	7.4		12,000	13
4-Chloroaniline	ND	U	ND	U	ND	U	ND	U	2700	0.22
Hexachlorobutadiene	ND	U	ND	U	ND	U	ND	U	25	
Caprolactam	ND	U	ND	U	ND	U	ND	U		
4-Chloro-3-methylphenol	ND	U	ND	U	ND	U	ND	U		0.24
2-Methylnaphthalene	ND	U	ND	U	ND	U	1.8	J		36.4
Hexachlorocyclo-pentadiene	ND	U	ND	U	ND	U	ND	U	4800	
2,4,6-Trichlorophenol	ND	U	ND	U	ND	U	ND	U	170	
2,4,5-Trichlorophenol	ND	U	ND	U	ND	U	ND	U	68,000	0.1
1,1-Biphenyl	ND	U	ND	U	ND	U	ND	U		
2-Chloronaphthalene	ND	U	ND	U	ND	U	ND	U		
2-Nitroaniline	ND	U	ND	U	ND	U	ND	U		0.43
Dimethylphthalate	ND	U	ND	U	ND	U	ND	U		2
2,6-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U	3	1
Acenaphthylene	ND	U	ND	U	0.78	J	ND	U		41
3-Nitroaniline	ND	U	ND	U	ND	U	ND	U		0.5
Acenaphthene	ND	U	ND	U	0.74	J	3.6	J	37,000	50
2,4-Dinitrophenol	ND	U	ND	U	ND	U	ND	U	1400	0.2

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Soil Sample Data (mg/kg)

Samples Continued:	B-24B B3LA6	Qualifier	B-24C B3LA7	Qualifier	DB-2A B3LB2	Qualifier	DB-2B B3LB3	Qualifier	Commercial SSLs	NY TAGM SCOs
4-Nitrophenol	ND	U	ND	U	ND	U	ND	U		0.1
Dibenzofuran	ND	U	ND	U	0.51	J	3 2	J		6.2
2.4-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U	3	
Diethylphthalate	ND	U	ND	U	ND	U	ND	U	550,000	7.1
Fluorene	ND	U	ND	U	0.9	J	3.9	J	24,000	50
4-Chlorophenyl-phenyl ether	ND	U	ND	U	ND	U	ND	U		
4-Nitroaniline	ND	U	ND	U	ND	U	ND	U		
4.6-Dinitro-2-methylphenol	ND	U	ND	U	ND	U	ND	U		
N-Nitroso diphenylamine	ND	U	ND	U	ND	U	ND	U	390	
1,2,4,5-Tetrachlorobenzene	ND	U	ND	U	ND	U	ND	U		
4-Bromophenyl-phenylether	ND	U	ND	U	ND	U	ND	U		
Hexachlorobenzene	ND	U	ND	U	ND	U	ND	U		0.41
Atrazine	ND	U	ND	U	ND	U	ND	U		
Pentachlorophenol	ND	U	ND	U	ND	U	ND	U	10	1
Phenanthrene	0.03	J	0.049	J	8.9		30			50
Anthracene	ND	U	ND	U	2.6		7	J	180,000	50
Di-n-butylphthalate	ND	U	ND	U	0.43	J	ND	U	68,000	8.1
Fluoranthene	ND	U	0.026	J	17		35		24,000	50
Pyrene	ND	U	ND	U	7.9		23		18,000	50
Butylbenzylphthalate	ND	U	ND	U	ND	U	ND	U	140,000	50
3,3-Dichlorobenzidine	ND	U	ND	U	ND	U	ND	U	4	
Benzo(a)anthracene	ND	U	ND	U	7.9		14		2	0.224
Chrysene	ND	U	ND	U	8.3		15		230	0.4
Bis(2-ethylhexyl)phthalate	0.33		0.35		3.5		ND	U	140	50
Di-n-octylphthalate	ND	U	ND	U	ND	U	ND	U	14,000	50
Benzo(b)fluoranthene	ND	U	ND	U	8.5		12		2	1.1
Benzo(k)fluoranthene	ND	U	ND	U	7.1		13		23	1.1
Benzo(a)pyrene	ND	U	ND	U	3.6		10		0.2	0.061
Indeno(1,2,3-cd)-pyrene	ND	U	ND	U	4		9.1		2	3.2
Dibenzo(a,h)-anthracene	ND	U	ND	U	3.1		5	J	0.2	0.014
Benzo(g,h,i)perylene	ND	U	ND	U	0.37	J	0.9	J		50
2,3,4,6-Tetrachlorophenol	ND	U	ND	U	ND	U	ND	U		
Carbazole	ND	U	ND	U	1.3	J	5.6	J	96	

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Soil Sample Data (mg/kg)

	BG-1A B3LC1	Qualifier	BG-1B B3LC2	Qualifier	S-3B B3LC3	Qualifier	S-4B B3LC4	Qualifier	Commercial SSLs	NY TAGM SCOs
Benzaldehyde	ND	U	ND	U	ND	U	ND	U		
Phenol	ND	U	ND	U	ND	U	ND	U	410,000	0.03
Bis-(2-chloroethyl)ether	ND	U	ND	U	ND	U	ND	U	2	
2-Chlorophenol	ND	U	ND	U	ND	U	ND	U	3400	0.8
2-Methylphenol	ND	U	ND	U	ND	U	ND	U	34,000	0.1
2,2'-Oxybis(1-chloropropane)	ND	U	ND	U	ND	U	ND	U		
Acetophenone	ND	U	ND	U	ND	U	ND	U		
4-Methylphenol	ND	U	ND	U	ND	U	ND	U		0.9
N-Nitroso-di-n propylamine	ND	U	ND	U	ND	U	ND	U	0.3	
Hexachloroethane	ND	U	ND	U	ND	U	ND	U	140	
Nitrobenzene	ND	U	ND	U	ND	U	ND	U	340	0.2
Isophorone	ND	U	ND	U	ND	U	ND	U	2000	4.4
2-Nitrophenol	ND	U	ND	U	ND	U	ND	U		0.33
2,4-Dimethylphenol	ND	U	ND	U	ND	U	ND	U	14,000	
Bis(2-chloroethoxy)methane	ND	U	ND	U	ND	U	ND	U		
2,4-Dichlorophenol	ND	U	ND	U	ND	U	ND	U	2100	0.4
Naphthalene	0.048	J	0.28	J	ND	U	ND	U	12,000	13
4-Chloroaniline	ND	U	ND	U	ND	U	ND	U	2700	0.22
Hexachlorobutadiene	ND	U	ND	U	ND	U	ND	U	25	
Caprolactam	ND	U	ND	U	ND	U	ND	U		
4-Chloro-3-methylphenol	ND	U	ND	U	ND	U	ND	U		0.24
2-Methylnaphthalene	0.02	J	0.11	J	ND	U	ND	U		36.4
Hexachlorocyclo-pentadiene	ND	U	ND	U	ND	U	ND	U	4800	
2,4,6-Trichlorophenol	ND	U	ND	U	ND	U	ND	U	170	
2,4,5-Trichlorophenol	ND	U	ND	U	ND	U	ND	U	68,000	0.1
1,1-Biphenyl	ND	U	ND	U	ND	U	ND	U		
2-Chloronaphthalene	ND	U	ND	U	ND	U	ND	U		
2-Nitroaniline	ND	U	ND	U	ND	U	ND	U		0.43
Dimethylphthalate	ND	U	ND	U	ND	U	0.89	J		2
2,6-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U	3	1
Acenaphthylene	ND	U	0.13	J	ND	U	ND	U		41
3-Nitroaniline	ND	U	ND	U	ND	U	ND	U		0.5
Acenaphthene	ND	U	ND	U	ND	U	ND	U	37,000	50
2,4-Dinitrophenol	ND	U	ND	U	ND	U	ND	U	1400	0.2

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Soil Sample Data (mg/kg)

Samples Continued:	BG-1A B3LC1	Qualifier	BG-1B B3LC2	Qualifier	S-3B B3LC3	Qualifier	S-4B B3LC4	Qualifier	Commercial SSLs	NY TAGM SCOs
4-Nitrophenol	ND	U	ND	U	ND	U	ND	U		0.1
Dibenzofuran	ND	U	ND	U	ND	U	ND	U		6.2
2,4-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U	3	
Diethylphthalate	ND	U	ND	U	ND	U	ND	U	550,000	7.1
Fluorene	ND	U	0.089	J	ND	U	ND	U	24,000	50
4-Chlorophenyl-phenyl ether	ND	U	ND	U	ND	U	ND	U		
4-Nitroaniline	ND	U	ND	U	ND	U	ND	U		
4,6-Dinitro-2-methylphenol	ND	U	ND	U	ND	U	ND	U		
N-Nitroso diphenylamine	ND	U	ND	U	ND	U	ND	U	390	
1,2,4,5-Tetrachlorobenzene	ND	U	ND	U	ND	U	ND	U		
4-Bromophenyl-phenylether	ND	U	ND	U	ND	U	ND	U		
Hexachlorobenzene	ND	U	ND	U	ND	U	ND	U		0.41
Atrazine	ND	U	ND	U	ND	U	ND	U		
Pentachlorophenol	ND	U	ND	U	ND	U	ND	U	10	1
Phenanthrene	0.12	J	1.1		ND	U	ND	U		50
Anthracene	0.026	J	0.28	J	ND	U	ND	U	180,000	50
Di-n-butylphthalate	ND	U	0.14	J	ND	U	ND	U	68,000	8.1
Fluoranthene	0.16	J	3.1		ND	U	ND	U	24,000	50
Pyrene	0.093	J	2.3		ND	U	ND	U	18,000	50
Butylbenzylphthalate	ND	U	ND	U	ND	U	0.68	J	140,000	50
3,3-Dichlorobenzidine	ND	U	ND	U	ND	U	ND	U	4	
Benzo(a)anthracene	0.077	J	1.5		ND	U	ND	U	2	0.224
Chrysene	0.095	J	1.9		ND	U	ND	U	230	0.4
Bis(2-ethylhexyl)phthalate	ND	U	ND	U	9.4		63		140	50
Di-n-octylphthalate	ND	U	ND	U	ND	U	3.1	J	14,000	50
Benzo(b)fluoranthene	0.089	J	1.9		ND	U	ND	U	2	1.1
Benzo(k)fluoranthene	0.066	J	1.6		ND	U	ND	U	23	1.1
Benzo(a)pyrene	0.026	J	1.7		ND	U	ND	U	0.2	0.061
Indeno(1.2,3-cd)-pyrene	0.034	J	1.6		ND	U	ND	U	2	3.2
Dibenzo(a,h)-anthracene	ND	U	0.71		ND	U	ND	U	0.2	0.014
Benzo(g.h,i)perylene	ND	U	0.52	J	ND	U	ND	U		50
2,3,4,6-Tetrachlorophenol	ND	U	ND	U	ND	U	ND	U		
Carbazole	ND	U	0.12	J	ND	U	ND	U	96	

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Blank Sample Data (ug/L)

	RB-01 B3LA8	Qualifier	RB-02 B3LA9	Qualifier
Benzaldehyde	ND	U	ND	U
Phenol	ND	U	ND	U
Bis-(2-chloroethyl)ether	ND	U	ND	U
2-Chlorophenol	ND	U	ND	U
2-Methylphenol	ND	U	ND	U
2,2'-Oxybis(1-chloropropane)	ND	U	ND	U
Acetophenone	ND	U	ND	U
4-Methylphenol	ND	U	ND	U
N-Nitroso-di-n propylamine	ND	U	ND	U
Hexachloroethane	ND	U	ND	U
Nitrobenzene	ND	U	ND	U
Isophorone	ND	U	ND	U
2-Nitrophenol	ND	U	ND	U
2.4-Dimethylphenol	ND	U	ND	U
Bis(2-chloroethoxy)methane	ND	U	ND	U
2.4-Dichlorophenol	ND	U	ND	U
Naphthalene	ND	U	ND	U
4-Chloroaniline	ND	U	ND	U
Hexachlorobutadiene	ND	U	ND	U
Caprolactam	ND	U	ND	U
4-Chloro-3-methylphenol	ND	U	ND	U
2-Methylnaphthalene	ND	U	ND	U
Hexachlorocyclo-pentadiene	ND	U	ND	U
2,4,6-Trichlorophenol	ND	U	ND	U
2,4,5-Trichlorophenol	ND	U	ND	U
1,1-Biphenyl	ND	U	ND	U
2-Chloronaphthalene	ND	U	ND	U
2-Nitroaniline	ND	U	ND	U
Dimethylphthalate	ND	U	ND	U
2,6-Dinitrotoluene	ND	U	ND	U
Acenaphthylene	ND	U	ND	U
3-Nitroaniline	ND	U	ND	U
Acenaphthene	ND	U	ND	U
2,4-Dinitrophenol	ND	U	ND	U

ND/U - Non detect
J - Estimated

Table 3: Base Neutral Extractable Blank Sample Data (ug/L)

Samples Continued:	RB-01 B3LA8	Qualifier	RB-02 B3LA9	Qualifier
4-Nitrophenol	ND	U	ND	U
Dibenzofuran	ND	U	ND	U
2,4-Dinitrotoluene	ND	U	ND	U
Diethylphthalate	ND	U	ND	U
Fluorene	ND	U	ND	U
4-Chlorophenyl-phenyl ether	ND	U	ND	U
4-Nitroaniline	ND	U	ND	U
4,6-Dinitro-2-methylphenol	ND	U	ND	U
N-Nitroso diphenylamine	ND	U	ND	U
1,2,4,5-Tetrachlorobenzene	ND	U	ND	U
4-Bromophenyl-phenylether	ND	U	ND	U
Hexachlorobenzene	ND	U	ND	U
Atrazine	ND	U	ND	U
Pentachlorophenol	ND	U	ND	U
Phenanthrene	ND	U	ND	U
Anthracene	ND	U	ND	U
Di-n-butylphthalate	ND	U	ND	U
Fluoranthene	ND	U	ND	U
Pyrene	ND	U	ND	U
Butylbenzylphthalate	ND	U	ND	U
3,3-Dichlorobenzidine	ND	U	ND	U
Benzo(a)anthracene	ND	U	ND	U
Chrysene	ND	U	ND	U
Bis(2-ethylhexyl)phthalate	ND	U	ND	U
Di-n-octylphthalate	ND	U	ND	U
Benzo(b)fluoranthene	ND	U	ND	U
Benzo(k)fluoranthene	ND	U	ND	U
Benzo(a)pyrene	ND	U	ND	U
Indeno(1,2,3-cd)-pyrene	ND	U	ND	U
Dibenzo(a,h)-anthracene	ND	U	ND	U
Benzo(g,h,i)perylene	ND	U	ND	U
2,3,4,6-Tetrachlorophenol	ND	U	ND	U
Carbazole	ND	U	ND	U

ND/U - Non detect
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	B-1A	Qualifier	B-1B	Qualifier	B-1C	Qualifier	B-2A	Qualifier	B-2B	Qualifier	Commercial	NY TAGM
	MB3L29		MB3L30		MB3L31		MB3L32		MB3L33		SSLs	SCOs
Aluminum	4580		2450		2890		4840		4550			
Antimony	ND	U	ND	U	ND	U	ND	U	ND	U	450	
Arsenic	ND	U	ND	U	ND	U	8.88	B	ND	U	2	7.5
Barium	36.6	B	16.6	B	18.6	B	24.9	B	23.4	B	79,000	300
Beryllium	ND	U	ND	U	ND	U	ND	U	ND	U	2300	0 16
Cadmium	67.9		29.1		68.5		195		134		900	1
Calcium	102,000		64,200		76.000		22,300		150.000			
Chromium	286		78.8		201		2170		485		3400	10
Cobalt	6	B	2 78	B	3.7	B	4.85	B	4.35	B		30
Copper	119		15.2	B	174		573		378			25
Iron	15,600		8070		10,400		31,500		20,400			2000
Lead	29.8		3.6		34		194		122		750	
Magnesium	25,800		5390		13,600		6900		42,800			
Manganese	844		275		333		617		360			
Nickel	99.2		25.9		884		1700		1250		23,000	13
Potassium	2110	B	794	B	937	B	1150	B	1280	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	0.63	B	ND	U	1.44	B	1.71	B	0.28	B	5700	
Sodium	285	B	349	B	202	B	234	B	223			
Thallium	0.22	B	0.09	B	0.12	B	0 22	B	0.17	B	91	
Vanadium	23.2	B	9.27	B	11.7	B	ND	U	23.1	B	7900	150
Zinc	1140		336		1120		758		822		340,000	20
Cyanide	8.5	J	0.92	J	5.6	J	6.9	J	2.2	J	23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	B-3A	Qualifier	B-3B	Qualifier	B-4A	Qualifier	B-4B	Qualifier	B-4C	Qualifier	Commercial	NY TAGM
	MB3L34		MB3L35		MB3L36		MB3L37		MB3L38		SSLs	SCOs
Aluminum	1180		3020		2600		2750		3920			
Antimony	1.02	B	1.28	B	ND	U	ND	U	0.66	B	450	
Arsenic	ND	U	ND	U	ND	U	ND	U	ND	U	2	7.5
Barium	6.48	B	25.5	B	29	B	25.6	B	44.4	B	79,000	300
Beryllium	ND	U	ND	U	ND	U	ND	U	ND	U	2300	0.16
Cadmium	34.8		67.3		405		78.4		68.9		900	1
Calcium	1,840	B	35,200		127,000		83 900		125,000			
Chromium	335		705		153		259		760		3400	10
Cobalt	0.41	B	1.81	B	35.3	B	22.8	B	20.9	B		30
Copper	1650		1770		431		208		1890			25
Iron	6,430		19,800		11,200		10,500		23,500			2000
Lead	1350		2370		35.2		32.6		822		750	
Magnesium	218	B	12,700		28,200		19,000		41,000			
Manganese	14.5	B	174		641		422		496			
Nickel	9.12	B	166		9830		9700		11,000		23,000	13
Potassium	985	B	1630	B	1980	B	1900	B	2260	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	1.43	B	1.06	B	2.1	B	2.22	B	1.24	B	5700	
Sodium	407	B	445	B	600	B	756	B	268	B		
Thallium	ND	U	0.12	B	0.13	B	0.22	B	0.21	B	91	
Vanadium	2.85	B	10.9	B	11.6	B	8.64	B	14.5	B	7900	150
Zinc	607		1380		843		889		4690		340,000	20
Cyanide	16.4		57.1		10.9	J	5.3	J	10.2	J	23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	B-6A	Qualifier	B-6B	Qualifier	B-6C	Qualifier	B-6D	Qualifier	B-5A	Qualifier	Commercial	NY TAGM
	MB3L39		MB3L40		MB3L41		MB3L42	Duplicate	MB3L43		SSLs	SCOs
Aluminum	2410		2180		2800		2450		4570			
Antimony	ND	U	ND	U	ND	U	ND	U	2.51	B	450	
Arsenic	3.31	B	ND	U	ND	U	ND	U	18.8		2	7.5
Barium	20.6	B	30.9	B	25.9	B	24.1	B	183	B	79,000	300
Beryllium	ND	U	ND	U	ND	U	ND	U	ND	U	2300	0.16
Cadmium	106		99.2		197		215		72.4		900	1
Calcium	114,000		145,000		150,000		138,000		52,100			
Chromium	54.5		44.8		43		40.4		130		3400	10
Cobalt	9.04	B	7.32	B	5.98	B	5.64	B	3.71	B		30
Copper	877		938		645		596		3540			25
Iron	12,000		12,500		11,700		10,200		41,500			2000
Lead	33.2		398		104		97.8		932		750	
Magnesium	31,600		47,800		26,000		23,400		2,350	B		
Manganese	668		1030		581		497		153			
Nickel	4120		632		1,600		1,380		602		23,000	13
Potassium	606	B	910	B	995	B	920	B	3880	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	ND	U	0.53	B	2.24	B	1.98	B	5.19	B	5700	
Sodium	1180	B	1200	B	821	B	726	B	2070	B		
Thallium	ND	U	ND	U	ND	U	ND	U	0.24	B	91	
Vanadium	9.09	B	9.37	B	9.04	B	ND	U	6.77	B	7900	150
Zinc	843		1840		1050		942		4610		340,000	20
Cyanide	67.7		23.2		24.5		27.9		39.4		23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	B-5B	Qualifier	SS-Hole1	Qualifier	B-7A	Qualifier	B-7B	Qualifier	B-7C	Qualifier	Commercial	NY TAGM
	MB3L44		MB3L45		MB3L46	MS/MSD	MB3L47		MB3L48		SSLs	SCOs
Aluminum	2180		1049		3120		2730		2560			
Antimony	43.2	B	2	B	ND	U	ND	U	ND	U	450	
Arsenic	25.5		3.18	B	ND	U	ND	U	ND	U	2	7.5
Barium	98.4	B	8.55	B	20.1	B	19.7	B	17.7	B	79,000	300
Beryllium	ND	U	ND	U	ND	U	ND	U	ND	U	2300	0.16
Cadmium	1960		445		68.4		115		298		900	1
Calcium	39,300		11,800		95,300		103,000		128,000			
Chromium	4800		79.1		61		92.9		34.8		3400	10
Cobalt	181		1.16	B	3.86	B	2.51	B	3.97	B		30
Copper	12,500		963		35.2		978		592			25
Iron	129,000		7,190		11,800		12,800		11,600			2000
Lead	2200		108		11		1140		8.46		750	
Magnesium	4,860		446	B	20,000		12,400		17,200			
Manganese	1170		61.5		538		250		399			
Nickel	45,900		49.8	B	49.9		34.7	B	210		23,000	13
Potassium	1260	B	2240	B	799	B	795	B	831	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	118		7.34	B	2.53	B	ND	U	0.31	B	5700	
Sodium	476	B	1540	B	764	B	27.2	B	51.3	B		
Thallium	0.22	B	ND	U	ND	U	0.14	B	0.15	B	91	
Vanadium	ND	U	ND	U	12.3	B	ND	U	10.2	B	7900	150
Zinc	32,100		6,110		107		1330		926		340,000	20
Cyanide	50.6		21.2		8	J	7.1	J	9	J	23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	B-9A	Qualifier	B-9B	Qualifier	B-9C	Qualifier	B-9D	Qualifier	B-10A	Qualifier	Commercial	NY TAGM
	MB3L49		MB3L50		MB3L51		MB3L52		MB3L53		SSLs	SCOs
Aluminum	8190		6460		8660		3010		7530			
Antimony	ND	U	ND	U	ND	U	ND	U	0.53	B	450	
Arsenic	ND	U	ND	U	ND	U	ND	U	21.4		2	7.5
Barium	76.2	B	24	B	55.6	B	24.8	B	83.7	B	79,000	300
Beryllium	ND	U	ND	U	ND	U	ND	U	ND	U	2300	0.16
Cadmium	1.98	B	7.81		5.72		9.21		3.29	B	900	1
Calcium	27,800		92,000		79,800		114,000		30,700			
Chromium	30.4		70.8		94.5		37.1		409		3400	10
Cobalt	4.54	B	8.36	B	10.3	B	6	B	7.51	B		30
Copper	21.7	B	691		292		209		218			25
Iron	15,200		8,710		14,600		8,400		27,900			2000
Lead	116		13.1		39		6.9		260		750	
Magnesium	2,140	B	28,900		16,900		32,100		2,050	B		
Manganese	705		462		512		417		569			
Nickel	34.6	B	292		214		414		108		23,000	13
Potassium	792	B	654	B	1850	B	570	B	814	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	0.59	B	0.61	B	0.54	B	0.33	B	0.89	B	5700	
Sodium	13,200		4070	B	5380		264	B	425	B		
Thallium	ND	U	0.16	B	0.16	B	0.1	B	0.33	B	91	
Vanadium	16.4	B	12.2	B	25.3	B	10.9	B	20.3	B	7900	150
Zinc	100		198		200		245		193		340,000	20
Cyanide	1.4	J	ND	U	0.53	J	ND	U	14.5		23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	B-10B	Qualifier	B-10C	Qualifier	B-11A	Qualifier	B-11B	Qualifier	B-11D	Qualifier	Commercial	NY TAGM
	MB3L54		MB3L55		MB3L56		MB3L57		MB3L59	Duplicate	SSLs	SCOs
Aluminum	4950		3980		5940		5050		4240			
Antimony	0.46	B	ND	U	ND	U	ND	U	ND	U	450	
Arsenic	ND	U	ND	U	2.18	B	ND	U	ND	U	2	7.5
Barium	51.1	B	45.6	B	37.9	B	27	B	25	B	79,000	300
Beryllium	ND	U	ND	U	ND	U	ND	U	ND	U	2300	0.16
Cadmium	3.24	B	9.11		1.12	B	1.11	B	0.96	B	900	1
Calcium	122,000		192,000		15,300		99,100		95,200			
Chromium	246		86.2		33.9		34.3		27.9		3400	10
Cobalt	5.65	B	4.89	B	4.35	B	4.12	B	3.69	B		30
Copper	354		180		72.3		96.8		40.6			25
Iron	11,500		9,570		16,100		9,950		8,990			2000
Lead	58		41.4		12.5		5.2		3.5		750	
Magnesium	20,000		26,700		3,080	B	15,500		9,220			
Manganese	466		497		559		447		406			
Nickel	327		157		16.7	B	14.9	B	13.4	B	23,000	13
Potassium	664	B	641	B	1040	B	903	B	702	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	ND	U	0.68	B	ND	U	ND	U	ND	U	5700	
Sodium	315	B	336	B	515	B	197	B	168	B		
Thallium	0.11	B	ND	U	0.01	B	0.19	B	0.12	B	91	
Vanadium	ND	U	10.6	B	44.6	B	16	B	11.4	B	7900	150
Zinc	145		88.5		90		112		108		340,000	20
Cyanide	0.19	J	0.11	J	0.87	J	ND	U	0.13	J	23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	B-11C	Qualifier	B-12A	Qualifier	B-12B	Qualifier	B-12C	Qualifier	B-13A	Qualifier	Commercial	NY TAGM
	MB3L58		MB3L64		MB3L65		MB3L66		MB3L67	MS/MSD	SSLs	SCOs
Aluminum	4470		5140		3010		2310		4840			
Antimony	0.33	B	ND	U	ND	U	ND	U	ND	U	450	
Arsenic	ND	U	ND	U	ND	U	ND	U	8.64	B	2	7.5
Barium	40.1	B	75.1	B	24.9	B	17.4	B	148	B	79,000	300
Beryllium	ND	U	0.3	B	ND	U	ND	U	0.62	B	2300	0.16
Cadmium	2.52	B	5.83		0.43	B	0.22	B	32.6		900	1
Calcium	118,000		18,700		92,200		90,200		13,100			
Chromium	106		18		11.3	B	6.33	B	94.1		3400	10
Cobalt	3.43	B	4.42	B	3.18	B	2.85	B	5.12	B		30
Copper	618		42.2		15.5	B	9.45	B	119			25
Iron	9,880		16,500		9,580		7,670		18,100			2000
Lead	53.3		81.3		54.1		4.58		210		750	
Magnesium	14,800		3,650	B	29,300		12,600		1,690	B		
Manganese	416		678		529		298		702			
Nickel	28.4	B	160		21.7	B	9.24	B	188		23,000	13
Potassium	722	B	510	B	1310	B	679	B	596	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	ND	U	4.56	B	ND	U	ND	U	3.96	B	5700	
Sodium	486		209	B	328	B	226	B	402	B		
Thallium	0.1	B	0.4	B	0.12	B	0.09	B	0.65	B	91	
Vanadium	12.9	B	12.1	B	17.4	B	10.9	B	15.1	B	7900	150
Zinc	633		92.4		46.2		34.2		264		340,000	20
Cyanide	1.4	J	1.7	J	0.52	J	ND	U	30.7		23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	B-13B	Qualifier	B-13C	Qualifier	B-14A	Qualifier	B-14C	Qualifier	B-14D	Qualifier	Commercial	NY TAGM
	MB3L68		MB3L69		MB3L70		MB3L71		MB3L72		SSLs	SCOs
Aluminum	4880		3280		4530		3450		3540			
Antimony	ND	U	ND	U	0.38	B	4.68	B	0.34	B	450	
Arsenic	ND	U	ND	U	3.71	B	ND	U	ND	U	2	7.5
Barium	52.1	B	42.2	B	109	B	90.9	B	59.3	B	79,000	300
Beryllium	ND	U	ND	U	0.26	B	ND	U	ND	U	2300	0.16
Cadmium	5.16	B	12.8		0.33	B	0.24	B	0.25	B	900	1
Calcium	68,100		92,100		51,400		99,100		109,000			
Chromium	59.2		54.4		6.68	B	11.4		9.12	B	3400	10
Cobalt	7.41	B	3.18	B	4.46	B	3.5	B	3.63	B		30
Copper	31		37.3		20.5		28.5		27.2			25
Iron	11,300		11,200		12,000		10,040		10,700			2000
Lead	70.3		39.2		233		178		121		750	
Magnesium	19,300		25,600		8,710		12,800		13,600			
Manganese	959		766		516		518		594			
Nickel	71.3		63.7		12.6	B	12.3	B	10.3	B	23,000	13
Potassium	1560	B	975	B	648	B	645	B	644	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	1.06	B	0.86	B	ND	U	0.99	B	ND	U	5700	
Sodium	370	B	259		301	B	277	B	273	B		
Thallium	0.17	B	0.11	B	0.16	B	0 1	B	0.1	B	91	
Vanadium	21.5	B	14.9	B	17.1	B	12.8	B	14.3	B	7900	150
Zinc	91.5		321		169.0		112		98.8		340,000	20
Cyanide	1.6	J	3.8	J	ND	U	5.2	J	ND	U	23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	B-15A	Qualifier	B-15B	Qualifier	B-15C	Qualifier	B-16A	Qualifier	CSR-1A	Qualifier	Commercial	NY TAGM
	MB3L74		MB3L75		MB3L76		MB3L77		MB3L78		SSLs	SCOs
Aluminum	5600		4710		3250		4410		2610			
Antimony	ND	U	ND	U	ND	U	ND	U	ND	U	450	
Arsenic	2.07	B	ND	U	7.92	B	ND	U	1.61	B	2	7.5
Barium	95.8	B	34.9	B	32.1	B	48.1	B	10.2	B	79,000	300
Beryllium	ND	U	ND	U	ND	U	ND	U	0.37	B	2300	0.16
Cadmium	0.1	B	ND	U	ND	U	0.1	B	45.4		900	1
Calcium	30,500		46,500		117,000		41,500		14,600			
Chromium	7.85	B	9.51	B	7.94	B	6.38	B	139		3400	10
Cobalt	4.22	B	4.16	B	3.66	B	5.5	B	4.12	B		30
Copper	22.2	B	12.8	B	13.6	B	20.4	B	10.6	B		25
Iron	11,900		13,500		9,910		13,700		8,540			2000
Lead	208		8.7		8.93		125		6.37		750	
Magnesium	4,460	B	9,860		17,500		5,940		4,290	B		
Manganese	811		511		481		720		195			
Nickel	27.8	B	11.4	B	9.03	B	16.6	B	10.7	B	23,000	13
Potassium	621	B	1910	B	889	B	599	B	513	B		
Selenium	1.15	B	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	ND	U	ND	U	ND	U	ND	U	0.5	B	5700	
Sodium	231	B	200	B	182	B	252	B	453	B		
Thallium	ND	U	ND	U	0.08	B	ND	U	ND	U	91	
Vanadium	16.8	B	22.3	B	12.2	B	12.1	B	ND	U	7900	150
Zinc	116		86.7		41.0		132		353		340,000	20
Cyanide	ND	U	ND	U	ND	U	ND	U	0.3	J	23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	CSR-1B	Qualifier	CSR-2A	Qualifier	CSR-2B	Qualifier	B-17A	Qualifier	B-17B	Qualifier	Commercial	NY TAGM
	MB3L79		MB3L80		MB3L81		MB3L82		MB3L83		SSLs	SCOs
Aluminum	2420		2600		2050		8050		7340			
Antimony	ND	U	ND	U	ND	U	ND	U	ND	U	450	
Arsenic	ND	U	ND	U	1.41	B	ND	U	ND	U	2	7.5
Barium	19.2	B	11.2	B	16.8	B	74.8	B	72.6	B	79,000	300
Beryllium	0.42	B	0.29	B	0.41	B	ND	U	ND	U	2300	0.16
Cadmium	0.99	B	0.31	B	1.5	B	0.5	B	0.3	B	900	1
Calcium	9,250		19,400		60,100		12,700		15,000			
Chromium	45.1		29.4	B	59.7		10.8	B	8.43	B	3400	10
Cobalt	2.97	B	4.35	B	3.06	B	4.3	B	4.15	B		30
Copper	27.7		10.7	B	10.6	B	17.6	B	12.1	B		25
Iron	7,320		7,860		7,320		14,800		13,500			2000
Lead	22.2		4.21		31.5		215		228		750	
Magnesium	2,810	B	2,760	B	24,200		2,930	B	2,630			
Manganese	270		186		573		745		668			
Nickel	7.5	B	7.95	B	12.7	B	18.2	B	12.6	B	23,000	13
Potassium	576	B	352	B	387	B	530	B	461	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	ND	U	2.39	B	0.81	B	ND	U	ND	U	5700	
Sodium	418	B	373	B	484	B	246	B	215	B		
Thallium	ND	U	ND	U	0.1	B	ND	U	ND	U	91	
Vanadium	ND	U	ND	U	ND	U	17.5	B	14.2	B	7900	150
Zinc	119		103		79		165		153		340,000	20
Cyanide	ND	U	ND	U	ND	U	ND	U	ND	U	23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	B-17C	Qualifier	B-18A	Qualifier	B-18B	Qualifier	B-18C	Qualifier	B-19A	Qualifier	Commercial	NY TAGM
	MB3L84		MB3L85		MB3L86	MS/MSD	MB3L87		MB3L88		SSLs	SCOs
Aluminum	2367		6540		5300		3270		5670			
Antimony	ND	U	ND	U	ND	U	ND	U	ND	U	450	
Arsenic	ND	U	3.73	B	ND	U	ND	U	ND	U	2	7.5
Barium	21.3	B	128	B	46.5	B	26.4	B	57.7	B	79,000	300
Beryllium	ND	U	ND	U	ND	U	ND	U	ND	U	2300	0.16
Cadmium	ND	U	0.12	B	ND	U	ND	U	ND	U	900	1
Calcium	147,000		18,800		33,300		92,200		127,000			
Chromium	5.91	B	7.84	B	8.52	B	6.42	B	11.2		3400	10
Cobalt	2.21	B	4.04	B	3.14	B	3.33	B	5.51	B		30
Copper	10.1	B	20.3	B	10.2	B	13.1	B	13.9	B		25
Iron	7,570		11,000		10,700		9,170		12,900			2000
Lead	8.85		244		40.3		21.7		7.1		750	
Magnesium	51,900		3,110	B	4,430	B	26,100		38,200			
Manganese	729		896		826		519		364			
Nickel	12.8	B	10.1	B	7.94	B	21.2	B	19.2	B	23,000	13
Potassium	486	B	647	B	558	B	529	B	641	B		
Selenium	ND	U	ND	U	ND	U	1.18	B	ND	U	5700	2
Silver	ND	U	ND	U	ND	U	ND	U	ND	U	5700	
Sodium	263	B	520	B	520	B	510	B	211	B		
Thallium	ND	U	ND	U	ND	U	ND	U	ND	U	91	
Vanadium	9.75	B	15.4	B	13	B	11.2	B	10.1	B	7900	150
Zinc	37.5		126.0		48.3		47.2		45.8		340,000	20
Cyanide	ND	U	ND	U	ND	U	ND	U	ND	U	23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	B-19B	Qualifier	B-19D	Qualifier	B-19C	Qualifier	B-20A	Qualifier	B-20B	Qualifier	Commercial	NY TAGM
	MB3L89		MB3L91	Duplicate	MB3L90		MB3L92		MB3L93		SSLs	SCOs
Aluminum	5360		5100		3840		5790		806			
Antimony	ND	U	ND	U	ND	U	ND	U	ND	U	450	
Arsenic	ND	U	ND	U	ND	U	9.51	B	ND	U	2	7.5
Barium	39.3	B	37.8	B	31.7	B	86.2	B	8.41	B	79,000	300
Beryllium	ND	U	ND	U	ND	U	ND	U	ND	U	2300	0.16
Cadmium	ND	U	ND	U	ND	U	ND	U	ND	U	900	1
Calcium	34,400		31,300		141,000		11,900		69,100			
Chromium	8.01	B	7.88	B	12.3	B	8.58	B	1.88	B	3400	10
Cobalt	4.26	B	4.07	B	3.16	B	2.67	B	0.58	B		30
Copper	18.4	B	16.2	B	20	B	33.7	B	3.37	B		25
Iron	16,700		15,800		10,600		9,430		3,230			2000
Lead	11.9		8.87		17.2		809		5.66		750	
Magnesium	13,100		13,080		25,200	B	3,809	B	27,900			
Manganese	970		878		523		364		238			
Nickel	24.8	B	24.7	B	209		7.53	B	85	B	23,000	13
Potassium	830	B	846	B	1180	B	873	B	218	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	ND	U	ND	U	ND	U	ND	U	ND	U	5700	
Sodium	337	B	325	B	265	B	293	B	113	B		
Thallium	ND	U	ND	U	ND	U	ND	U	ND	U	91	
Vanadium	14.8	B	14.7	B	10.4	B	9.6	B	5.11	B	7900	150
Zinc	45		45.01		163		87		19.8	B	340,000	20
Cyanide	ND	U	ND	U	ND	U	ND	U	D	U	23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	B-20C	Qualifier	S-3A	Qualifier	S-4A	Qualifier	DB-1	Qualifier	B-21A	Qualifier	Commercial	NY TAGM
	MB3L94		MB3L96		MB3L97		MB3L98		MB3L99		SSLs	SCOs
Aluminum	2500		2920		2270		4236		5300			
Antimony	ND	U	1.98	B	1.33	B	4.07	B	ND	U	450	
Arsenic	ND	U	ND	U	2.08	B	3.34	B	ND	U	2	7.5
Barium	27.7	B	29.3	B	8.53	B	92.5	B	209	B	79,000	300
Beryllium	ND	U	0.4	B	0.46	B	0.38	B	ND	U	2300	0.16
Cadmium	ND	U	29.2		4.21	B	2210		ND	U	900	1
Calcium	119,000		788	B	1,020	B	239,000		22,500			
Chromium	5.1	B	665		302		4840		6.95	B	3400	10
Cobalt	2.31	B	1760		1460		9.9	B	4.92	B		30
Copper	8.14	B	2450		1990		3370		28			25
Iron	7,530		40,800		24,600		43,200		12,100			2000
Lead	17		282		93.1		822		208		750	
Magnesium	34,100		1,030	B	994	B	31,000		3,430	B		
Manganese	443		275		110		566		670			
Nickel	5.5	B	765		405		6,440		19.8		23,000	13
Potassium	516	B	2590	B	5000	B	382	B	656	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	ND	U	74		82.3		32.9		0.45	B	5700	
Sodium	198	B	23,700		6550	B	977	B	230	B		
Thallium	ND	U	ND	U	0.67	B	ND	U	ND	U	91	
Vanadium	8.54	B	ND	U	ND	U	ND	U	11.8	B	7900	150
Zinc	40.4		84,800		16,100		10,800		75.1		340,000	20
Cyanide	ND	U	23.5		28.5		43.5		ND	U	23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	B-21B	Qualifier	B-22A	Qualifier	B-22B	Qualifier	B-23A	Qualifier	B-23B	Qualifier	Commercial	NY TAGM
	MB3LA0		MB3LA1		MB3LA2		MB3LA3		MB3LA4		SSLs	SCOs
Aluminum	5010		6460		4831		5940		3020			
Antimony	ND	U	ND	U	ND	U	ND	U	ND	U	450	
Arsenic	ND	U	6.43	B	2.94	B	9.45	B	3.14	B	2	7.5
Barium	33.8	B	105	B	73.6	B	101	B	34.9	B	79,000	300
Beryllium	ND	U	0.43	B	0.43	B	0.53	B	0.33	B	2300	0.16
Cadmium	ND	U	0.27	B	0.31	B	1.12	B	0.35	B	900	1
Calcium	75,000		106,000		67,100		105,000		91,600			
Chromium	8	B	12	B	10.1	B	40.7		6.12	B	3400	10
Cobalt	5.19	B	6.46	B	3.37	B	6.35	B	3.46	B		30
Copper	26.9	B	23.1	B	18.3	B	36.6		14.8	B		25
Iron	12,300		17,000		13,300		16,500		11,700			2000
Lead	29.2		208		185		137		50.5		750	
Magnesium	17,400	B	32,800		11,800		26,800		16,100			
Manganese	583		551		500		368		615			
Nickel	11.1	B	16.3	B	13.9	B	21.9	B	12.5	B	23,000	13
Potassium	601	B	1110	B	829	B	1008	B	683	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	ND	U	ND	U	0.33	B	ND	U	ND	U	5700	
Sodium	227	B	328	B	234	B	263	B	306	B		
Thallium	ND	U	0.23	B	0.12	B	0.16	B	0.14	B	91	
Vanadium	16.1	B	11.2	B	9.69	B	10.6	B	ND	U	7900	150
Zinc	45.5		98.6		61.9		174		57.0		340,000	20
Cyanide	ND	U	ND	U	ND	U	ND	U	ND	U	23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	B-24A	Qualifier	B-24B	Qualifier	B-24C	Qualifier	B-25A	Qualifier	B-25B	Qualifier	Commercial	NY TAGM
	MB3LA5		MB3LA6		MB3LA7		MB3LB0		MB3LB1		SSLs	SCOs
Aluminum	4770		7800		2860		4150		5860			
Antimony	ND	U	ND	U	ND	U	ND	U	ND	U	450	
Arsenic	16.3		3.73	B	2.01	B	6.77	B	4.32	B	2	7.5
Barium	46	B	44.2	B	24.9	B	120	B	104	B	79,000	300
Beryllium	0.81	B	1.77	B	0.37	B	0.43	B	0.67	B	2300	0.16
Cadmium	1.19	B	2.32	B	1	B	0.24	B	0.3	B	900	1
Calcium	66,000		9,820		89,200		31,600		46,200			
Chromium	10.2	B	12.8		6.54	B	5.15	B	13		3400	10
Cobalt	9.37	B	10.6	B	7.43	B	3.47	B	4.2	B		30
Copper	29.4	B	23.3	B	41.8		48.2		27.1	B		25
Iron	23,100		29,600		12,700		11,000		14,600			2000
Lead	45.4		15.6		4.9		283		510		750	
Magnesium	5,310	B	2,280	B	24,500		2,790	B	4,560	B		
Manganese	539		2080		646		587		622			
Nickel	25.9	B	48		40.2	B	12.2	B	10.8	B	23,000	13
Potassium	604	B	768	B	644	B	636	B	788	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	0.84	B	ND	U	ND	U	0.37	B	0.64	B	5700	
Sodium	219	B	195	B	290	B	233	B	320	B		
Thallium	0.2	B	0.19	B	0.1	B	0.14	B	0.52	B	91	
Vanadium	ND	U	18.6	B	ND	U	ND	U	11	B	7900	150
Zinc	264		418		103	B	93.9		86.9		340,000	20
Cyanide	ND	U	ND	U	ND	U	ND	U	ND	U	23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	DB-2A	Qualifier	DB-2B	Qualifier	B-26A	Qualifier	B-26B	Qualifier	B-27A	Qualifier	Commercial	NY TAGM
	MB3LB2		MB3LB3		MB3LB4		MB3LB5	MS/MSD	MB3LB7		SSLs	SCOs
Aluminum	3450		6260		6310		6930		5600			
Antimony	5.2	B	4.42	B	ND	U	ND	U	ND	U	450	
Arsenic	5.81	B	11.7	B	9.03	B	4.57	B	29.3		2	7.5
Barium	47	B	92.5	B	132	B	86.6	B	79	B	79,000	300
Beryllium	0.6	B	1.13	B	1	B	0.97	B	0.8	B	2300	0.16
Cadmium	1780		1.27	B	22.1		2.45	B	1.27	B	900	1
Calcium	109,000		53,000		48,600		58,300		28,500			
Chromium	358		1270		69.2		13.1		8.22	B	3400	10
Cobalt	22.5	B	12.5	B	4.12	B	4.59	B	5.64	B		30
Copper	705		799		62.5		24.3	B	56.7			25
Iron	24,700		34,600		17,000		21,200		31,300			2000
Lead	768		727		443		45.6		231		750	
Magnesium	21,200		17,900		2,470	B	13,700		2,480	B		
Manganese	460		271		760		1200		767			
Nickel	1,170		631		138		22.7	B	27.1	B	23,000	13
Potassium	530		603	B	1130	B	1010	B	972	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	9.63	B	7.82	B	10.2	B	0.87	B	1 13	B	5700	
Sodium	704	B	499	B	449	B	320	B	327	B		
Thallium	ND	U	0.11	B	0.18	B	0.17	B	0.16	B	91	
Vanadium	92.5		56.5	B	14.8	B	19	B	13.8	B	7900	150
Zinc	1,420		992		210		78.2		88.1	B	340,000	20
Cyanide	6.7		4.9		5.3		ND	U	ND	U	23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4. Inorganic Soil Sample Data (mg/kg)

	B-27D	Qualifier	B-27B	Qualifier	B-27C	Qualifier	BG-1A	Qualifier	BG-1B	Qualifier	Commercial	NY TAGM
	MB3LC0	Duplicate	MB3LB8		MB3LB9		MB3LC1		MB3LC2		SSLs	SCOs
Aluminum	4810		2550		2220		4100		4080			
Antimony	ND	U	1.24	B	1.54	B	ND	U	ND	U	450	
Arsenic	25.4		3.21	B	1.92	B	6.01	B	6.94	B	2	7.5
Barium	77.5	B	27.3	B	19.1	B	86.8	B	119	B	79,000	300
Beryllium	0.65	B	0.52	B	0.38	B	0.47	B	0.58	B	2300	0.16
Cadmium	1.31	B	27.2		38.6		1.65	B	1.86	B	900	1
Calcium	21,600		146,000		12,800		34,600		52,400	B		
Chromium	9.51	B	29.8		75.5		12.1		23.4		3400	10
Cobalt	4.46	B	2.73	B	2.18	B	5.69	B	4.84	B		30
Copper	48		93.4		95.6		28.2	B	41.6			25
Iron	26,700		9,050		7,120		11,900		12,800			2000
Lead	258		12.8		7.12		413		759		750	
Magnesium	3,080	B	42,300		26,000		4,570	B	5,400	B		
Manganese	701		725		419		729		991			
Nickel	21.7	B	41.3	B	49.1		22	B	27.9	B	23,000	13
Potassium	831	B	652	B	587	B	534	B	539	B		
Selenium	ND	U	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	1.39	B	2.01	B	1.36	B	1.47	B	1.56	B	5700	
Sodium	287	B	325	B	237	B	347	B	360	B		
Thallium	0.12	B	0.11	B	ND	U	0.11	B	0.13	B	91	
Vanadium	ND	U	15.6	B	ND	U	13.3	B	16	B	7900	150
Zinc	78.3		177		249.0		245		256		340,000	20
Cyanide	1.5	J	9.6		29.5		2.8	U	2.8	U	23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Soil Sample Data (mg/kg)

	S-3B	Qualifier	S-4B	Qualifier	DB-3A	Qualifier	DB-3B	Qualifier	Commercial	NY TAGM
	MB3LC3		MB3LC4		MB3LC5		MB3LC6		SSLs	SCOs
Aluminum	1920		1520		4880		5500			
Antimony	ND	U	0.61	B	3.43	B	7.77	B	450	
Arsenic	ND	U	ND	U	11.1	B	8.98	B	2	7.5
Barium	31.2	B	11.6	B	54.7	B	113	B	79,000	300
Beryllium	0.55	B	0.28	B	0.88	B	0.72	B	2300	0.16
Cadmium	6.62	B	6.76		205		791		900	1
Calcium	22,300		1,730	B	49,000		175,000			
Chromium	355		312		951		1320		3400	10
Cobalt	362		1540		10.5	B	8.28	B		30
Copper	1370		3,180		795		2,850			25
Iron	11,600		16,200		33,700		41,200			2000
Lead	318		299		502		636		750	
Magnesium	896	B	575	B	1,210		30,500			
Manganese	124		70.1		276		928			
Nickel	230		577		571		1,710		23,000	13
Potassium	2730	B	5970	B	516	B	678	B		
Selenium	ND	U	ND	U	ND	U	ND	U	5700	2
Silver	54.9		118		8.87	B	56		5700	
Sodium	21,100		7780		484	B	822	B		
Thallium	ND	U	0.27	B	ND	U	ND	U	91	
Vanadium	ND	U	ND	U	56.1	B	ND	U	7900	150
Zinc	69,900	B	43,800		1,130		5,100		340,000	20
Cyanide	6.6		78.9		596		95.5		23,000	

ND/U - Non detect
B - Detected value < the contract required quantitation limit
J - Estimated

Table 4: Inorganic Blank Sample Data (ug/L)

	RB-01	Qualifier	RB-02	Qualifier
	MB3LA8		MB3LA9	
Aluminum	9.32	B	17.6	B
Antimony	1.67	B	1.97	B
Arsenic	ND	U	ND	U
Barium	0.69	B	0.36	B
Beryllium	ND	U	ND	U
Cadmium	0.09	B	0.45	B
Calcium	112	B	79	B
Chromium	1.76	B	1.84	B
Cobalt	ND	U	ND	U
Copper	28.4		1.55	B
Iron	22	B	9	B
Lead	0.62	B	0.18	B
Magnesium	19	B	9	B
Manganese	1.28	B	0.65	B
Nickel	1.1	B	1.43	B
Potassium	104	B	32	B
Selenium	ND	U	ND	U
Silver	ND	U	ND	U
Sodium	406	B	121	B
Thallium	ND	U	ND	U
Vanadium	ND	U	ND	U
Zinc	28.1		8.38	B
Cyanide	ND	U	ND	U

ND/U - Non detect
B - Detected value < the contract required quantitation limit

Table 5: Base Neutral Acid Extractable Ground Water Sample Data (ug/L)

	MW-5	Qualifier	MW-2	Qualifier	MW-6	Qualifier	MW-4	Qualifier	Federal	NYS
	B3L60		B3L61		B3L62	Duplicate	B3L63		DWS	WQS
Benzaldehyde	ND	U	ND	U	ND	U	ND	U		
Phenol	ND	U	ND	U	ND	U	ND	U		1
Bis-(2-chloroethyl)ether	ND	U	ND	U	ND	U	ND	U		1
2-Chlorophenol	ND	U	ND	U	ND	U	ND	U		
2-Methylphenol	ND	U	ND	U	ND	U	ND	U		
2,2'-Oxybis(1-chloropropane)	ND	U	ND	U	ND	U	ND	U		
Acetophenone	ND	U	ND	U	ND	U	ND	U		
4-Methylphenol	ND	U	ND	U	ND	U	ND	U		
N-Nitroso-di-n propylamine	ND	U	ND	U	ND	U	ND	U		5
Hexachloroethane	ND	U	ND	U	ND	U	ND	U		0.4
Nitrobenzene	ND	U	ND	U	ND	U	ND	U		
Isophorone	ND	U	ND	U	ND	U	ND	U		
2-Nitrophenol	ND	U	ND	U	ND	U	ND	U		1
2,4-Dimethylphenol	ND	U	ND	U	ND	U	ND	U		5
Bis(2-chloroethoxy)methane	ND	U	ND	U	ND	U	ND	U		1
2,4-Dichlorophenol	ND	U	ND	U	ND	U	ND	U		
Naphthalene	ND	U	ND	U	ND	U	ND	U		5
4-Chloroaniline	ND	U	ND	U	ND	U	ND	U		0.5
Hexachlorobutadiene	ND	U	ND	U	ND	U	ND	U		
Caprolactam	ND	U	ND	U	ND	U	ND	U		
4-Chloro-3-methylphenol	ND	U	ND	U	ND	U	ND	U		
2-Methylnaphthalene	ND	U	ND	U	ND	U	ND	U		
Hexachlorocyclo-pentadiene	ND	U	ND	U	ND	U	ND	U	50	5
2,4,6-Trichlorophenol	ND	U	ND	U	ND	U	ND	U		
2,4,5-Trichlorophenol	ND	U	ND	U	ND	U	ND	U		
1,1-Biphenyl	ND	U	ND	U	ND	U	ND	U		5
2-Chloronaphthalene	ND	U	1.8	J	ND	U	ND	U		
2-Nitroaniline	ND	U	ND	U	ND	U	ND	U		5
Dimethylphthalate	ND	U	ND	U	ND	U	ND	U		
2,6-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U		5
Acenaphthylene	ND	U	ND	U	ND	U	ND	U		
3-Nitroaniline	ND	U	ND	U	ND	U	ND	U		5
Acenaphthene	ND	U	2.2	J	1.7	J	ND	U		

U/ND - Non detect J - Estimated

Table 5: Base Neutral Acid Extractable Ground Water Sample Data (ug/L)

	MW-5	Qualifier	MW-2	Qualifier	MW-6	Qualifier	MW-4	Qualifier	Federal	NYS
	B3L60		B3L61		B3L62	Duplicate	B3L63		DWS	
2,4-Dinitrophenol	ND	U	ND	U	ND	U	ND	U		1
4-Nitrophenol	ND	U	ND	U	ND	U	ND	U		
Dibenzofuran	ND	U	1.4	J	1.3	J	ND	U		
2,4-Dinitrotoluene	ND	U	ND	U	ND	U	ND	U		5
Diethylphthalate	ND	U	ND	U	ND	U	ND	U		
Fluorene	ND	U	2.6	J	2.1	J	ND	U		
4-Chlorophenyl-phenyl ether	ND	U	ND	U	ND	U	ND	U		
4-Nitroaniline	ND	U	ND	U	ND	U	ND	U		5
4,6-Dinitro-2-methylphenol	ND	U	ND	U	ND	U	ND	U		
N-Nitroso diphenylamine	ND	U	ND	U	ND	U	ND	U		
1,2,4,5-Tetrachlorobenzene	ND	U	ND	U	ND	U	ND	U		5
4-Bromophenyl-phenylether	ND	U	ND	U	ND	U	ND	U		
Hexachlorobenzene	ND	U	ND	U	ND	U	ND	U	1	0.04
Atrazine	ND	U	ND	U	ND	U	ND	U	3	7.5
Pentachlorophenol	ND	U	ND	U	ND	U	ND	U	1	1
Phenanthrene	ND	U	ND	U	ND	U	ND	U		
Anthracene	ND	U	ND	U	ND	U	ND	U		
Di-n-butylphthalate	ND	U	ND	U	ND	U	ND	U		50
Fluoranthene	ND	U	ND	U	ND	U	ND	U		
Pyrene	ND	U	ND	U	0.56	J	ND	U		
Butylbenzylphthalate	ND	U	ND	U	ND	U	ND	U		
3,3-Dichlorobenzidine	ND	U	ND	U	ND	U	ND	U		5
Benzo(a)anthracene	ND	U	ND	U	ND	U	ND	U		
Chrysene	ND	U	ND	U	ND	U	ND	U		
Bis(2-ethylhexyl)phthalate	ND	U	ND	U	ND	U	16	J		5
Di-n-octylphthalate	ND	U	ND	U	ND	U	ND	U		
Benzo(b)fluoranthene	ND	U	ND	U	ND	U	ND	U		
Benzo(k)fluoranthene	ND	U	ND	U	ND	U	ND	U		
Benzo(a)pyrene	ND	U	ND	U	ND	U	ND	U	2	
Indeno(1,2,3-cd)-pyrene	ND	U	ND	U	ND	U	ND	U		
Dibenzo(a,h)-anthracene	ND	U	ND	U	ND	U	ND	U		
Benzo(g,h,i)perylene	ND	U	ND	U	ND	U	ND	U		
2,3,4,6-Tetrachlorophenol	ND	U	ND	U	ND	U	ND	U		
Carbazole	ND	U	ND	U	ND	U	ND	U		

U/ND - Non detect J - Estimated

Table 6. Inorganic Ground Water Sample Data (ug/L)

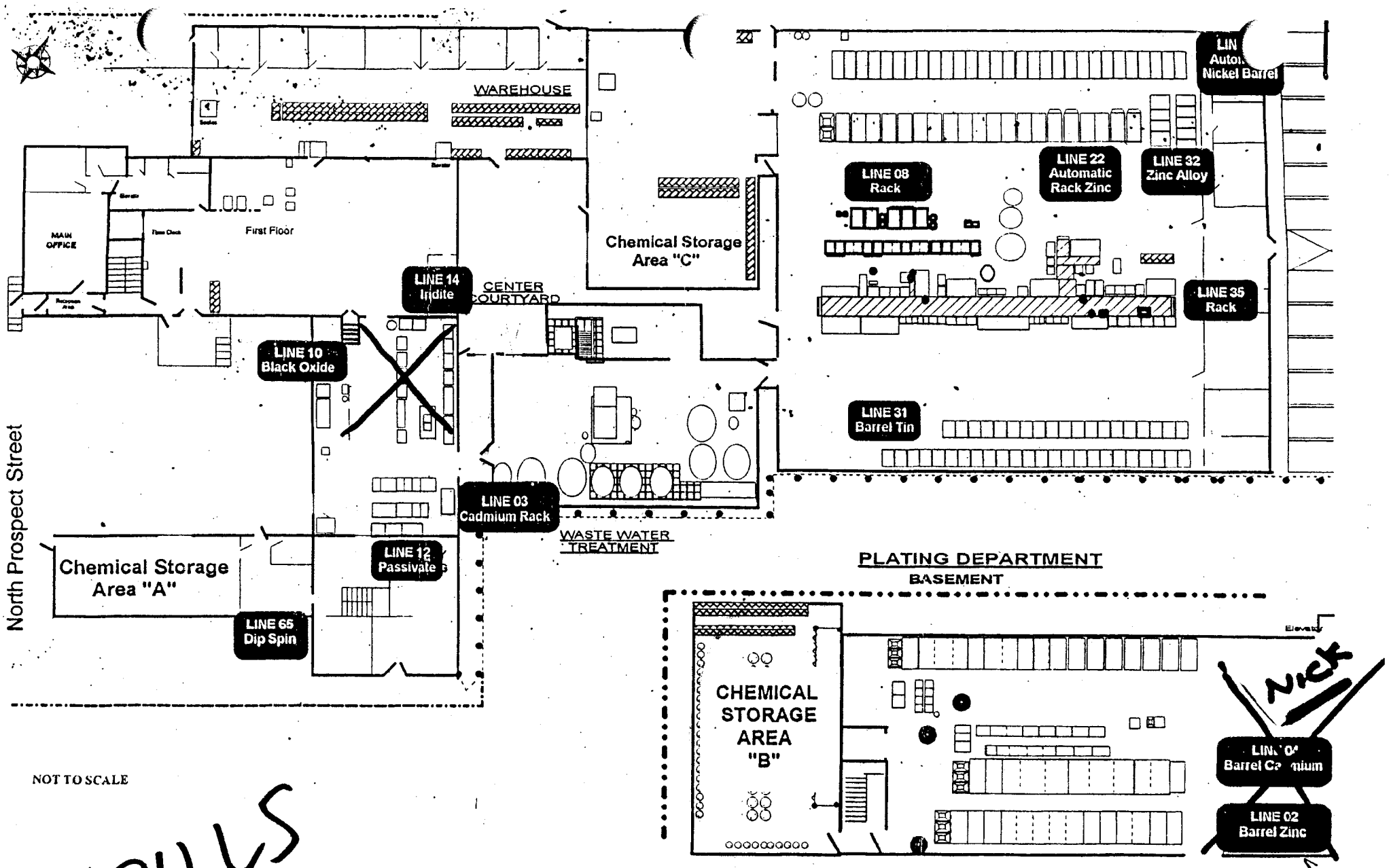
	MW-2	Qualifier	MW-6	Qualifier	MW-4	Qualifier	MW-5	Qualifier	Federal	NYS
	MB3L61		MB3L62	Duplciate	MB3L63	MS/MSD	MB3L60		DWS	WQS
Aluminum	130	B	68.7	B	241	B	2510			
Antimony	3.13	B	2.26	B	3.06	B	2.09	B	6	3
Arsenic	7.36	B	8.77	B	2.84	B	4 7	B	10	25
Barium	171	B	175	B	182	B	62	B	2000	1000
Beryllium	ND	U	ND	U	ND	U	0.16	B	4	
Cadmium	0.29	B	0.28	B	2.21	B	48.4		5	5
Calcium	118,000		121,000		101,000		104,000			
Chromium	1.67	B	2.13	B	4.13	B	46.2		100	50
Cobalt	0.63	B	0.64	B	1.33	B	2.86	B		
Copper	1.95	B	1.67	B	8.97	B	9 03	B	1300	200
Iron	6,125		5610		2720		5,520			300
Lead	0.64	B	0.61	B	4.83		3.2		15	25
Magnesium	12,200		12,700		11,100		14,600			
Manganese	627		627		906		222			300
Nickel	9.71	B	7.76	B	12.3	B	277			100
Potassium	3940	B	3,810	B	150,000		11,020			
Selenium	ND	U	ND	U	0.89	B	2.19	B	50	10
Silver	ND	U	ND	U	0.26	B	1.93	B		50
Sodium	124,000		122,000		621,000		167,000			20,000
Thallium	0.32	B	ND	U	0.12	B	0.15	B	2	
Vanadium	ND	U	ND	U	ND	U	ND	U		
Zinc	11.4	B	11.9		55.6		1450			
Cyanide	ND	U	ND	U	6.4		ND	U	200	200

ND/U - Non detect

B - Detected value < the contract required quantitation limit

APPENDIX A

SITE MAPS

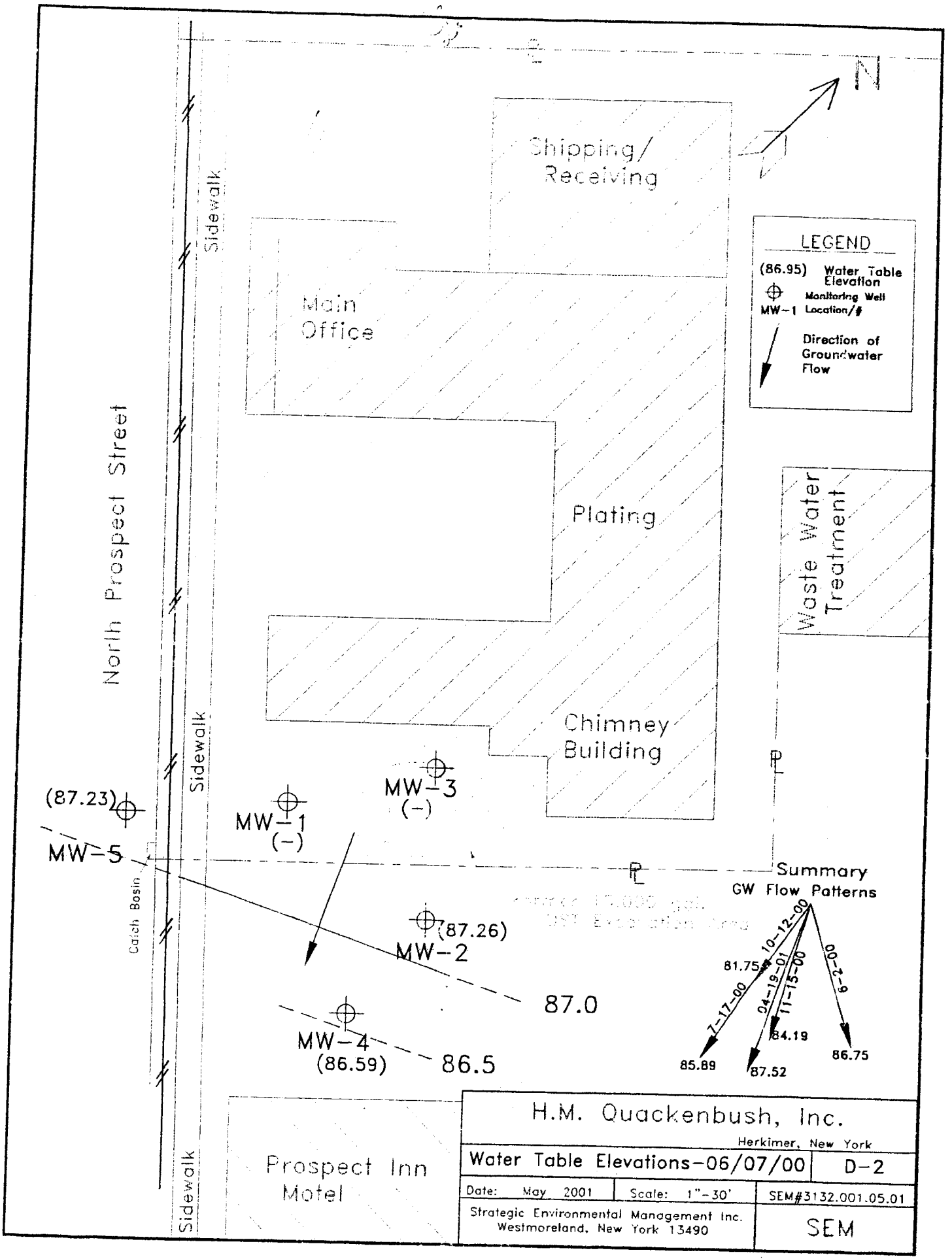


NOT TO SCALE

SPILLS

H. M. QUACKENBUSH INC. 220 Prospect Street Herkimer, New York 13350.	**FIGURE 1** **FACILITY LAYOUT** Issuer: MANAGER ENV. & SAFETY	DOCUMENT # REVISION NUMBER: 6 REVISION DATE: 07-10-02 File:\HMQ\TANK\FACT1.DSF, Plate 1

TO THE RT. OF THE STRM AS YOU GO DWN.


N
Shipping/
Receiving
Main
Office
Plating
Waste Water
Treatment
Chimney
Building
Sidewalk
Sidewalk
Sidewalk
North Prospect Street
Catch Basin
LEGEND
(86.95) Water Table Elevation
Monitoring Well
MW-1 Location/#
Direction of Groundwater Flow
(87.23)
MW-5
MW-1
(-)
MW-3
(-)
(87.26)
MW-2
87.0
MW-4
(86.59)
86.5
Summary
GW Flow Patterns
10-12-00
81.75
7-17-00
04-19-01
11-15-00
6-2-00
85.89
87.52
84.19
86.75
Prospect Inn
Motel
H.M. Quackenbush, Inc.
Herkimer, New York
Water Table Elevations-06/07/00
D-2
Date: May 2001
Scale: 1"=30'
SEM#3132.001.05.01
Strategic Environmental Management Inc.
Westmoreland, New York 13490
SEM

APPENDIX B

QUALITY ASSURANCE PROJECT PLAN

FOR THE

H.M QUACKENBUSH SITE

FEBRUARY, 2006

QUALITY ASSURANCE PROJECT PLAN (QAPP)

FOR THE

REMOVAL ASSESSMENT

AT THE

H.M. QUACKENBUSH, INC. SITE

HERKIMER, HERKIMER COUNTY, NEW YORK

Project Officer's Signature: _____ Date: 2/14/06

Project Officer's Name: Diane Salkie, Environmental Scientist

Project Quality Assurance Officer's Signature: _____ Date: 2/15/06

Project Quality Assurance Officer's Name: Pat Sheridan, QA Officer

Date Prepared: February 14, 2006

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Appendix I - U.S.EPA (Environmental Protection Agency). March 2004. *Contract Laboratory Program (CLP) Statement of Work (SOW) for Multi-Media, Multi-Concentration Inorganic Analysis (ILM0 5.3).Quick Reference Fact Sheet.* Office of Emergency and Remedial Response (OERR), Analytical Operations Center (AOC), Washington, DC.

Appendix J - U.S. EPA. August 2005. SOP # *MAL-3: Determination of Trace Metals by Inductively Coupled Plasma-Mass Spectroscopy.* DESA/HWSB. Edison, NJ.

Appendix K - Field Data Sheets and Sample Documentation Examples

On August 8, 2005, DSHM inspectors conducted a follow-up inspection accompanied by personnel from NYSDEC's Division of Environmental Remediation, the state's Superfund program. The NYSDEC notified the EPA and requested assistance on August 15, 2005. EPA personnel responded to this request on August 17, 2005 by dispatching representatives from the Emergency Remedial and Response Division (ERRD). In the subsequent months, EPA removed all hazardous materials with the exception of drums which are presently awaiting disposal. There are presently five monitoring wells in the vicinity of the site that were installed because of a leaking storage tank.

The Division of Environmental Science and Assessment (DESA), Hazardous Waste Support Branch (HWSB), Superfund Contract Support Team (SCST) has been requested by the EPA Emergency Remedial and Response Division (ERRD) to conduct a soil and ground water sampling event at the H.M. Quackenbush, Inc. Site. The purpose of the soil sampling is to delineate the levels of contaminants underneath the buildings and in the perimeter of the buildings to determine if any metal or base neutral extractables have leaked from past operations. The purpose of the ground water investigation is to determine if the contaminants have reached the ground water in the vicinity of the site.

1.2 Project/Task Description:

The purpose of this removal investigation is to collect valid data which are necessary and efficient to identify the levels of contaminants in the subsurface and surface soil and ground water. The sampling event will assist in the future removal of contaminated soil and/or ground water. The scope of the removal assessment is to:

- assess the levels of Target Analyte List (TAL) total metals and cyanide in the soil below the buildings and in the perimeter of the buildings ; and
- assess the levels of Target Compound List (TCL) base neutral acids (BNAs) in a biased 25 sample locations in the soil below the buildings and in the perimeter of the buildings ; and
- assess the levels of Target Compound List (TCL) volatile organic compounds (VOCs) in a biased 10 sample locations in the soil below the buildings and in the perimeter of the buildings ; and
- assess the levels of TAL- total metals and cyanide and TCL - BNAs in the ground water from 5 near site monitoring wells.

Soil samples will be compared to the following:

- New York State Department of Environmental Conservation. Division of Environmental Remediation. *Technical and Administrative Guidance Memorandum # 4046 Determination of Soil Cleanup Objectives and Cleanup Levels.* January 1994 which can be found as Appendix B; and

- U.S. EPA (Environmental Protection Agency). May 1996. Soil Screening Guidance: Technical Background Document, Appendix A - *Generic Soil Screening Levels (SSLs). 2nd Edition. EPA/540/R95/128.* Publication 9355.4-17A. Office of Solid Waste and Emergency Response (OSWER), Washington, DC which can be found as Appendix C.

Water samples will be compared to the following:

- New York State Department of Environmental Conservation: 6 NYCRR Part 703 *Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations* which can be found as Appendix E.

- U.S. Code of Federal Regulations (CFR). Title 40: Protection of Environment. Part 141: National Primary Drinking Water Regulations. Subpart G: National Revised Primary Drinking Water Regulations: Maximum Contaminant Levels. Section 61: *Maximum Contaminant Levels for Organic Contaminants.* 7-1-97 Edition which can be found as Appendix D.

2.0 PROJECT ORGANIZATION AND RESPONSIBILITY

2.1 Project/Task Organization

The following list of key personnel and their corresponding responsibilities. Due to the work breakdown structure of the project, an organization list is provided instead of a concise organization chart.

3.1.1 Analytical and sample collection precision

To assess error associated with analyte interference with the quantitation of other analytes and error due to laboratory bias and precision, Matrix Spike and Matrix Spike Duplicate samples (MS/MSDs) will be collected. Hence, one sample will have three aliquots. The first aliquot will be analyzed routinely for the parameters of interest, while the other two aliquots will be spiked with known quantities of the parameters of interest prior to analysis. The Relative Percent Difference (RPD) between the two results will be calculated and used as an indication of the precision of the analyses performed. The equation for this calculation is presented below.

$$RPD = \frac{|MSR - MSDR|}{(MSR+MSDR)/2} \times 100$$

where: MSR = Matrix Spike Recovery
MSDR = Matrix Spike Duplicate Recovery
| | indicates absolute value of the difference. Hence, RPD is always expressed as a positive value.

For the CLP laboratory, which will be conducting the organic analysis, an MS/MSD is not required for any of the organic samples. As an alternative the laboratory uses a Deuterated Monitoring Compound (DMC) solution which they add to the sample at a known concentration. DMC solutions are added to each sample, standard and blank. This is used to assess error associated with analyte interference with the quantitation of other analytes and error due to laboratory bias and precision.

Sample collection precision and data representativeness will be assessed by collecting field replicate samples. The field replicates will be used to evaluate errors associated with sample heterogeneity, sampling methodology and analytical procedures. The analytical results from these samples will provide data on the overall measurement precision.

3.1.2 Analytical and sample collection accuracy

Analytical accuracy will be assessed through the analysis of quality control samples specified in the analytical method (i.e., matrix spike, surrogate spike). The quality control samples will be used to reduce the sources of error associated with sample matrix, sample preparation and analysis techniques. Accuracy is defined as a measure of how close an analytically determined concentration is to the true value.

The analytical accuracy will be expressed as the percent recovery (%R) of an analyte which has been added to the environmental sample at a known concentration before analysis and is calculated according to the following equation.

- Proper analytical procedures are followed and holding times of the samples are not exceeded in the laboratory according to:

    - U.S. EPA. August 2005. Standard Operating Procedure: *MAL-3: Determination of Trace Metals by Inductively Coupled Plasma-Mass Spectroscopy*. Hazardous Waste Support Branch. Edison, NJ. SOP are enclosed as Appendix J.

For organic analysis, the following SOW applies:

- U.S.EPA (Environmental Protection Agency). July 2005. Contract Laboratory Program (CLP) *Statement of Work (SOW) for Multi-Media, Multi-Concentration Organic Analytical Services for Superfund (SOM 01.1)*. Office of Emergency and Remedial Response (OERR), Analytical Operations Center (AOC), Washington, DC. which can be found as Appendix H.

For cyanide analysis, the following SOW applies:

- U.S.EPA (Environmental Protection Agency). July 2005. Contract Laboratory Program (CLP) *Statement of Work (SOW) for Multi-Media, Multi-Concentration Inorganic Analytical Services for Superfund (ILM0 5.3)*. Office of Emergency and Remedial Response (OERR), Analytical Operations Center (AOC), Washington, DC. which can be found as Appendix I.

3.1.4 Data completeness

Data completeness will be expressed as the percentage of valid data obtained from measurement system. For data to be considered valid, it must meet all the acceptable criteria including accuracy and precision, as well as any other criteria specified by the analytical method used. Therefore, all data points critical to the sampling program in terms of completeness will be 100% validated by USEPA Region II DESA/HWSB/Hazardous Waste Support Section (HWSS) according to the appropriate and current US EPA Region 2 Data Validation SOPs. With 100% validation, the rationale for considering data points non-critical is not required. The data generated by the Mobile Laboratory will be validated according to the *U.S. EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*.

will be also be analyzed for TCL- VOCs by a CLP laboratory according to the U.S. EPA CLP *Statement of Work (SOW) for Multi-Media, Multi-Concentration Organic Analytical Services for Superfund (SOM 01.1)* which can be found as Appendix H. One field duplicate sample will be collected for TCL – VOC analysis.

The aqueous samples collected from the five (5) monitoring wells will be analyzed for TAL-total metals by the U.S. EPA mobile laboratory according to SOP # *MAL--3: Determination of Trace Metals by Inductively Coupled Plasma-Mass Spectrometry* in Appendix J. The samples will also be sent to a CLP laboratory for TCL – BNA analysis according to U.S. EPA CLP *Statement of Work (SOW) for Multi-Media, Multi-Concentration Organic Analytical Services for Superfund (SOM 01.1)* and TAL – cyanide only analysis according to U.S. EPA CLP *SOW for Multi-Media, Multi-Concentration Inorganic Analysis [ILM0 5.3]* in Appendices H and I, respectively. One field duplicate sample and one MS/MSD for the inorganic analysis will also be collected for the aqueous matrix and submitted to the Mobile Laboratory and the CLP laboratory. One field duplicate will be collected for organic analysis for the CLP laboratory, no MS/MSD is required.

To assess error associated with analyte interference with the quantitation of other analytes and error due to laboratory bias and precision, Matrix Spike and Matrix Spike Duplicate samples (MS/MSDs) will be collected. Sample collection frequency for this site will be one MS/MSD per twenty (20) soil samples collected per analytical parameter/fraction analyzed. Double sample collection volume is required for inorganic MS/MSD analysis. The CLP laboratory will be using deuterated monitoring compound mixture in place of the MS/MSD sample for organic analysis which requires no extra volume.

To assess sample collection precision and data representativeness, a field replicate sample will be collected. The field replicate will be used to evaluate errors associated with sample heterogeneity, sampling methodology and analytical procedures. Sample collection frequency will be one field replicate per twenty (20) soil or aqueous samples collected per analytical parameter/ fraction analyzed.

To assess sample accuracy, field quality control samples will be collected including a rinsate blank. The blank will be used to evaluate errors arising from potential cross-contamination due to: improper handling of samples by collectors and lab personnel; improper shipment and storage; and/or on-site atmospheric contaminants. Rinsate blanks will be prepared in the field by pouring deionized water over decontaminated sampling equipment which in this case would entail pouring the water over stainless steel bowls and augers. Sample frequency will be one rinsate blank for each type of equipment used per each day a decontamination event is carried out. Rinsate blanks will be analyzed for TAL - total metals and cyanide and TCL – BNAs.

The sampling and analysis protocol is listed as Table 1.

TABLE 1 – H.M. Quackenbush Site
Removal Investigation – Soil and Ground Water Sampling
Sampling and Analysis Protocols - RAS Parameters

Sample Type	Number of Samples	Matrix	Parameter/Fraction	Sample Container[1]	Sample Preservation	Analytical Method	Method Detection Limit	Holding Time[2]
Environmental			Target Analyte List (TAL):					
Surface and Subsurface Soil	100*	Soil	Total Metals	(1) 4 oz. Wide-mouth glass jar with Teflon lid	Cool to 4°C	MAL-3	Analyte Specific (0.5 – 500 mg/kg)^	6 months
	100*	Soil	Cyanide only	(1) 4 oz. Wide-mouth glass jar with Teflon lid	Cool to 4°C	ILM0 5.3	2.5 mg/kg	12 days
			Target Compound List (TCL):					
	27*	Soil	Base Neutral Acid Extractables	(1) 8 oz. Wide-mouth glass jar with Teflon lid	Cool to 4°C	SOM0 1.1	Compound Specific (170 - 330 µg/kg)	10 days
	11*	Soil	Volatile Organic Compound	(3) EnCore Samplers and (1) 4 oz glass jar with Teflon lid for percent moisture	Cool to 4°C	SOM0 1.1	Compound Specific (5-10 µg/kg)	10 days
Environmental			Target Analyte List (TAL):					
Ground Water	6*	Aqueous	Total Metals	(1) 1 Lt.. Wide-mouth HDPE bottle	1:1 HNO_3 to pH<2, Cool to 4°C	MAL-3	Analyte Specific (1 - 10 µg/L)^	6 months
	6*	Aqueous	Cyanide only	(1) 1 Lt.. Wide-mouth HDPE bottle	1:1 NaOH to pH>12; Cool to 4°C	ILM0 5.3	10 µg/L	12 days
			Target Compound List (TCL):					
	6*	Aqueous	Base Neutral Acid Extractables	(1) 1 lt. amber glass jar with Teflon lid	Cool to 4°C	SOM0 1.1	Compound Specific (5 - 10 µg/L)	5 days

Legend:
1 The number in parentheses in the "Sample Container" column denotes the number of containers needed.
All sample bottles comply with OSWER Directive #9240.0-05A; Specifications and Guidance for obtaining Contaminant-Free Containers, EPA 540/R-93/051.
2 All holding times listed are Contractual Holding Times and are from the date of Verified Time of Sample Receipt (VTSR).
* The number of samples indicated includes field replicate samples and MS/MSDs.
^ The Mobile Laboratory will be analyzing the samples according to EPA Method 6020A with the QA/QC criteria following ILM0 5.3 for ICP/MS.

4.2 Sampling Methods Requirements

4.2.1 Standard operating procedures

As previously stated, all sampling will be in accordance with the *U.S. EPA Region II CERCLA Quality Assurance Manual*; and *U.S. EPA Superfund Program Representative Sampling Guidance* OSWER Directive 9360.4-10, Interim Final, EPA/540/R-95/141, Office of Emergency and Remedial Response (OERR), Washington, D.C. Furthermore, the specific Standard Operating Procedure (SOP) utilized for soil sampling is the *U.S. EPA ERT SOP #2012: Soil Sampling*; from the *Compendium of ERT Soil Sampling and Surface Geophysics Procedures* which can found as Appendix F. The SOP for ground water sampling is U.S. EPA DESA Region 2, *Ground Water Sampling Procedure - Low Stress (Low Flow) Purging and Sampling* which can be found as Appendix G.

4.2.2 Sample collection methodology

All samples including QA/QC samples will be collected by personnel from the USEPA Region II DESA/HWSB/SCST at approximately twenty four (24) locations below the buildings, approximately twenty four (24) locations around the perimeter and five (5) monitoring wells in the vicinity of the site. Sample locations may be demarcated on-site utilizing survey paint, marks, or flags. The total number of soil samples includes: ninety five (95) environmental samples in addition to, five (5) field duplicates (i.e., laboratory quality control sample), five (5) MS/MSDs for inorganic analysis, and up to three (3) rinsate blank samples. As previously stated, the specific SOP utilized will be the *U.S. EPA ERT SOP #2012: Soil Sampling,* from the *Compendium of ERT Soil Sampling and Surface Geophysics Procedures* which can be found as Appendix F. Up to three (3) homogenized subsurface soil samples will be collected from each location until refusal is encountered. Samples will be collected from the Geoprobe ^{TM} sleeve. If sampling for VOC analysis, this sample will be collected first, otherwise, the sample will be homogenized utilizing stainless steel scoops and bowls. The samples from the perimeter will be collected using a stainless steel auger, scoops and bowls. A total of five (5) ground water samples, one field duplicate sample and one rinsate blank sample will also be collected according to U.S. EPA DESA Region 2, *Ground Water Sampling Procedure - Low Stress (Low Flow) Purging and Sampling* which can be found as Appendix G.

For MS/MSD sample collection, double sample volume is required for inorganic analysis. Sample preservation for all soil samples required only wet ice with samples cooled to 4°C. Aqueous samples for TAL – total metals requires nitric acid to a pH of less than 2 and wet ice cooled to 4°C. Aqueous samples for TAL – cyanide analysis requires sodium hydroxide to a pH greater than 12 and wet ice cooled to 4°C. All sample bottles comply with the *U.S.EPA Specifications and Guidance for Contaminant-Free Sample Containers.* Samples will be maintained in sealed cooler(s) with ice at 4°C. All samples for TAL – total metals analysis will be hand delivered to the off-site Mobile Laboratory at the conclusion of the sampling event. All samples for TAL – cyanide analysis and TCL – BNAs and VOC analysis will be sent to CLP laboratories via United Parcel Service within specified holding times.

4.2.5 Sampling Equipment Decontamination

Soil samples will be collected using stainless steel scoops, bowls and augers. With respect to all non-disposable equipment, these tools to be used on-site will also be decontaminated prior to site activities. Decontamination of equipment will be done at the Edison facility and in the field if necessary. The Grundsfos pumps are the only equipment for ground water sampling that requires decontamination. The pumps were decontaminated prior to the sampling event at the EPA facility in Edison, NJ according to the U.S. EPA DESA Region 2, *Ground Water Sampling Procedure - Low Stress (Low Flow) Purging and Sampling* which can be found as Appendix G. All soil decontamination procedures will be in accordance with the following:

- *U.S. EPA ERT SOP #2006: Sampling Equipment Decontamination* from the *Compendium of ERT Soil Sampling and Surface Geophysics Procedures*
- *U.S. EPA Region II CERCLA Quality Assurance Manual.*

4.2.6 Management of Investigative-Derived Wastes (IDW)

The wastes that are anticipated on being generated during this sampling event are soils, purge water and personnel protective equipment (i.e. goggles, booties, etc.). The waste soils will be that from the usage of augers, shovels, spatulas, and other soil sampling equipment. These excess soils will be placed back in the hole that was generated through sampling processes. Excess ground water will be released to the ground surface on site.

The personnel protective equipment will be double-bagged and properly disposed of in on-site solid waste roll-off or off-site in properly designated containers.

5.0 SAMPLE CUSTODY

5.1 Special Training Requirements/Certification

To perform the operations of this sampling event, SCST will be dealing with the sampling activities on-site. This can imminently expose SCST personnel to potential occupational environmental hazards. As a result, it is important for SCST field personnel to be familiar with:

- Identifying methods and procedures for recognizing, evaluating and controlling hazardous substances.
- Identifying concepts, principles, and guidelines to properly protect SCST field personnel.
- Discussing regulations and action levels to ensure the health and safety of SCST field oversight personnel.
- Discussing the fundamentals needed to develop organizational structures and standard operating procedures to mitigate potential environmental hazards.
- Demonstrating the selection and use of dermal and respiratory protective equipment.
- Demonstrating the selection and use of direct-reading air monitoring instrumentation

Sample labels will be securely affixed to the sample container and include only the sample identification number as per protocol. The sample labels will be sealed with clear tape to maintain sample label integrity. Custody seals will then be affixed around each individual sample container top. Once sealed, samples will be placed in a polyethylene bag inside a waterproof High Density Polyethylene (HDPE) coolers. The coolers will be packed with sufficient wet ice to cool the samples to 4°C along with non-combustible adsorbent cushioning material to minimize the possibility of container breakage and movement during shipment. Custody seals and strapping tape will then be affixed to the coolers. A temperature blank will be included in each cooler as per requirements.

All samples will be the responsibility of the Project Officer to see that the samples are delivered to the Mobile Laboratory and the CLP laboratories. At the completion of the sampling event, the inorganic samples will be hand delivered by a U.S. EPA employee to a secure, locked refrigeration system in the laboratory which can only be opened by laboratory personnel. At the conclusion of each day, the samples for TCL – VOC and BNA analysis will be sent to a CLP laboratory for analysis via UPS. At the conclusion of the sampling event, the samples for TAL – cyanide analysis will be sent to CLP laboratories via UPS.

5.2.2 Sample custody procedures

Standard U.S.EPA Chain-of-Custody Procedures will be followed for all samples and be in accordance with the U.S.EPA Region II *CERCLA Quality Assurance Manual*. The Forms II Lite computer program will be used to generate the Chain of Custodies for the laboratories. An example can be found in Appendix K. The Traffic Report & Chain of Custody Records will be maintained from the time of sample collection until final deposition. Every transfer of custody will be noted and signed for and a copy of the record will be kept for each individual who has signed it. The chain-of-custody records will include, at a minimum, sample identification number, number of samples collected, sample collection date and time, sample type, sample matrix, sample container type, sample analysis requested, sample preservation, and the name(s) and signature(s) of samplers and all individuals who have had custody. Sample labels will only include the sample identification number, time and date to prevent any conflict of interest issues for samples. Custody seals will demonstrate that a sample container or cooler has not been opened or tampered with. The sampler will sign and date the custody seal and affix it to the container and/or cooler in such a manner that it cannot be opened without breaking the seal.

6.0 CALIBRATION PROCEDURES AND FREQUENCY

6.1 Instrument Calibration and Frequency

The Mobile Laboratory's instruments for TAL - total metals analysis are calibrated according to SOP *#MAL-3: Determination of Trace Metals by Inductively Coupled Plasma- Mass Spectroscopy* which can be found as Appendix J. The SCST personnel will be utilizing a PID monitoring instruments while on-site and will calibrate each upon arrival each morning and possibly once during mid-day or as necessary. CLP laboratory analytical equipment will follow procedures as specified under the to U.S. EPA CLP *Statement of Work (SOW) for*

USEPA Region II SOP No. HW-13: Low Concentration Data Validation, (CLP/SOW OLC0 3.2) and *Evaluation of Metals Data for Contract Laboratory Program, HW-2,* Revision 11.

8.3 Data Acquisition Requirements

Data acquisition from non-direct measurements such as data from databases or literature is not anticipated at this time. Therefore, this is not applicable.

8.4 Data Quality Management

All project data and information must be documented in a format that is usable by project personnel. This section of the QAPP describes how project data and information will be documented, tracked, and managed from their generation in the field to final use and storage in a manner that ensures data integrity and defensibility. All field and sample documents will be legibly written in indelible ink. Any correction or revisions will be made by lining through the original entry and initialing the change.

The following field and sample documentation will be maintained. Examples are presented in Appendix K.

- The field logbook is a descriptive notebook detailing site activities and observations so that an accurate, factual account of field procedures may be reconstructed. The sample team or individuals performing a particular sampling activity are required to maintain a field notebook. This field notebook will be a bound weatherproof logbook that shall be filled out at the location of sample collection immediately after sampling. All entries will be signed by the individuals making them. At a minimum, the logbook will contain sample particulars including sample number, collection time, location, descriptions, methods used, daily weather conditions, field measurements, name of sampler(s), sample preservation, and other site-specific observations including any deviations from protocol.

- Field data sheets and corresponding sample labels are used to identify samples and document field sampling conditions and activities. The field data sheets will be completed at the time of sample collection and will include the following: sample location; upper limit of observed contamination; sample depth; time of sample collection; lowest depth of observed contamination; laboratory sample number; laboratory sample analysis; private laboratory sample number; private laboratory sample analysis; and sample collection notes and/or observations. An example of the *Soil Field Data Sheet* is presented in Appendix K. Sample labels will be securely affixed to the sample container and include only the sample identification number as per protocol. *Well Data Sheet* and corresponding sample labels are used to identify samples and document field sampling conditions and activities. The *Well Data Sheet* will be completed at the time of sample collection and will include the sample location, purge time, parameter readings, well depth, sample time, sample characteristics, sampling personnel, weather and/or observations. An example of the *Well Data Sheet* is presented in Appendix K. Sample labels will be securely affixed to the sample container and include only the sample identification number as per protocol.

$$RPD = \frac{|MSR - MSDR|}{(MSR+MSDR)/2} \times 100$$

Where: MSR = Matrix Spike Recovery
MSDR = Matrix Spike Duplicate Recovery
| | indicates absolute value of the difference.

Table 2 located on page 24 of this QAPP depicts the analytical precision for the analytical methods chosen in terms of estimated RPD.

9.1.1.2 Sample collection precision

Sample collection precision will be assessed by collecting field replicate samples. The field replicates will be used to evaluate errors associated with sample heterogeneity, sampling methodology and analytical procedures. The analytical results from these samples will provide data on the overall measurement precision.

9.1.2 Data accuracy

Accuracy is defined as the degree of difference between measured or calculated values and the true value. The closer the numerical value of the measurement comes to the true value, or actual concentration, the more accurate the measurement is. It is difficult to measure accuracy for the entire data collection activity. Sources of error are the sampling process, field contamination, preservation, handling, sample matrix, sample preparation and analysis techniques.

9.1.2.1 Analytical accuracy

Analytical accuracy will be assessed through the analysis of quality control samples specified in the analytical method (i.e., matrix spike, surrogate spike). The analytical accuracy will expressed as the percent recovery (%R) of an analyte which has been added to the environmental sample at a known concentration before analysis and is calculated according to the following equation. See previous table for estimated accuracy.

$$\%R = [(A-B)/C] \times 100$$

where: A = The analyte concentration determined experimentally from the spiked sample.
B =The unspiked sample concentration.
C =The amount of spike added.

Table 2 on page 24 located in this QAPP depicts both the analytical precision and accuracy for the analytical methods chosen in terms of estimated percent recovery.

from measurement system. For data to be considered valid, it must meet all the acceptable criteria including accuracy and precision, as well as any other criteria specified by the analytical method used. Therefore, all data points critical to the sampling program in terms of completeness will be 100% validated by USEPA Region II DESA/HWSB/HWSS in accordance with the US EPA Region 2 SOPs. With 100% validation, the rationale for considering data points non-critical is not required.

10.0 Performance and Systems Audits

10.1 Assessments and Response Actions

No performance audit of field operations is anticipated at this time. If conducted, performance and systems audits will be in accordance with:

- U.S. EPA (Environmental Protection Agency) Region II. October 1994. *SOP No. HW-20: Standard Operation Procedure (SOP) for Conducting CERCLA Field Audits.* Revision 0. Division of Environmental Services and Assessment, Hazardous Waste Support Branch, Hazardous Waste Support Section, Edison, NJ.

11.0 PREVENTIVE MAINTENANCE

11.1 Instrument/Equipment Testing, Procedures & Scheduled Inspection and Maintenance Requirements

As previously stated, calibration and preventative maintenance of analytical laboratory equipment will follow procedures as specified under to SOP *#MAL-3: Determination of Trace Metals by Inductively Coupled Plasma- Mass Spectroscopy* , U.S. EPA CLP *SOW for Multi-Media, Multi-Concentration Organic Analytical Services for Superfund (SOM 01.1)* and U.S. EPA CLP *SOW for Multi-Media, Multi-Concentration Inorganic Analysis [ILM0 5.3]*.

11.2 Inspection/Acceptance Requirements for Supplies and Consumables

All blanks (e.g., rinsate blank) will be prepared using demonstrated analyte free, deionized water as specified in the U.S. EPA Region II *CERCLA Quality Assurance Manual.* The demonstrated analyte free water meets the assigned criteria values for the Contract Laboratory Program (CLP) Contract Required Detection Limits (CRDLs) and Contract Required Quantitation Limits (CRQLs) as outlined in the most recent CLP Statements of Work (SOWs). The criteria is as follows: purgeable organics < 10 ppb; semi-volatile organics < CRQL; pesticides < CRQL; PCBs < CRQL; inorganics < CRDL. However, for common laboratory contaminants (i.e., methylene chloride, acetone, toluene, 2-butanone, and phthalates), the allowable limits are three times the respective CRQLs. All sample bottles comply with OSWER Directive #9240.0-05A; U.S. EPA *Specifications and Guidance for obtaining Contaminant-Free Containers*, EPA 540/R-93/051.

13.0 CORRECTIVE ACTION

13.1 Assessments and Response Actions

Procedures are provided for project personnel to make changes, take corrective actions and document the process through Corrective Action Request Forms. Corrective action can occur during field activities, laboratory analysis, data validation, and data assessment.

Corrective action in the field may be necessary when the monitoring network design is changed. A change in the field includes: increasing the number or type of samples or analyses; changing sampling locations; and/or modifying sampling protocol. When this occurs, the project officer or project QA officer will identify any suspected technical or QA deficiencies and note them in the field logbook. The project QA officer will be responsible for assessing the suspected deficiency and determining the impact on the quality of the data. Development of the appropriate corrective action will be the responsibility of the OSC.

Laboratory corrective action will be in accordance with SOP *#MAL-3: Determination of Trace Metals by Inductively Coupled Plasma- Mass Spectroscopy* , U.S. EPA CLP *SOW for Multi-Media, Multi-Concentration Organic Analytical Services for Superfund (SOM 01.1)]* and U.S. EPA CLP *SOW for Multi-Media, Multi-Concentration Inorganic Analysis [ILM0 5.3]*.

The data generated by the Mobile Laboratory will be validated according to the *U.S. EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*. Laboratory corrective action will be in accordance with the U.S. EPA CLP *SOW for Multi-Media, Multi-Concentration Organic Analytical Services for Superfund (SOM 01.1)* and U.S. EPA CLP *SOW for Multi-Media, Multi-Concentration Inorganic Analysis [ILM0 5.3]* for a CLP laboratory.

14.0 QA REPORTS TO MANAGEMENT

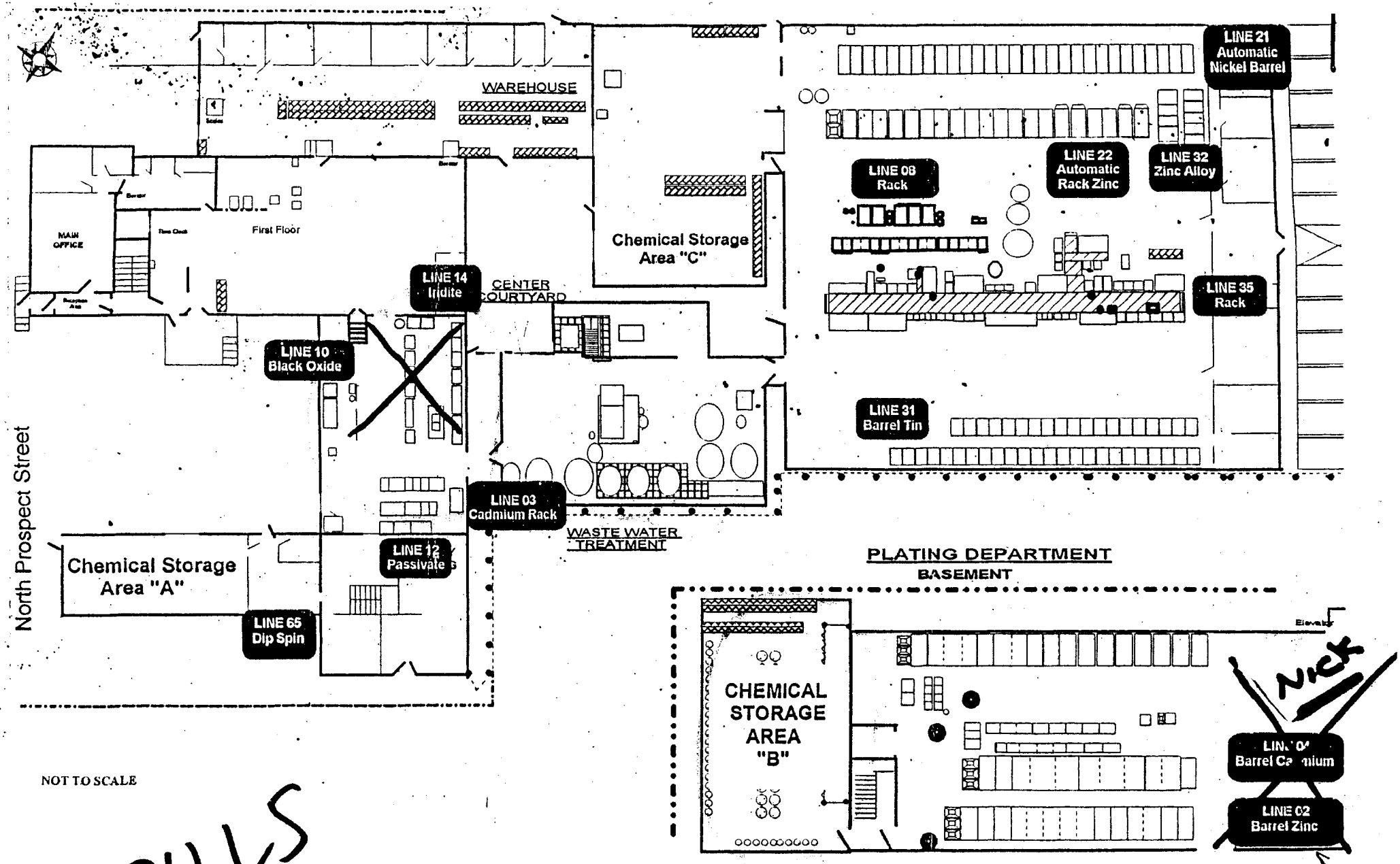
14.1 Distribution List

The following project personnel will receive copies of the approved QAPP and any subsequent revisions.

Project Personnel	Title
Andrew Confortini, On-Scene Coordinator ERRD	Overall Project Coordinator
Diane Salkie DESA/HWSB Superfund Contract Support Team (SCST)	Project Officer
Pat Sheridan DESA/HWSB/HWSS Hazardous Waste Support Section (HWSS)	Quality Assurance Officer

APPENDIX A

SITE MAP



NOT TO SCALE

SPILLS

H. M. QUACKENBUSH INC. 220 Prospect Street Herkimer, New York 13350.	**FIGURE 1** **FACILITY LAYOUT** Issuer: MANAGER ENV. & SAFETY	DOCUMENT # REVISION NUMBER: 6 REVISION DATE: 07-10-02 File:\HMQ\TANK\FACT1.DSF, Plate 1

TO THE RT. OF THE STAIR AS YOU GO DOWN.

APPENDIX B

New York State Department of Environmental Conservation
Division of Environmental Remediation

Technical and Administrative Guidance Memorandum # 4046 Determination of Soil Cleanup Objectives and Cleanup Levels
January 1994

New York State
Department of Environmental Conservation

This page was last updated 7/10/98.

Division of Environmental Remediation ~ Guidance Document

TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM # 4046
DETERMINATION OF SOIL CLEANUP OBJECTIVES AND CLEANUP LEVELS

NOTE: The document you are viewing is an HTML facsimile of an original Technical and Administrative Guidance Memorandum (TAGM) issued by the Division of Environmental Remediation (formerly the Division of Hazardous Waste Remediation). This facsimile was reformatted for the Internet but maintains as much as possible of the original document. Some changes were made to headers, footnote locations, paging, etc. and hyperlinks were made to facilitate user navigation. None of these changes revise the content of the original TAGM.

TO: Regional Haz. Waste Remediation Engineers, Bureau Dirs. & Section Chiefs

FROM: Michael J. O'Toole, Jr., Director, Div. of Hazardous Waste Remediation

SUBJECT: DIVISION TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM:
DETERMINATION OF SOIL CLEANUP OBJECTIVES AND CLEANUP LEVELS

DATE: Jan 24, 1994

Michael J. O'Toole, Jr. (signed)

APPENDICES: Appendix A - Recommended Soil Cleanup Objectives
Appendix B - Total Organic Carbon (TOC)

The cleanup goal of the Department is to restore inactive hazardous waste sites to predisposal conditions, to the extent feasible and authorized by law. However, it is recognized that restoration to predisposal conditions will not always be feasible.

1. INTRODUCTION:

This TAGM provides a basis and procedure to determine soil cleanup levels at individual Federal Superfund, State Superfund, 1986 EQBA Title 3 and Responsible Party (RP) sites, when the Director of the DHWR determines that cleanup of a site to predisposal conditions is not possible or feasible.

The process starts with development of soil cleanup objectives by the Technology Section for the contaminants identified by the Project Managers. The Technology Section uses the procedure described in this TAGM to develop soil cleanup objectives. Attainment ofthese generic soil cleanup objectives will, at a minimum, eliminate all significant threats to human health and/or the environment posed by the inactive hazardous waste site. Project Managers should use these cleanup objectives in selecting alternatives in the Feasibility Study (FS). Based on the proposed selected remedial technology (outcome of FS), final site specific soil cleanup levels are established in the Record of Decision (ROD) for these sites.

This approach is not used for heavy metals, which do not partition appreciably into soil organic matter. For heavy metals, eastern USA or New York State soil background values may be used as soil cleanup objectives. A list of values that have been tabulated is attached. Soil background data near the site, if available, is preferable and should be used as the cleanup objective for such metals. Background samples should be free from the influences of this site and any other source of contaminants. Ideal background samples may be obtained from uncontaminated upgradient and upwind locations.

3. DETERMINATION OF SOIL CLEANUP GOALS FOR ORGANICS IN SOIL FOR PROTECTION OF WATER QUALITY

Protection of water quality from contaminated soil is a two-part problem. The first is predicting the amount of contamination that will leave the contaminated media as leachate. The second part of the problem is to determine how much of that contamination will actually contribute to a violation of groundwater standards upon reaching and dispersing into groundwater. Some of the contamination which initially leaches out of soil will be absorbed by other soil before it reaches groundwater. Some portion will be reduced through natural attenuation or other mechanism.

PART A: PARTITION THEORY MODEL

There are many test and theoretical models which are used to predict leachate quality given a known value of soil contamination. The Water-Soil Equilibrium Partition Theory is used as a basis to determine soil standard or contamination limit for protection of water quality by most of the models currently in use. It is based on the ability of organic carbon in soil to adsorb contamination. Using a water quality value which may not be exceeded in leachate and the partition coefficient method, the equilibrium concentration (Cs) will be expressed in the same units as the water standards. The following expression is used:

Allowable Soil Concentration $Cs = f \times Koc \times Cw$ . . . . (1)

Where: f = fraction of organic carbon of the natural soil medium.

Koc = partition coefficient between water and soil media. Koc can be estimated by the following equation:

$\log Koc = 3.64 - 0.55 \log S$

S = water solubility in ppm
Cw = appropriate water quality value from TOGS 1.1.1

Most Koc and S values are listed in the Exhibit A-1 of the USEPA Superfund Public Health Evaluation Manual (EPA/540/1-86/060). The Koc values listed in this manual should be used for the purpose. If the Koc value for a contaminant is not listed, it should be estimated using the above mentioned equation.

PART B: PROCEDURE FOR DETERMINATION OF SOIL CLEANUP OBJECTIVES

When the contaminated soil is in the unsaturated zone above the water table, many

APPENDIX A of TAGM #4046

TABLE 1
Recommended soil cleanup objectives (mg/kg or ppm)
Volatile Organic Contaminants

Shortcut to TAGM 4046 Tables for SVOCs | Pesticides/PCBs | Heavy Metals

Contaminant	Partition Coefficient, Koc	Groundwater Standards/ Criteria, Cw (ug/l or ppb)	a Allowable soil conc., Cs (ppm)	b ** Soil cleanup objectives to protect GW quality (ppm)	USEPA Health Based (ppm) Carcin-ogens	USEPA Health Based (ppm) Systemic Toxicants	CRQL (ppb)	*** Rec. Soil Cleanup Objective (ppm)
Acetone	2.2	50	0.0011	0.11	N/A	8,000	10	0.2
Benzene	83	0.7	0.0006	0.06	24	N/A	5	0.06
Benzoic Acid	54 *	50	0.027	2.7	N/A	300,000	5	2.7
2-Butanone	4.5 *	50	0.003	0.3	N/A	4,000	10	0.3
Carbon Disulfide	54 *	50	0.027	2.7	N/A	8,000	5	2.7
Carbon Tetrachloride	110 *	5	0.006	0.6	5.4	60	5	0.6
Chlorobenzene	330	5	0.017	1.7	N/A	2,000	5	1.7
Chloroethane	37 *	50	0.019	1.9	N/A	N/A	10	1.9
Chloroform	31	7	0.003	0.30	114	800	5	0.3
Dibromochloromethane	N/A	50	N/A	N/A	N/A	N/A	5	N/A
1,2-Dichlorobenzene	1,700	4.7	0.079	7.9	N/A	N/A	330	7.9
1,3-Dichlorobenzene	310 *	5	0.0155	1.55	N/A	N/A	330	1.6
1,4-Dichlorobenzene	1,700	5	0.085	8.5	N/A	N/A	330	8.5
1,1-Dichloroethane	30	5	0.002	0.2	N/A	N/A	5	0.2
1,2-Dichloroethane	14	5	0.001	0.1	7.7	N/A	5	0.1
1,1-Dichloroethene	65	5	0.004	0.4	12	700	5	0.4
1,2-Dichloroethene (trans)	59	5	0.003	0.3	N/A	2,000	5	0.3
1-3 dichloropropane	51	5	0.003	0.3	N/A	N/A	5	0.3
Ethylbenzene	1,100	5	0.055	5.5	N/A	8,000	5	5.5
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	1,230 *	5	0.060	6.0	N/A	200,000	5	6.0

APPENDIX A of TAGM #4046

TABLE 2
Recommended soil cleanup objectives (mg/kg or ppm)
Semi-Volatile Organic Contaminants

Shortcut to TAGM 4046 Tables for VOCs | Pesticides/PCBs | Heavy Metals

Contaminant	Partition Coefficient, Koc	Groundwater Standards/ Criteria, Cw (ug/l or ppb)	a Allowable soil conc., Cs (ppm)	b ** Soil cleanup objectives to protect GW quality (ppm)	USEPA Health Based (ppm) Carcin-ogens	Systemic Toxicants	CRQL (ppb)	*** Rec. Soil Cleanup Objective (ppm)
Acenaphthene	4,600	20	0.9	90.0	N/A	5,000	330	50.0 ***
Acenaphthylene	2,056 *	20	0.41	41.0	N/A	N/A	330	41.0
Aniline	13.8	5	0.001	0.1	123	N/A	330	0.1
Anthracene	14,000	50	7.00	700.0	N/A	20,000	330	50.0 ***
Benzo(a)anthracene	1,380,000	0.002	0.03	3.0	0.224	N/A	330	0.224 or MDL
Benzo (a) pyrene	5,500,000	0.002 (ND)	0.110	11.0	0.0609	N/A	330	0.061 or MDL
Benzo (b) fluoranthene	550,000	0.002	0.011	1.1	N/A	N/A	330	1.1
Benzo (g,h,i) perylene	1,600,000	5	8.0	800	N/A	N/A	330	50.0 ***
Benzo (k) fluoranthene	550,000	0.002	0.011	1.1	N/A	N/A	330	1.1
bis(2-ethylhexyl)phthalate	8,706 *	50	4.35	435.0	50	2,000	330	50.0 ***
Butylbenzylphthlate	2,430	50	1.215	122.0	N/A	20,000	330	50.0 ***
Chrysene	200,000	0.002	0.004	0.4	N/A	N/A	330	0.4
4- Chloroaniline	43 ****	5	0.0022	0.22	200	300	330	0.220 or MDL
4-Chloro-3-methylphenol	47	5	0.0024	0.24	N/A	N/A	330	0.240 or

4-Nitrophenol	21	5	0.001	0.1	N/A	N/A	1,600	or MDL
3-Nitroaniline	93	5	0.005	0.5	N/A	N/A	1,600	0.500 or MDL
Pentachlorophenol	1,022	1	0.01	1.0	N/A	2,000	1,600	1.0 or MDL
Phenanthrene	4,365 *	50	2.20	220.0	N/A	N/A	330	50.0 ***
Phenol	27	1	0.0003	0.03	N/A	50,000	330	0.03 or MDL
Pyrene	13,295 *	50	6.65	665.0	N/A	2,000	330	50.0 ***
2,4,5-Trichlorophenol	89 *	1	0.001	0.1	N/A	8,000	330	0.1

a. Allowable Soil Concentration Cs = f x Cw x Koc
b. Soil cleanup objective = Cs x Correction Factor (CF)
N/A is not available
MDL is Method Detection Limit

* Partition coefficient is calculated by using the following equation:
log Koc = -0.55 log S + 3.64, where S is solubility in water in ppm.
Other Koc values are experimental values.

** Correction Factor (CF) of 100 is used as per TAGM #4046

*** As per TAGM #4046, Total VOCs < 10 ppm., Total Semi- VOCs < 500ppm. and Individual Semi-VOCs < 50 ppm.

**** Koc is derived from the correlation Koc = 0.63 Kow (Determining Soil Response Action Levels..... EPA/540/2-89/057). Kow is obtained from the USEPA computer database 'MAIN'.

Note: Soil cleanup objectives are developed for soil organic carbon content (f) of 1%, and should be adjusted for the actual soil organic carbon content if it is known.

Endrin	9,157 *	ND (<0.01)	0.001	0.1	N/A	20	8	0.10
Endrin keytone	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
gamma - BHC (Lindane)	1,080	ND (<0.05)	0.0006	0.06	5.4	20	8	0.06
gamma - chlordane	140,000	0.1	0.14	14.0	0.54	5	80	0.54
Heptachlor	12,000	ND (<0.01)	0.0010	0.1	0.16	40	8	0.10
Heptachlor epoxide	220	ND (<0.01)	0.0002	0.02	0.077	0.8	8	0.02
Methoxychlor	25,637	35.0	9.0	900	N/A	400	80	***
Mitotane	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Parathion	760	1.5	0.012	1.2	N/A	500	8	1.2
PCBs	17,510 *	0.1	0.1	10.0	1.0	N/A	160	1.0 (Surface) 10 (sub-surf)
Polychlorinated dibenzo-furans (PCDF)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Silvex	2,600	0.26	0.007	0.7	N/A	600	330	0.7
2,4,5-T	53	35	0.019	1.9	N/A	200	330	1.9

a. Allowable Soil Concentration Cs = f x Cw x Koc
b. Soil cleanup objective = Cs x Correction Factor (CF)
N/A is not available

* Partition coefficient is calculated by using the following equation:
log Koc = -0.55 log S + 3.64, where S is solubility in water in ppm.
All other Koc values are experimental values.

** Correction Factor (CF) of 100 is used as per TAGM #4046

*** As per TAGM #4046, Total VOCs < 10 ppm.

Note: Soil cleanup objectives are developed for soil organic carbon content (f) of 1% (5% for PCBs as per PCB Guidance Document), and should be adjusted for the actual soil organic carbon content if it is known.

Note: Some forms of metal salts such as Aluminum Phosphide, Calcium Cyanide, Potassium Cyanide, Copper cyanide, Silver cyanide, Sodium cyanide, Zinc phosphide, Thallium salts, Vanadium pentoxide and Chromium (VI) compounds are more toxic in nature. Please refer to the USEPA HEASTs database to find cleanup objectives if such metals are present in soil.

SB is site background
N/A is not available

* CRDL is contract required detection limit which is approx. 10 times the CRDL for water.

** New York State background

*** Some forms of Cyanide are complex and very stable while other forms are pH dependent and hence are very unstable. Site-specific form(s) of Cyanide should be taken into consideration when establishing soil cleanup objective.

**** Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.

***** Recommended soil cleanup objectives are average background concentrations as reported in a 1984 survey of reference material by E. Carol McGovern, NYSDEC.

APPENDIX C

United States Environmental Protection Agency (USEPA) May 1996

Soil Screening Guidance: Technical Background Document, Appendix A Generic Soil Screening Levels (SSLs).

May 1996, 2nd Edition. EPA/540/R95/128. Publication 9355.4-17A.

Office of Solid Waste and Emergency Response (OSWER), Washington, DC

United States
Environmental Protection
Agency

Solid Waste and
Emergency Response

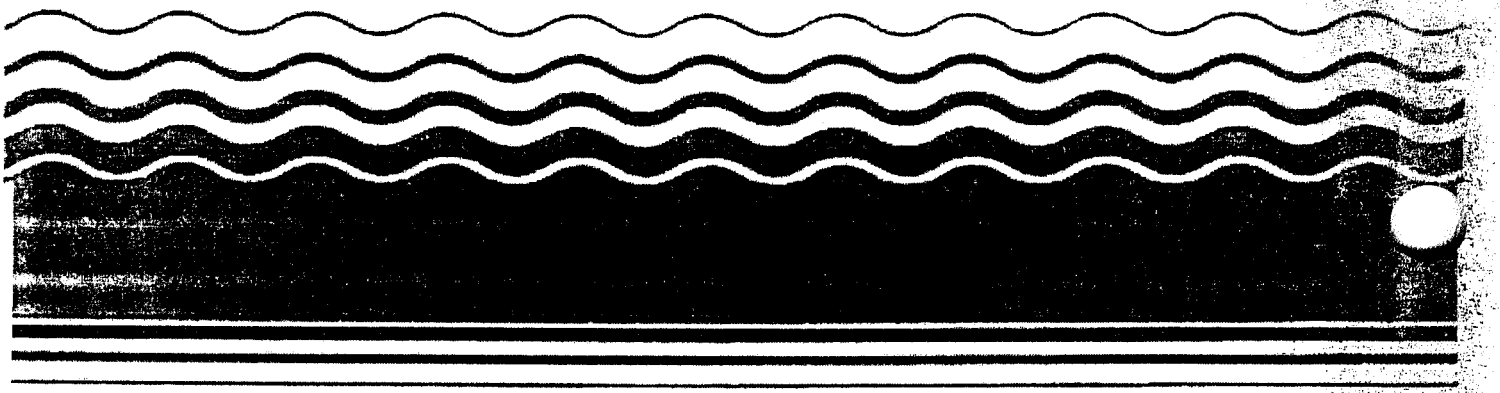
OSWER 9355.4-24
March 2001

Superfund

EPA

SUPPLEMENTAL GUIDANCE FOR DEVELOPING SOIL SCREENING LEVELS FOR SUPERFUND SITES

Peer Review Draft



APPENDIX A

GENERIC SSLs FOR THE RESIDENTIAL AND COMMERCIAL/INDUSTRIAL SCENARIOS

This appendix provides generic SSLs for 110 chemicals under residential and non-residential (i.e., commercial/industrial) exposure scenarios. Exhibit A-1 presents updated generic SSLs for the residential exposure scenario. The generic SSLs for three of the pathways in this exhibit — inhalation of volatiles in outdoor air, inhalation of fugitive dust, and migration to ground water — were calculated using the same equations and default values for exposure assumptions found in the 1996 *SSG* (and reproduced in Appendix B of this document). However, they incorporate updated values for dispersion factors, for toxicity, and for other chemical-specific parameters presented in Appendix C. The exhibit also presents new SSLs for concurrent exposures via soil ingestion and dermal absorption that are based, in part, on a new quantitative approach for evaluating dermal absorption. SSLs for combined direct ingestion and dermal absorption exposures to contaminants were calculated according to the method described in Section 3.2.1 of this document. The generic residential SSLs in Exhibit A-1 supersede those published in the 1996 *SSG*.

Exhibits A-2 and A-3 present commercial/industrial SSLs for the outdoor worker and indoor worker receptors, respectively. These SSLs have been calculated using the equations and the default values for exposure assumptions and other input parameters presented in Section 4.2.3 of this guidance document. All generic SSLs presented in this appendix, both residential and commercial/industrial, are rounded to two significant figures, with the exception of values less than 10 mg/kg, which are rounded to one significant figure.

EPA does not present generic SSLs for the construction exposure scenario because the complexity and variability of exposure conditions for construction activities precludes the development of such values. For information on developing SSLs for exposures during construction activities, users should refer to Chapter 5 or Appendix E of the guidance document.

The generic residential and non-residential SSLs are not necessarily protective of all known human exposure pathways or ecological threats. Before applying SSLs, it is therefore necessary to compare the conceptual site model (developed in Step 1 of the soil screening process) with the assumptions underlying the generic SSLs to ensure that site conditions and exposure pathways are consistent with these assumptions (See Exhibit A-4.) If this comparison indicates that the site is more complex than the generic SSL scenario, or that there are significant exposure pathways not accounted for by the SSL scenario, then generic SSLs alone are **not** sufficient to evaluate the site, and additional, more detailed site-specific investigation is necessary.

After all possible SSLs for all potential receptors at a site have been identified from the tables in Exhibits A-1 through A-3, the site manager should select the lowest applicable SSL for each exposure pathway to be used for comparison to site contaminant concentrations in soil. Generally, where the relevant SSL for a given pathway of concern is not exceeded, the user may eliminate the pathway from further investigation. If all pathways of concern are eliminated for an area of the site based on comparison with residential SSLs, that area can be eliminated from further investigation. However, if commercial/industrial SSLs are used in soil screening evaluations, elimination of an area from further consideration is contingent on an analysis of institutional control options. Users should consult Section 4.3.2 of the guidance document for more information.

The final exhibit in this appendix (Exhibit A-4) presents the default values for physical site characteristics that are used in calculating SSLs (both residential and commercial/industrial) for the inhalation and migration to ground water pathways. These values describe the nature of the contaminant source area, the characteristics of site soil, meteorologic conditions, and hydrogeologic characteristics, and serve either as direct input parameters for SSL equations or as assumptions for developing input parameters for the equations.

Analysis of Effects of Source Size on Generic SSLs

The generic SSLs presented have been developed assuming an infinite source and a 0.5 acre source size. For an analysis of the sensitivity of generic SSLs to changes in source size and the depths to which infinite source SSLs are protective at larger sites, please refer to Attachment A and Table A-3 in the *Technical Background Document* of the 1996 *SSG*, or the following sources:

- US EPA, 1990. *Guidance on Remedial Actions for Superfund Sites with PCB Contamination*. Office of Solid Waste and Emergency Response, Washington, D.C. NTIS PB91-921206CDH.
- US EPA, 1994. *Revised Interim Soil Lead Guidance for CERCLA sites and RCRA Corrective Action Facilities*. Office of Solid Waste and Emergency Response, Washington, D.C. Directive 9355.4-12.

Exhibit A-1 (continued)

GENERIC SSLs FOR RESIDENTIAL SCENARIO[a]

Compound	CAS No.	Ingestion-Dermal (mg/kg)	Inhalation of Volatiles (mg/kg)	Inhalation of Fugitive Particulates (mg/kg)	Migration to Ground Water	
					DAF=20 (mg/kg)	DAF=1 (mg/kg)
Organics (continued)						
1,2-Dichloropropane	78-87-5	9 [c,e]	15 [b]	---	0.03	0.001 [f]
1,3-Dichloropropene	542-75-6	6 [c,e]	1 [e]	---	0.004 [e]	0.0002 [e,f]
Dieldrin	60-57-1	0.04 [c,e]	1 [e]	---	0.004 [e]	0.0002 [e,f]
Diethylphthalate	84-66-2	49,000 [b]	--- [c]	---	470 [b]	23 [b]
2,4-Dimethylphenol	105-67-9	1,200 [b]	--- [c]	---	9 [b]	0.4 [b]
2,4-Dinitrophenol	51-28-5	120 [b]	--- [c]	---	0.2 [b,f,i]	0.008 [b,f,i]
2,4-Dinitrotoluene	121-14-2	0.7 [e]	--- [c]	---	0.0008 [e,f]	0.00004
2,6-Dinitrotoluene	606-20-2	0.7 [e]	--- [c]	---	0.0007 [e,f]	0.00003 [e,f]
Di-n-octyl phthalate	117-84-0	1,200 [b]	--- [c]	---	10,000 [d]	10,000 [d]
Endosulfan	115-29-7	470 [b,c]	--- [c]	---	18 [b]	0.9 [b]
Endrin	72-20-8	23 [b,c]	--- [c]	---	1	0.05
Ethylbenzene	100-41-4	7,800 [b,c]	400 [d]	---	13	0.7
Fluoranthene	206-44-0	2,300 [b]	--- [c]	---	4,300 [b]	210 [b]
Fluorene	86-73-7	2,300 [b]	--- [c]	---	560 [b]	28 [b]
Heptachlor	76-44-8	0.1 [c,e]	4 [e]	---	23	1
Heptachlor Epoxide	1024-57-3	0.07 [c,e]	5 [e]	---	0.7	0.03
Hexachlorobenzene	118-74-1	0.3 [e]	1 [e]	---	2	0.1 [f]
Hexachloro-1,3-butadiene	87-68-3	6 [e]	8 [e]	---	2	0.1 [f]
α-HCH (α-BHC)	319-84-6	0.1 [c,e]	0.7 [e]	---	0.0005 [e,f]	0.00003 [e,f]
β-HCH(β-BHC)	319-85-7	0.4 [c,e]	6 [e]	---	0.003 [e]	0.0001 [e,f]
γ-HCH(Lindane)	58-89-9	0.4 [e]	--- [c]	---	0.009	0.0005 [f]
Hexachlorocyclopentadiene	77-47-4	430 [b]	10 [b]	---	400	20
Hexachloroethane	67-72-1	35 [e]	54 [e]	---	0.5 [e]	0.02 [e,f]
Indeno(1,2,3-cd)pyrene	193-39-5	0.6 [e]	--- [c]	---	14 [e]	0.7 [e,f]
Isophorone	78-59-1	510 [e]	--- [c]	---	0.5 [e]	0.03 [e,f]
Methoxychlor	72-43-5	390 [b,c]	--- [c]	---	160	8
Methyl bromide	74-83-9	110 [b,c]	9 [b]	---	0.2 [b]	0.01 [b,f]
Methylene chloride	75-09-2	85 [c,e]	13 [e]	---	0.02 [e]	0.001 [e,f]
2-Methylphenol (o-cresol)	95-48-7	3,100 [b]	--- [c]	---	15 [b]	0.8 [b]
Naphthalene	91-20-3	1,100 [b]	170 [c]	---	84 [b]	4 [b]
Nitrobenzene	98-95-3	31 [b]	90 [b]	---	0.1 [b,f]	0.007 [b,f]
N-Nitrosodiphenylamine	86-30-6	99 [e]	--- [c]	---	1 [e]	0.06 [e,f]
N-Nitrosodi-n-propylamine	621-64-7	0.07 [e,f]	--- [c]	---	0.00005 [e,f]	0.000002 [e,f]
Pentachlorophenol	87-86-5	3 [e]	--- [c]	---	0.03 [f]	0.001 [f]
Phenol	108-95-2	37,000 [b]	--- [c]	---	100 [b]	5 [b]
Pyrene	129-00-0	1,700 [b]	--- [c]	---	4,200 [b]	210 [b]
Styrene	100-42-5	16,000 [b,c]	1,500 [d]	---	4	0.2 [f]
1,1,2,2-Tetrachloroethane	79-34-5	3 [c,e]	0.6 [e]	---	0.003 [e,f]	0.0002 [e,f]
Tetrachloroethylene	127-18-4	12 [c,e]	10 [e]	---	0.06	0.003 [f]
Toluene	108-88-3	16,000 [b,c]	650 [d]	---	12	0.6
Toxaphene	8001-35-2	0.6 [e,f]	87 [e]	---	31	2
1,2,4-Trichlorobenzene	120-82-1	610 [b]	3,200 [d]	---	5	0.3 [f]
1,1,1-Trichloroethane	71-55-6	--- [c]	1,200 [d]	---	2	0.1

Exhibit A-2

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: OUTDOOR WORKER RECEPTOR[a]

Compound		Ingestion-Dermal	Inhalation of Volatiles	Inhalation of Fugitive Particulates	Migration to Ground Water	
					DAF=20	DAF=1
Organics	CAS No.	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Acenaphthene	83-32-9	37,000 [b]	--- [c]	---	570 [b]	29 [b]
Acetone (2-Propanone)	67-64-1	110,000 [b,c]	--- [c]	---	16 [b]	0.8 [b]
Aldrin	309-00-2	0.2 [c,e]	6 [e]	---	0.5 [e]	0.02 [e]
Anthracene	120-12-7	180,000 [b]	--- [c]	---	12,000 [b]	590 [b]
Benz(a)anthracene	56-55-3	2 [e]	--- [c]	---	2 [e]	0.08 [e,f]
Benzene	71-43-2	58 [c,e]	1 [e]	---	0.03	0.002 [f]
Benzo(b)fluoranthene	205-99-2	2 [e]	--- [c]	---	5 [e]	0.2 [e,f]
Benzo(k)fluoranthene	207-08-9	23 [e]	--- [c]	---	49 [e]	2 [e]
Benzoic acid	65-85-0	1,000,000 [b,c]	--- [c]	---	400 [b,i]	20 [b,i]
Benzo(a)pyrene	50-32-8	0.2 [e]	--- [c]	---	8	0.4
Bis(2-chloroethyl)ether	111-44-4	2 [e]	0.4 [e]	---	0.0004 [e,f]	0.00002 [e,f]
Bis(2-ethylhexyl)phthalate	117-81-7	140 [e]	--- [c]	---	3,600	180
Bromodichloromethane	75-27-4	51 [c,e]	--- [c]	---	0.6	0.03
Bromoform (tribromomethane)	75-25-2	400 [c,e]	88 [e]	---	0.8	0.04
Butanol	71-36-3	110,000 [b,c]	--- [c]	---	17 [b]	0.9 [b]
Butyl benzyl phthalate	85-68-7	140,000 [b]	--- [c]	---	930 [d]	810 [b]
Carbazole	86-74-8	96 [e]	--- [c]	---	0.6 [e]	0.03 [e,f]
Carbon disulfide	75-15-0	110,000 [b,c]	720 [d]	---	32 [b]	2 [b]
Carbon tetrachloride	56-23-5	24 [c,e]	0.6 [e]	---	0.07	0.003 [f]
Chlordane	57-74-9	7 [e]	120 [e]	---	10	0.5
p-Chloroaniline	106-47-8	2,700 [b]	--- [c]	---	0.7 [b]	0.03 [b,f]
Chlorobenzene	108-90-7	23,000 [b,c]	180 [b]	---	1	0.07
Chlorodibromomethane	124-48-1	38 [c,e]	--- [c]	---	0.4	0.02
Chloroform	67-66-3	520 [c,e]	0.5 [e]	---	0.6	0.03
2-Chlorophenol	95-57-8	3,400 [b]	--- [c]	---	4 [b,i]	0.2 [b,f,i]
Chrysene	218-01-9	230 [e]	--- [c]	---	160 [e]	8 [e]
DDD	72-54-8	13 [c,e]	--- [c]	---	16 [e]	0.8 [e]
DDE	72-55-9	9 [c,e]	--- [c]	---	54 [e]	3 [e]
DDT	50-29-3	8 [e]	--- [g]	---	32 [e]	2 [e]
Dibenz(a,h)anthracene	53-70-3	0.2 [e]	--- [c]	---	2 [e]	0.08 [e,f]
Di-n-butyl phthalate	84-74-2	68,000 [b]	--- [c]	---	2,300 [d]	270 [b]
1,2-Dichlorobenzene	95-50-1	62,000 [b]	600 [d]	---	17	0.9
1,4-Dichlorobenzene	106-46-7	80 [e]	--- [g]	---	2	0.1
3,3-Dichlorobenzidine	91-94-1	4 [e]	--- [c]	---	0.007 [e,f]	0.0003 [e,f]
1,1-Dichloroethane	75-34-3	110,000 [b,c]	1,700 [d]	---	23 [b]	1 [b]
1,2-Dichloroethane	107-06-2	35 [c,e]	0.6 [e]	---	0.02	0.001 [f]
1,1-Dichloroethylene	75-35-4	5 [c,e]	0.1 [e]	---	0.06	0.003 [f]
cis-1,2-Dichloroethylene	156-59-2	11,000 [b,c]	--- [c]	---	0.4	0.02
trans-1,2-Dichloroethylene	156-60-5	23,000 [b,c]	--- [c]	---	0.7	0.03
2,4-Dichlorophenol	120-83-2	2,100 [b]	--- [c]	---	1 [b,i]	0.05 [b,f,i]
1,2-Dichloropropane	78-87-5	47 [c,e]	21 [b]	---	0.03	0.001 [f]
1,3-Dichloropropene	542-75-6	32 [c,e]	2 [e]	---	0.004 [e]	0.0002 [e]

Exhibit A-2 (continued)

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: OUTDOOR WORKER RECEPTOR[a]

Compound	CAS No.	Ingestion-Dermal (mg/kg)	Inhalation of Volatiles (mg/kg)	Inhalation of Fugitive Particulates (mg/kg)	Migration to Ground Water	
					DAF=20 (mg/kg)	DAF=1 (mg/kg)
***Organics* (continued)**						
2,4,6-Trichlorophenol	88-06-2	170 [d]	340 [e]	---	0.2 [e,f,i]	0.008 [e,f]
Vinyl acetate	108-05-4	--- [c]	1,400 [b]	---	170 [b]	8 [b]
Vinyl chloride (chloroethene)	75-01-4	4 [b,e]	1 [e]	---	0.01 [f]	0.0007 [f]
m-Xylene	108-38-3	1,000,000 [b,c]	--- [c]	---	210	10
o-Xylene	95-47-6	1,000,000 [b,c]	--- [c]	---	190	9
p-Xylene	106-42-3	1,000,000 [b,c]	--- [c]	---	200	10
Inorganics						
Antimony	7440-36-0	450 [b,c]	---	--- [c]	5	0.3
Arsenic	7440-38-2	2 [e]	---	1,400 [e]	29 [f]	1 [f]
Barium	7440-39-3	79,000 [b,c]	---	1,000,000 [b]	1,600 [f]	82 [f]
Beryllium	7440-41-7	2,300 [c,e]	---	2,600 [e]	63 [f]	3
Cadmium	7440-43-9	900 [b,h]	---	3,400 [e]	8 [f]	0.4 [f]
Chromium (total)	7440-47-3	3,400 [b,c]	---	510 [d]	38 [f]	2 [f]
Chromium (III)	16065-83-1	1,000,000 [b,c]	---	--- [c]	--- [g]	--- [g]
Chromium (VI)	18540-29-9	3,400 [b,c]	---	510 [d]	38 [f]	2 [f]
Cyanide (amenable)	57-12-5	23,000 [b,c]	---	--- [c]	40	2
Lead	7439-92-1	750 [j]	---	--- [j]	--- [j]	--- [j]
Mercury	7439-97-6	340 [c,k]	14 [b,i]	---	2 [f]	0.1 [f]
Nickel	7440-02-0	23,000 [b,c]	---	26,000 [e]	130 [f]	7 [f]
Selenium	7782-49-2	5,700 [b,c]	---	--- [c]	5 [f]	0.3 [f]
Silver	7440-22-4	5,700 [b,c]	---	--- [c]	34 [b,f]	2 [b,f]
Thallium	7440-28-0	91 [b,c,l]	---	--- [c]	0.7 [f]	0.04 [f]
Vanadium	7440-62-2	7,900 [b,c]	---	--- [c]	6,000 [b]	300 [b]
Zinc	7440-66-6	340,000 [b,c]	---	--- [c]	12,000 [b,f]	620 [b,f]

DAF = Dilution Attenuation Factor

[a] Screening level based on human health criteria only

[b] Calculated values correspond to a noncancer hazard quotient of 1

[c] Ingestion-Dermal pathway: no dermal absorption data available; calculated based on ingestion data only. Inhalation of volatiles pathway: no toxicity criteria available

[d] Soil Saturation Limit (Csat)

[e] Calculated values correspond to a cancer risk of 1 in 1,000,000

[f] Level is at or below Contract Laboratory Program required quantification limit for Regular Analytical Services (RAS)

[g] Chemical-specific properties are such that this pathway is not of concern at any soil contaminant concentration

[h] SSL is based on dietary RfD

[i] SSL for pH of 6.8

[j] A screening level of 750 mg/kg has been set for lead based on conservative inputs to the Technical Review Workgroup for Lead's Adult Pb model (http://www.epa.gov/oerrpage/superfund/programs/lead/adfaqs.htm)

[k] SSL is based on RfD for mercuric chloride (CAS No. 007847-94-7)

[l] SSL is based on Rfd for thallium chloride (CAS No. 7791-12-0)

Exhibit A-3 (continued)

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: INDOOR WORKER RECEPTOR[a]

Compound			Migration to Ground Water	
Organics(continued)	CAS No.	Ingestion-Dermal* (mg/kg)	DAF=20 (mg/kg)	DAF=1 (mg/kg)
1,2-Dichloropropane	78-87-5	84 [e]	0.03	0.001 [f]
1,3-Dichloropropene	542-75-6	57 [e]	0.004 [e]	0.0002 [e]
Dieldrin	60-57-1	0.4 [e]	0.004 [e]	0.0002 [e,f]
Diethylphthalate	84-66-2	1,000,000 [b]	470 [b]	23 [b]
2,4-Dimethylphenol	105-67-9	41,000 [b]	9 [b]	0.4 [b]
2,4-Dinitrophenol	51-28-5	4,100 [b]	0.2 [b,f,i]	0.008 [b,f,i]
2,4-Dinitrotoluene	121-14-2	8 [e]	0.0008 [e,f]	0.00004 [e,f]
2,6-Dinitrotoluene	606-20-2	8 [e]	0.0007 [e,f]	0.00003 [e,f]
Di-n-octyl phthalate	117-84-0	41,000 [b]	10,000 [d]	10,000 [d]
Endosulfan	115-29-7	12,000 [b]	18 [b]	0.9 [b]
Endrin	72-20-8	610 [b]	1	0.05
Ethylbenzene	100-41-4	200,000 [b]	13	0.7
Fluoranthene	206-44-0	82,000 [b]	4,300 [b]	210 [b]
Fluorene	86-73-7	82,000 [b]	560 [b]	28 [b]
Heptachlor	76-44-8	1 [e]	23	1
Heptachlor Epoxide	1024-57-3	0.6 [e]	0.7	0.03
Hexachlorobenzene	118-74-1	4 [e]	2	0.1 [f]
Hexachloro-1,3-butadiene	87-68-3	73 [e]	2	0.1 [f]
α-HCH (α-BHC)	319-84-6	0.9 [e]	0.0005 [e,f]	0.00003 [e,f]
β-HCH(β-BHC)	319-85-7	3 [e]	0.003 [e]	0.0001 [e,f]
γ-HCH(Lindane)	58-89-9	4 [e]	0.009	0.0005 [f]
Hexachlorocyclopentadiene	77-47-4	14,000 [b]	400	20
Hexachloroethane	67-72-1	410 [e]	0.5 [e]	0.02 [e,f]
Indeno(1,2,3-cd)pyrene	193-39-5	8 [e]	14 [e]	0.7 [e]
Isophorone	78-59-1	6,000 [e]	0.5 [e]	0.03 [e,f]
Methoxychlor	72-43-5	10,000 [b]	160	8
Methyl bromide	74-83-9	2,900 [b]	0.2 [b]	0.01 [b,f]
Methylene chloride	75-09-2	760 [e]	0.02 [e]	0.001 [e,f]
2-Methylphenol (o-cresol)	95-48-7	100,000 [b]	15 [b]	0.8 [b]
Naphthalene	91-20-3	41,000 [b]	84 [b]	4 [b]
Nitrobenzene	98-95-3	1,000 [b]	0.1 [b,f]	0.007 [b,f]
N-Nitrosodiphenylamine	86-30-6	1,200 [e]	1 [e]	0.06 [e,f]
N-Nitrosodi-n-propylamine	621-64-7	0.8 [e]	0.00005 [e,f]	0.000002 [e,f]
Pentachlorophenol	87-86-5	48 [e]	0.03 [f,i]	0.001 [f,i]
Phenol	108-95-2	1,000,000 [b]	100 [b]	5 [b]
Pyrene	129-00-0	61,000 [b]	4,200 [b]	210 [b]
Styrene	100-42-5	410,000 [b]	4	0.2
1,1,2,2-Tetrachloroethane	79-34-5	29 [e]	0.003 [e,f]	0.0002 [e,f]
Tetrachloroethylene	127-18-4	110 [e]	0.06	0.003 [f]
Toluene	108-88-3	410,000 [b]	12	0.6
Toxaphene	8001-35-2	5 [e]	31	2
1,2,4-Trichlorobenzene	120-82-1	20,000 [b]	5	0.3 [f]
1,1,1-Trichloroethane	71-55-6	--- [c]	2	0.1

APPENDIX D

U.S. Code of Federal Regulations (CFR) Title 40: Protection of Environment. Part 141: National Primary Drinking Water Regulations

Subpart G: National Revised Primary Drinking Water Regulations: Maximum Contaminant Levels
7-1-97 Edition

Current Drinking Water Standards

National Primary Drinking Water Regulations (NPDWRs or primary standards) are legally enforceable standards that apply to public water systems. Primary standards protect public health by limiting the levels of contaminants in drinking water. The table below divides these contaminants into:

EPA 816-F-02-01
July 200
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Microorganisms | Disinfectants | Disinfection Byproducts | Inorganic Chemicals | Organic Chemicals | Radionuclides

For more information, see Setting Standards for Safe Drinking Water to learn about EPA's standard-setting process or look at a timeline that shows the order in which EPA regulated these contaminants. For copies of the complete regulations regarding these contaminants, follow these links:

- National Primary Drinking Water Regulations
- National Secondary Drinking Water Regulations

National Primary Drinking Water Regulations

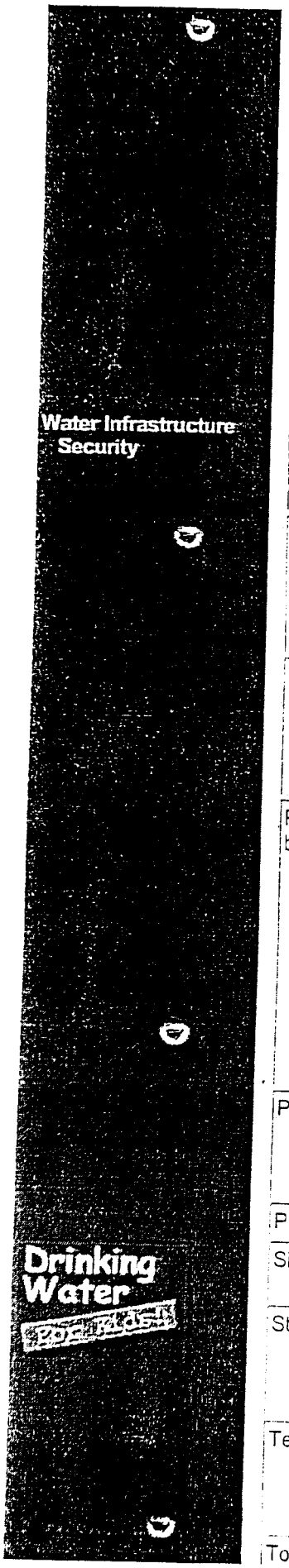
Microorganisms	MCLG[1] (mg/L)[2]	MCL or TT[1] (mg/L)[2]	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Cryptosporidium	zero	TT[3]	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and fecal animal waste
Giardia lamblia	zero	TT[3]	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste
Heterotrophic plate count	n/a	TT[3]	HPC has no health effects; it is an analytic method used to measure the variety of bacteria that are common in water. The lower the concentration of bacteria in drinking water, the better maintained the water system is.	HPC measures a range of bacteria that are naturally present in the environment

Legionella	zero	TT[3]	Legionnaire's Disease, a type of pneumonia	Found naturally in water; multiplies in heating systems
Total Coliforms (including fecal coliform and *E. Coli*)	zero	5.0%[4]	Not a health threat in itself; it is used to indicate whether other potentially harmful bacteria may be present[5]	Coliforms are naturally present in the environment; as well as feces; fecal coliforms and *E. coli* only come from human and animal fecal waste.
Turbidity	n/a	TT[3]	Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (e.g., whether disease-causing organisms are present). Higher turbidity levels are often associated with higher levels of disease-causing microorganisms such as viruses, parasites and some bacteria. These organisms can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.	Soil runoff
Viruses (enteric)	zero	TT[3]	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste

Disinfection Byproducts	MCLG[1] (mg/L)[2]	MCL or TT[1] (mg/L)[2]	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Bromate	zero	0.010	Increased risk of cancer	Byproduct of drinking water disinfection
Chlorite	0.8	1.0	Anemia; infants & young children: nervous system effects	Byproduct of drinking water disinfection
Haloacetic acids (HAA5)	n/a[6]	0.060	Increased risk of cancer	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHMs)	none[7] / n/a[6]	0.10 / 0.080	Liver, kidney or central nervous system problems; increased risk of cancer	Byproduct of drinking water disinfection

Copper	1.3	TT[8]; Action Level=1.3	Short term exposure: Gastrointestinal distress Long term exposure: Liver or kidney damage People with Wilson's Disease should consult their personal doctor if the amount of copper in their water exceeds the action level	Corrosion of household plumbing systems; erosion of natural deposits
Cyanide (as free cyanide)	0.2	0.2	Nerve damage or thyroid problems	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride	4.0	4.0	Bone disease (pain and tenderness of the bones); Children may get mottled teeth	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Lead	zero	TT[8]; Action Level=0.015	Infants and children: Delays in physical or mental development; children could show slight deficits in attention span and learning abilities Adults: Kidney problems; high blood pressure	Corrosion of household plumbing systems; erosion of natural deposits
Mercury (inorganic)	0.002	0.002	Kidney damage	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands
Nitrate (measured as Nitrogen)	10	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Carbofuran	0.04	0.04	Problems with blood, nervous system, or reproductive system	Leaching of soil fumigant used on rice and alfalfa
Carbon tetrachloride	zero	0.005	Liver problems; increased risk of cancer	Discharge from chemical plants and other industrial activities
Chlordane	zero	0.002	Liver or nervous system problems; increased risk of cancer	Residue of banned termiticide
Chlorobenzene	0.1	0.1	Liver or kidney problems	Discharge from chemical and agricultural chemical factories
2,4-D	0.07	0.07	Kidney, liver, or adrenal gland problems	Runoff from herbicide used on row crops
Dalapon	0.2	0.2	Minor kidney changes	Runoff from herbicide used on rights of way
1,2-Dibromo-3-chloropropane (DBCP)	zero	0.0002	Reproductive difficulties; increased risk of cancer	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
o-Dichlorobenzene	0.6	0.6	Liver, kidney, or circulatory system problems	Discharge from industrial chemical factories
p-Dichlorobenzene	0.075	0.075	Anemia; liver, kidney or spleen damage; changes in blood	Discharge from industrial chemical factories
1,2-Dichloroethane	zero	0.005	Increased risk of cancer	Discharge from industrial chemical factories
1,1-Dichloroethylene	0.007	0.007	Liver problems	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene	0.07	0.07	Liver problems	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene	0.1	0.1	Liver problems	Discharge from industrial chemical factories
Dichloromethane	zero	0.005	Liver	Discharge from drug



			of cancer	
Heptachlor epoxide	zero	0.0002	Liver damage; increased risk of cancer	Breakdown of heptachlor
Hexachlorobenzene	zero	0.001	Liver or kidney problems; reproductive difficulties; increased risk of cancer	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene	0.05	0.05	Kidney or stomach problems	Discharge from chemical factories
Lindane	0.0002	0.0002	Liver or kidney problems	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor	0.04	0.04	Reproductive difficulties	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl (Vydate)	0.2	0.2	Slight nervous system effects	Runoff/leaching from insecticide used on apples, potatoes, and tomatoes
Polychlorinated biphenyls (PCBs)	zero	0.0005	Skin changes; thymus gland problems; immune deficiencies; reproductive or nervous system difficulties; increased risk of cancer	Runoff from landfills; discharge of waste chemicals
Pentachlorophenol	zero	0.001	Liver or kidney problems; increased cancer risk	Discharge from wood preserving factories
Picloram	0.5	0.5	Liver problems	Herbicide runoff
Simazine	0.004	0.004	Problems with blood	Herbicide runoff
Styrene	0.1	0.1	Liver, kidney, or circulatory system problems	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene	zero	0.005	Liver problems; increased risk of cancer	Discharge from factories and dry cleaners
Toluene	1	1	Nervous	Discharge from

Radionuclides	MCLG[1] (mg/L)[2]	MCL or TT[1] (mg/L)[2]	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Alpha particles	none[7] ---------- zero	15 picocuries per Liter (pCi/L)	Increased risk of cancer	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation
Beta particles and photon emitters	none[7] ---------- zero	4 millirems per year	Increased risk of cancer	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation
Radium 226 and Radium 228 (combined)	none[7] ---------- zero	5 pCi/L	Increased risk of cancer	Erosion of natural deposits
Uranium	zero	30 ug/L as of 12/08/03	Increased risk of cancer, kidney toxicity	Erosion of natural deposits

Notes

[1] Definitions:
Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed ir drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.
Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.
Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflec the benefits of the use of disinfectants to control microbial contaminants.
Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

[2] Units are in milligrams per liter (mg/L) unless otherwise noted. Milligrams per liter are equivalent to parts per million.

[3] EPA's surface water treatment rules require systems using surface water or ground water under the direct influence of surface water to (1) disinfect their water, and (2) filter their wate or meet criteria for avoiding filtration so that the following contaminants are controlled at the following levels:

- Cryptosporidium (as of1/1/02 for systems serving >10,000 and 1/14/05 for systems serving <10,000) 99% removal.

APPENDIX E

New York State Department of Environmental Conservation:
6 NYCRR Part 703

Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations

6 NYCRR Part 703

Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations

(Statutory authority: Environmental Conservation Law, §§ 3-0301[2][m], 15-0313, 17-0301, 17-0809)

[Effective Date: 1967]
[Amended last on August 1999]
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Historical Note

Part (§§ 703.1-703.4) filed March 20, 1967; repealed, new filed April 28, 1972; repealed, new (§§ 703.1 -703.11) filed Aug. 2, 1978; repealed, new (§§ 703.1-703.7) filed Aug. 2, 1991; amd. filed July 16, 1999 eff. Aug. 4, 1999. Amended Part title.

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§703.1 Substance form

		for their best usages.
Radioactivity	A-Special	Should be kept at the lowest practicable levels, and in any event should be controlled to the extent necessary to prevent harmful effects on health.
Thermal discharges	GA, GSA, GSB	None in amounts that will impair the waters for their best usages.
Thermal discharges	AA, A, B, C, D, SA, SB, SC, I, SD, A-Special	See Part 704 of this Title.

Historical Note

Sec. filed March 20, 1967; repealed, new filed: April 28, 1972; Aug. 2, 1978; Aug. 2, 1991 eff. 30 days after filing.

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§703.3 Water quality standards for pH, dissolved oxygen, dissolved solids, odor, color and turbidity

Standards for specific classes are provided in this section.

Parameter	***Classes***	***Standard***
pH	AA, A, B, C, AA-Special, A-Special, GA	Shall not be less than 6.5 nor more than 8.5.
	D	Shall not be less than 6.0 nor more than 9.5.
	SA, SB, SC, I, SD	The normal range shall not be extended by more than one-tenth (0.1) of a pH unit.
Dissolved oxygen (DO)	A-Special	In rivers and upper waters of lakes, not less than 6.0 mg/L at any time. In hypolimnetic waters, it should not be less than necessary for the support of fishlife, particularly cold water species.
	AA, A, B, C, AA-	For cold waters suitable for trout spawning, the DO concentration shall not be less than 7.0

A, B, C, D, SB, SC	The monthly median value and more than 20 percent of the samples, from a minimum of five examinations, shall not exceed 2,400 and 5,000, respectively.
SA	The median most probable number (MPN) value in any series of representative samples shall not be in excess of 70.
I	The monthly geometric mean, from a minimum of five examinations, shall not exceed 10,000.
A-Special	The geometric mean, of not less than five samples, taken over not more than a 30-day period shall not exceed 1,000.
GA	The maximum allowable limit is 50.

(b) Fecal coliforms (number per 100 ml).

Classes	*Standard*
A, B, C, D, SB, SC	The monthly geometric mean, from a minimum of five examinations, shall not exceed 200
I	The monthly geometric mean, from a minimum of five examinations, shall not exceed 2,000.
A-Special	The geometric mean, of not less than five samples, taken over not more than a 30-day period shall not exceed 200.

(c) The total and fecal coliform standards for classes B, C, D, SB, SC and I shall be met during all periods when disinfection is practiced.

Historical Note

Sec. filed March 20, 1967; repealed, new filed: April 28, 1972; Aug. 2, 1978; amd. filed Nov. 5, 1984; repealed, new filed Aug. 2, 1991; amd. filed Dec. 10, 1993 eff. 30 days after filing. Amended (a).

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§703.5 Water quality standards for taste-, color- and odor-producing, toxic and other deleterious substances

(a) Water quality standards for specific substances or groups of substances are listed in Table 1 of subdivision (f) of this section for the applicable water classes. The substance name is listed with the associated Chemical Abstract Service Registry Number (CAS No.) where applicable. For entries in Table 1 of subdivision (f) of this section that refer to chemical groups, congeners or

(107-13-1)				
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Alachlor (15972-60-8)	A, A-S, AA, AA-S GA	0.5 0.5	H(WS) H(WS)	A A
Aldicarb (116-06-3)	A, A-S, AA, AA-S GA	7 *	H(WS) H(WS)	B
Remark: * Refer to standards for "Aldicarb and Methomyl."				
Aldicarb and Methomyl (116-06-3; 16752-77-5)	GA	0.35*	H(WS)	F
Remark: * Applies to the sum of these substances.				
Aldrin (309-00-2)	GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, SD	ND * *	H(WS) H(FC) H(FC)	F
Remark: * Refer to standards for "Aldrin and Dieldrin."				
Aldrin and Dieldrin (309-00-2; 60-57-1)	A, A-S, AA, AA-S, B, C, D SA, SB, SC, SD	0.001 0.001	H(FC) H(FC)	
Remark: * Applies to the sum of these substances.				
Alkyldimethyl benzyl ammonium chloride	A, A-S, AA, AA-S, B, C	*	A(C)	

4-Aminotoluene (106-49-0)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Ammonia and Ammonium (7664-41-7; CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C D	2,000* 2,000* ** **	H(WS) H(WS) A(C) A(A)	H H
Remarks: * NH3 + NH4+ as N. ** Un-ionized ammonia as NH3; tables below provide the standard in ug/L at varying pH and temperature for different classes and specifications. Linear interpolation between the listed pH values and temperatures is applicable.				

Classes A, A-S, AA, AA-S, B, C with the (T) or (TS) Specification				
pH	**0C**	**5C**	**10C**	**15-30C**
6.50	0.7	0.9	1.3	1.9
6.75	1.2	1.7	2.3	3.3
7.00	2.1	2.9	4.2	5.9
7.25	3.7	5.2	7.4	11
7.50	6.6	9.3	13	19
7.75	11	15	22	31
8.0-9.0	13	18	25	35

Classes A, A-S, AA, AA-S, B, C with the (T) or (TS) Specification					
pH	**0C**	**5C**	**10C**	**15C**	**20-30C**
6.50	0.7	0.9	1.3	1.9	2.6
6.75	1.2	1.7	2.3	3.3	4.7
7.00	2.1	2.9	4.2	5.9	8.3

	A, A-S, AA, AA-S, B, C, D SA, SB, SC SD	63* 120*	A(C) A(A)	
Remark: * Dissolved arsenic form.				
Asbestos (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	* *	H(WS) H(WS)	G G
Remark: * 7,000,000 fibers (longer than 10 um)/L				
Atrazine (1912-24-9)	GA	7.5	H(WS)	F
Azinphosmethyl (86-50-0)	GA A, A-S, AA, AA-S, B, C SA, SB, SC	4.4 0.005* 0.01	H(WS) A(C) A(C)	F
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Azobenzene (103-33-3)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Barium (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	1,000 1,000	H(WS) H(WS)	G F
Benefin (1861-40-1)	GA	35	H(WS)	F
Benzene (71-43-2)	A, A-S, AA, AA-S GA	1 1	H(WS) H(WS)	A A

Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Bis(2-chloroethyl) ether (111-44-4)	GA	1.0	H(WS)	F
Bis(chloromethyl)ether (542-88-1)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Bis(2-chloro-1-methylethyl)ether (108-60-1)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Bis(2-ethylhexyl) phthalate (117-81-7)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C	5 5 0.6	H(WS) H(WS) A(C)	A A
Boron (CAS No. Not Applicable)	GA A, A-S, AA, AA-S, B, C SA, SB, SC	1,000 10,000* 1,000	H(WS) A(C) A(C)	H
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title. Aquatic Type standards apply to acid-soluble form.				
Bromacil (314-40-9)	GA	4.4	H(WS)	F
Bromobenzene (108-86-1)	GA	*	H(WS)	J

n-Butylbenzene (104-51-8)	A, A-S, AA, AA-S GA	5 *	H(WS) H(WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
sec-Butylbenzene (135-98-8)	A, A-S, AA, AA-S GA	5 *	H(WS) H(WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
tert-Butylbenzene (98-06-6)	A, A-S, AA, AA-S GA	5 *	H(WS) H(WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Cadmium (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S, B, C, D SA, SB, SC, I SD	5 5 * ** 7.7 21	H(WS) H(WS) A(C) A(A) A(C) A(A)	B,G B,G
Remarks: * (0.85) exp(0.7852 [ln (ppm hardness)] - 2.715) ** (0.85) exp(1.128 [ln (ppm hardness)] - 3.6867) Aquatic Type standards apply to dissolved form.				
Captan (133-06-2)	GA	18	H(WS)	F

(CAS No. Not Applicable)	AA-S GA	250,000	H(WS)	H
Chlorinated dibenzo-p- dioxins and Chlorinated dibenzofurans (CAS No. Not applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD	7 x 10-7* 7 x 10-7* 6 x 10-10* 6 x 10-10* 3.1 x 10-9** 3.1 x 10-9**	H(WS) H(WS) H(FC) H(FC) W W	A A A A

Remarks: * Value is for the total of the chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans that are listed in the table below as equivalents of 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD).

The 2,3,7,8-TCDD equivalent for a congener for the H(WS) standards is obtained by multiplying the concentration of that congener by its Toxicity Equivalency Factor (TEF) from the table below.

The 2,3,7,8-TCDD equivalent for a congener for the H(FC) standards is obtained by multiplying the concentration of that congener by its TEF and its Bioaccumulation Equivalency Factor (BEF) from the table below.

** Applies only to 2,3,7,8-TCDD

CONGENER	TEF	BEF
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1	1
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.5	0.9
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	0.3
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	0.1
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	0.1
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	0.1

(108-90-7)	AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA,SB, SC, I, SD A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S D	* 400 400 5 20 50	(WS) H (WS) H (FC) H (FC) A(C) E E	J B B U V
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4-Chlorobenzotrifluoride (98-56-6)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1-Chlorobutane (109-69-3)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Chloroethane (75-00-3)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Chloroform (67-66-3)	A, A-S, AA, AA-S GA	7 7	H (WS) H	A A

5 ug/L (described elsewhere in this Table) applies to this substance.				
3-Chlorotoluene (108-41-8)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4-Chlorotoluene (106-43-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4-Chloro-o-toluidine (95-69-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
5-Chloro-o-toluidine (95-79-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3-Chloro-1,1,1-trifluoropropane (460-35-5)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Chromium (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C	50 50 * **	H (WS) H (WS) A(C) A(A)	G G

	AA, AA-S, B, C, D	****	A(C)	
			A(A)	
	SA, SB, SC, I			
	SA, SB, SC, I, SD			
Remarks: * (0.96) exp(0.8545 [ln (ppm hardness)] - 1.702) ** (0.96) exp(0.9422 [ln (ppm hardness)] - 1.7) *** Standard is 3.4 ug/L except in New York/New Jersey Harbor where it is 5.6 ug/L. **** Standard is 4.8 ug/L except in New York/New Jersey Harbor where it is 7.9 ug/L. Aquatic Type standards apply to dissolved form.				
Cyanide (CAS No. Not Applicable)	A, A-S, AA, AA-S	200	H (WS)	B
		200		B
	GA		H	
		9,000	(WS)	B
	A, A-S, AA-S, B, C, D	9,000	H (FC)	B
		5.2*		
	SA, SB, SC, I, SD	22*	H (FC)	
	A, A-S, AA, AA-S, B, C	1.0*	A(C)	
		1.0*	A(A)	
	A, A-S, AA, AA-S, B, C, D		A(C)	
			A(A)	
	SA, SB, SC			
	SD			
Remark: * As free cyanide: the sum of HCN and CN- expressed as CN.				
Cyanogen bromide	GA	*	H (WS)	J

	SA, SB, SC, I, SD	*	H (FC)	
	A, A-S, AA, AA-S, B, C, D	*	W	
	SA, SB, SC, I, SD		W	
Remark: * See standard for p,p'-DDT.				
p,p'-DDT (50-29-3)	A, A-S, AA, AA-S	0.2	H (WS)	A
	GA	0.2		A
		1 x 10-5	H (WS)	A
	A, A-S, AA, AA-S, B, C, D	1 x 10-5	H (FC)	A
	SA, SB, SC, I, SD	1.1 x 10-5*	H (FC)	
	A, A-S, AA, AA-S, B, C, D	1.1 x 10-5*	W	
	SA, SB, SC, I, SD		W	
Remark: * Applies to the sum of p,p'-DDD, p,p'-DDE and p,p'-DDT				
Dechlorane Plus (13560-89-9)	A, A-S, AA, AA-S	5	H (WS)	I
	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Demeton (8065-48-3; 298-03-3;126-75-0)	A, A-S, AA, AA-S, B, C	0.1*	A(C)	
		0.1	A(C)	

Dibromodichloromethane (594-18-3)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Dibromomethane (74-95-3)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Di-n-butyl phthalate (84-74-2)	GA	50	H (WS)	J
Dicamba (1918-00-9)	GA	0.44	H (WS)	F
Dichlorobenzenes (95-50-1; 541-73-1; 106-46-7)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S D	3* 3* 5** 20***/30**** 50**	H (WS) H (WS) A(C) E E	A A U V
Remarks: * Applies to each isomer (1,2-,1,3- and 1,4-dichlorobenzene) individually. ** Applies to the sum of 1,2-, 1,3- and 1,4-dichlorobenzene. For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title. *** Applies to 1,3-dichlorobenzene only. **** Applies to 1,4-dichlorobenzene only.				

(75-35-4)				
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
cis-1,2-Dichloroethene (156-59-2)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
trans-1,2-Dichloroethene (156-60-5)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Dichlorofluoromethane (75-43-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4-Dichlorophenol (120-83-2)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D	0.3* ** ***	E E E	U
Remarks: * Also see standards for "Phenolic compounds (total phenols)." ** Refer to standards for "Phenolic compounds (total phenols)." *** Refer to standards for "Phenols, total chlorinated."				
2,4-Dichlorophenoxyacetic acid	A, A-S, AA, AA-S GA	50 50	H (WS) H	G G

Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4-Dichlorotoluene (95-73-8)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,5-Dichlorotoluene (19398-61-9)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,6-Dichlorotoluene (118-69-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,4-Dichlorotoluene (95-75-0)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,5-Dichlorotoluene (25186-47-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Dieldrin (60-57-1)	A, A-S, AA, AA-S GA	0.004 0.004	H (WS) H	A A

N,N-Dimethylaniline (121-69-7)	A, A-S, AA, AA-S GA	1 1	H (WS) H (WS)	A A
2,3-Dimethylaniline (87-59-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4-Dimethylaniline (95-68-1)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,5-Dimethylaniline (95-78-3)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,6-Dimethylaniline (87-62-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,4-Dimethylaniline (95-64-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,5-Dimethylaniline (108-69-0)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,3'-Dimethylbenzidine (119-93-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				

2,4-Dinitrophenol (51-28-5)	A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD A, A-S, AA, AA-S GA B, C, D	400 400 * * ** 	H (FC) H (FC) E E E 	B B
Remarks: * Refer to standards for "Phenolic compounds (total phenols)." ** Refer to standards for "Phenols, total unchlorinated."				
2,3-Dinitrotoluene (602-01-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4-Dinitrotoluene (121-14-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,5-Dinitrotoluene (619-15-8)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,6-Dinitrotoluene (606-20-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,4-Dinitrotoluene (610-39-9)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of				

	SD			
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (d) of this Title.				
Endrin (72-20-8)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, SD A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S, B, C, D	0.2 ND 0.002 0.002 0.036 0.086	H (WS) H (WS) H (FC) H (FC) A(C) A(A)	G F
Endrin aldehyde (7421-93-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Endrin ketone (53494-70-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Ethylbenzene (100-41-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				

	GA		H (WS)	
Remark: * 15 picocuries per liter, excluding radon and uranium.				
Gross beta radiation (CAS No. Not Applicable)	A, AA GA	* *	H (WS) H (WS)	H H
Remark: * 1,000 picocuries per liter, excluding strontium-90 and alpha emitters.				
Heptachlor (76-44-8)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD	0.04 0.04 2 x 10-4 2 x 10-4	H (WS) H (WS) H (FC) H (FC)	A A A A
Heptachlor epoxide (1024-57-3)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD	0.03 0.03 3 x 10-4 3 x 10-4	H (WS) H (WS) H (FC) H (FC)	A A A A
Hexachlorobenzene (118-74-1)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D	0.04 0.04 3 x 10-5 3 x 10-5	H (WS) H (WS) H (FC) H (FC)	A A A A

	GA	0.007	H (WS)	A
	A, A-S, AA, AA-S, B, C, D	0.007	H (FC)	A
	SA, SB, SC, I, SD		H (FC)	
delta-Hexachlorocyclohexane (319-86-8)	A, A-S, AA, AA-S	0.04	H (WS)	A
	GA	0.04		A
		0.008	H (WS)	A
	A, A-S, AA, AA-S, B, C, D	0.008	H (FC)	A
	SA, SB, SC, I, SD		H (FC)	
epsilon-Hexachlorocyclohexane (6108-10-7)	A, A-S, AA, AA-S	0.04	H (WS)	A
	GA	0.04		A
		0.008	H (WS)	A
	A, A-S, AA, AA-S, B, C, D	0.008	H (FC)	A
	SA, SB, SC, I, SD		H (FC)	
gamma-Hexachlorocyclohexane (58-89-9)	A, A-S, AA, AA-S	0.05	H (WS)	A
	GA	0.05		A
		0.008	H (WS)	A
	A, A-S, AA, AA-S, B, C, D	0.008	H (FC)	A
		0.95		
	SA, SB, SC, I, SD		H (FC)	

	GA B,C,D	** *** 	E E	

Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.

** Refer to standards for "Phenolic compounds (total phenols)."

*** Refer to standards for "Phenols, total chlorinated."

Hexachloropropene (1888-71-7)	GA	*	H (WS)	J

Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.

Hexazinone (51235-04-2)	GA	50	H (WS)	J
Hydrazine (302-01-2)	A, A-S, AA, AA-S, B, C D	* **	A(C) A(A)	

Remarks: * 5 ug/L at less than 50 ppm hardness and 10 ug/L at greater than or equal to 50 ppm hardness.

** 50 ug/L at less than 50 ppm hardness and 100 ug/L at greater than or equal to 50 ppm hardness.

For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) and (d) of this Title.

Hydrogen sulfide (7783-06-4)	A, A-S, AA, AA-S, B, C SA, SB, SC	2.0* 2.0	A(C) A(C)	

Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.

Aquatic Type standards apply to undissociated form.

Isodrin (465-73-6)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Isopropalin (33820-53-0)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Isopropylbenzene (98-82-8)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2-Isopropyltoluene (527-84-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3-Isopropyltoluene (535-77-3)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4-Isopropyltoluene (99-87-6)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Isothiazolones, total (isothiazolinones)	A, A-S, AA, AA-S, B, C D	1* 10*	A(C) A(A)	

sulfonates (LAS) (CAS No. Not Applicable)	AA, AA-S, B, C			
Remark: * LAS with side chains greater than 13 carbons only; applies to the sum of these substances. * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Magnesium (CAS No. Not Applicable)	A, A-S, AA, AA-S	35,000	H (WS)	B
Malathion (121-75-5)	GA A, A-S, AA, AA-S, B, C SA, SB, SC	7.0 0.1* 0.1	H (WS) A(C) A(C)	F
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Mancozeb (8018-01-7)	GA	1.8	H (WS)	F
Maneb (12427-38-2)	GA	1.8	H (WS)	F
Manganese (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	300 300*	E E	G F
Remark: * Also see standards for "Iron and Manganese."				
Mercury (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-	0.7 0.7 7 x 10-4*	H (WS) H (WS) H	B B B

	SC			
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
N-Methylaniline (100-61-8)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Methyl chloride (74-87-3)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2-Methyl-4-chloro-phenoxyacetic acid (94-74-6)	GA	0.44	H (WS)	F
4,4'-Methylene-bis-(2-chloroaniline) (101-14-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4,4'-Methylene-bis-(N-methyl)aniline (1807-55-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4,4'-Methylene-bis-(N,N'-dimethyl) aniline (101-61-1)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Methylene bisthiocyanate (6317-18-6)	A, A-S, AA, AA-S, B, C	1.0*	A(C)	

			(WS)	
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3-Methylstyrene (100-80-1)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4-Methylstyrene (622-97-9)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Metribuzin (21087-64-9)	GA	50	H (WS)	J
Mirex (2385-85-5)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD A, A-S, AA, AA-S, B, C D SA, SB, SC	0.03 0.03 1 x 10-6 1 x 10-6 0.001* 0.001* 0.001	H (WS) H (WS) H (FC) H (FC) A(C) A(A) A(C)	A A A A
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined				

Nitrate and Nitrite (expressed as N) (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	10,000* 10,000*	H (WS) H (WS)	G G
Remark: * Applies to the sum of these substances; also see individual standards for "Nitrate" and "Nitrite."				
Nitrilotriacetic acid (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C	3* 3* 5,000**	H (WS) H (WS) A(C)	A A
Remarks: * Includes related forms that convert to nitrilotriacetic acid upon acidification to a pH of 2.3 or less. ** Applies to nitrilotriacetate. ** For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Nitrite (expressed as N) (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C	1,000* 1,000* **	H (WS) H (WS) A(C)	G G
Remarks: * Also see standards for "Nitrate and Nitrite." ** Standard is 100 ug/L for warm water fishery waters and 20 ug/L for cold water fishery waters. ** For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
2-Nitroaniline (88-74-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of				

(29082-74-4)	GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD	0.2 6 x 10-6 6 x 10-6	 H (WS) H (FC) H (FC)	B B B
Oxamyl (23135-22-0)	GA	50	H (WS)	J
Paraquat (4685-14-7)	GA	3.0	H (WS)	F
Parathion (56-38-2)	GA A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S, B, C, D	* * 0.065	H (WS) A(C) A(A)	
Remark: * Refer to standards for "Parathion and Methyl parathion."				
Parathion and Methyl parathion (56-38-2; 298-00-0)	GA A, A-S, AA, AA-S, B, C	1.5* 0.008**	H (WS) A(C)	F
Remarks: * Applies to the sum of these substances. ** Applies to the sum of these substances. For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Pendimethalin (40487-42-1)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				

** Refer to standards for "Phenols, total unchlorinated."

Phenolic compounds	A, A-S, AA, AA-S	1*	E	U
(total phenols)	GA	1*	E	U
(CAS No. Not Applicable)				

Remark: * Applies to the sum of these substances.

Phenols, total chlorinated	A, A-S, AA, AA-S	*	E	V
(CAS No. Not Applicable)	GA	*	E	
	A, A-S, AA, AA-S, B, C, D	1.0**	E	

Remarks: * Refer to standards for "Phenolic compounds (total phenols)."

** Applies to the sum of these substances.

Phenols, total unchlorinated	A, A-S, AA, AA-S	*	E	V
(CAS No. Not Applicable)	GA	*	E	
	A, A-S, AA, AA-S, B, C, D	5.0**	E	

Remarks: * Refer to standards for "Phenolic compounds (total phenols)."
** Applies to the sum of these substances.

1,2-Phenylenediamine	GA	*	H (WS)	J
(95-54-5)				

Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.

1,3-Phenylenediamine	GA	*	H (WS)	J
(108-45-2)				

Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.

Phorate and Disulfoton (298-02-2; 298-04-4)	GA	ND*	H (WS)	F
Remark: * Applies to sum of these substances.				
Picloram (CAS No. Not Applicable)	GA	50*	H (WS)	J
Remark: * Includes: related forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid.				
Polybrominated biphenyls (CAS No. Not Applicable)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to each congener individually.				
Polychlorinated biphenyls (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD A, A-S, AA, AA-S, B, C,D SA, SB, SC, I, SD	0.09* 0.09* 1 x 10-6* 1 x 10-6* 1.2 x 10-4* 1.2 x 10-4*	H (WS) H (WS) H (FC) H (FC) W W	A A A A
Remark: * Applies to the sum of these substances.				
Principal organic contaminant (CAS No. Not Applicable)	GA	5	H (WS)	J
Remarks: This standard applies to any and every individual substance, whether listed in this Table or not, that is in one of the principal organic contaminant classes as defined in section 700.1 of this Title except any				

a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Radium 226 (CAS No. Not Applicable)	A, AA GA	* *	H (WS) H (WS)	H H
Remark: * 3 picocuries per liter; also see standards for "Radium 226 and Radium 228."				
Radium 226 and Radium 228 (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	* *	H (WS) H (WS)	G G
Remark: * 5 picocuries per liter; Applies to the sum of these substances.				
Radium 228 (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	* *	H (WS) H (WS)	
Remark: * Refer to standards for "Radium 226 and Radium 228."				
Selenium (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C	10 10 4.6*	H (WS) H (WS) A(C)	G G
Remark: * Aquatic Type standard applies to dissolved form.				
Silver (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C D	50 50 0.1* **	H (WS) H (WS) A(C)	G F

(CAS No. Not Applicable)				
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Tebuthiuron (34014-18-1)	GA	50	H (WS)	J
Terbacil (5902-51-2)	GA	50	H (WS)	J
Tetrachlorobenzenes (634-66-2; 634-90-2;95-94-3; 12408-10-5)	GA A, A-S, AA, AA-S	* 10**	H (WS) E	J U
Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to each isomer (1,2,3,4-, 1,2,3,5-, and 1,2,4,5-tetrachlorobenzene) individually. ** Applies to the sum of 1,2,3,4-, 1,2,3,5- and 1,2,4,5-tetrachlorobenzene.				
1,1,1,2-Tetrachloroethane (630-20-6)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,1,2,2-Tetrachloroethane (79-34-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Tetrachloroethene (127-18-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Tetrachloroterephthalic acid (2136-79-0)	GA	50	H (WS)	J
alpha, alpha, alpha, 4-Tetrachloro-toluene	GA	*	H (WS)	J

(95-70-5)			(WS)	
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Toluene-2,6-diamine (823-40-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
o-Toluidine (95-53-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Toxaphene (8001-35-2)	A, A-S, AA, AA-S	0.06	H (WS)	A
	GA	0.06	H (WS)	A
	A, A-S, AA, AA-S, B, C, D	6 x 10-6	H (FC)	A
	SA, SB, SC, I, SD	0.005	H (FC)	A
	A, A-S, AA, AA-S, B, C	1.6*	A(C)	
	D	0.005	A(A)	
	SA, SB, SC		A(C)	
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic standard if so determined under section 702.15 (d) of this Title.				
1,2,4-Tribromobenzene (615-54-3)	A, A-S, AA, AA-S	5	H (WS)	I
	GA	*		J

(79-00-5)	GA	1	H (WS)	A
Trichloroethene (79-01-6)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD	5 * 40 40	H (WS) H (WS) H (FC) H (FC)	I J A A
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Trichlorofluoromethane (75-69-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4,5-Trichlorophenoxy-acetic acid (93-76-5)	GA	35	H (WS)	F
2,4,5-Trichlorophenoxy-propionic acid (93-72-1)	A, A-S, AA, AA-S GA	10 0.26	H (WS) H (WS)	G F
1,1,2-Trichloropropane (598-77-6)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J

(102-47-6)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
alpha,alpha,2-Trichlorotoluene (88-66-4)	A, A-S, AA, AA-S	5	H (WS)	I
	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
alpha,alpha,4-Trichlorotoluene (13940-94-8)	A, A-S, AA, AA-S	5	H (WS)	I
	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,3,4-Trichlorotoluene (7359-72-0)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,3,5-Trichlorotoluene (56961-86-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,3,6-Trichlorotoluene (2077-46-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4,5-Trichlorotoluene (6639-30-1)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of				

1,3,5-Trimethylbenzene (108-67-8)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
sym-Trinitrobenzene (99-35-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,3,4-Trinitrotoluene (602-29-9)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,3,6-Trinitrotoluene (18292-97-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4,5-Trinitrotoluene (610-25-3)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4,6-Trinitrotoluene (118-96-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,4,5-Trinitrotoluene (603-15-6)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Triphenyl phosphate	A, A-S, AA, AA-	4*	A(C)	

Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,4-Xylene (106-42-3)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Zinc (CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S, B, C, D SA, SB, SC, I SD	* ** 66 95	A(C) A(A) A(C) A(A)	
Remarks: Aquatic Type standards apply to dissolved form. * exp(0.85 [ln(ppm hardness)] + 0.50) ** 0.978 exp(0.8473 [ln(ppm hardness)] + 0.884)				
Zineb (12122-67-7)	GA	1.8	H (WS)	F
Ziram (137-30-4)	GA	4.2	H (WS)	F

Table 2
BASIS OF STANDARDS
(cf.703.5)

BASIS CODE	BASIS
A	Oncogenic, Human Health
B	Non-oncogenic, Human Health

APPENDIX F

U.S. EPA Environmental Response Team (ERT)

Standard Operating Procedure (SOP) #2012: Soil Sampling;
from the Compendium of ERT Soil Sampling and Surface Geophysics Procedures. OSWER Directive 9360.4-02. Interim Final. EPA/540/P-91/006
Office of Emergency and Remedial Response (OERR), Washington, DC.

January 1991

2.0 SOIL SAMPLING: SOP #2012

2.1 SCOPE AND APPLICATION

The purpose of this Standard Operating Procedure (SOP) is to describe the procedures for collecting representative soil samples. Analysis of soil samples may determine whether concentrations of specific soil pollutants exceed established action levels, or if the concentrations of soil pollutants present a risk to public health, welfare, or the environment.

2.2 METHOD SUMMARY

Soil samples may be collected using a variety of methods and equipment. The methods and equipment used are dependent on the depth of the desired sample, the type of sample required (disturbed versus undisturbed), and the type of soil. Near-surface soils may be easily sampled using a spade, trowel, and scoop. Sampling at greater depths may be performed using a hand auger, a trier, a split-spoon, or, if required, a backhoe.

2.3 SAMPLE PRESERVATION, CONTAINERS, HANDLING, AND STORAGE

Chemical preservation of solids is not generally recommended. Refrigeration to 4°C, supplemented by a minimal holding time, is usually the best approach.

2.4 INTERFERENCES AND POTENTIAL PROBLEMS

There are two primary interferences or potential problems associated with soil sampling. These include cross-contamination of samples and improper sample collection. Cross-contamination problems can be eliminated or minimized through the use of dedicated sampling equipment. If this is not possible or practical, then decontamination of sampling equipment is necessary. Improper sample collection can involve using contaminated equipment, disturbance of the matrix resulting in compaction of the sample, or inadequate homogenization of the samples where required, resulting in variable, non-representative results.

2.5 EQUIPMENT/APPARATUS

- sampling plan
- maps/plot plan
- safety equipment, as specified in the health and safety plan
- compass
- tape measure
- survey stakes or flags
- camera and film
- stainless steel, plastic, or other appropriate homogenization bucket or bowl
- 1-quart mason jars w/Teflon liners
- Ziploc plastic bags
- logbook
- labels
- chain of custody forms and seals
- field data sheets
- cooler(s)
- ice
- decontamination supplies/equipment
- canvas or plastic sheet
- spade or shovel
- spatula
- scoop
- plastic or stainless steel spoons
- trowel
- continuous flight (screw) auger
- bucket auger
- post hole auger
- extension rods
- T-handle
- sampling trier
- thin-wall tube sampler
- Vehimeyer soil sampler outfit
  - tubes
  - points
  - drive head
  - drop hammer
  - puller jack and grip
- backhoe

2.6 REAGENTS

Reagents are not used for the preservation samples. Decontamination solutions are sp

ERT SOP #2006, Sampling Equipment Decontamination.

2.7 PROCEDURES

2.7.1 Preparation

1. Determine the extent of the sampling effort, the sampling methods to be employed, and which equipment and supplies are required.

2. Obtain necessary sampling and monitoring equipment.

3. Decontaminate or preclean equipment, and ensure that it is in working order.

4. Prepare schedules, and coordinate with staff, client, and regulatory agencies, if appropriate.

5. Perform a general site survey prior to site entry in accordance with the site-specific health and safety plan.

6. Use stakes, buoys, or flagging to identify and mark all sampling locations. Consider specific site factors, including extent and nature of contaminant, when selecting sample location. If required, the proposed locations may be adjusted based on site access, property boundaries, and surface obstructions. All staked locations will be utility-cleared by the property owner prior to soil sampling.

2.7.2 Sample Collection

Surface Soil Samples

Collect samples from near-surface soil with tools such as spades, shovels, and scoops. Surface material can be removed to the required depth with this equipment, then a stainless steel or plastic scoop can be used to collect the sample.

This method can be used in most soil types but is limited to sampling near surface areas. Accurate, representative samples can be collected with this procedure depending on the care and precision demonstrated by the sampling team member. The use of a flat, pointed mason trowel to cut a block of the desired soil can be helpful when undisturbed profiles are required. A stainless steel scoop, lab spoon, or plastic spoon will suffice in most other applications. Avoid the use of devices plated with chrome or other materials. Plating is particularly common with garden implements such as potting trowels.

Follow these procedures to collect surface soil samples.

1. Carefully remove the top layer of soil or debris to the desired sample depth with a pre-cleaned spade.

2. Using a pre-cleaned, stainless steel scoop, plastic spoon, or trowel, remove and discard a thin layer of soil from the area which came in contact with the spade.

3. If volatile organic analysis is to be performed, transfer a portion of the sample directly into an appropriate, labeled sample container(s) with a stainless steel lab spoon, plastic lab spoon, or equivalent and secure the cap(s) tightly. Place the remainder of the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval. Then, either place the sample into an appropriate, labeled container(s) and secure the cap(s) tightly; or, if composite samples are to be collected, place a sample from another sampling interval into the homogenization container and mix thoroughly. When compositing is complete, place the sample into appropriate, labeled container(s) and secure the cap(s) tightly.

Sampling at Depth with Augers and Thin-Wall Tube Samplers

This system consists of an auger, a series of extensions, a "T" handle, and a thin-wall tube sampler (Appendix A, Figure 1). The auger is used to bore a hole to a desired sampling depth, and is then withdrawn. The sample may be collected directly from the auger. If a core sample is to be collected, the auger tip is then replaced with a thin-wall tube sampler. The system is then lowered down the borehole, and driven into the soil at the completion depth. The system is withdrawn and the core collected from the thin-wall tube sampler.

Several types of augers are available. These include: bucket, continuous flight (screw), and posthole augers. Bucket augers are better for direct

3. Slowly withdraw the trier, making sure that the slot is facing upward.

4. If volatile organic analysis is to be performed, transfer a portion of the sample directly into an appropriate, labeled sample container(s) with a stainless steel lab spoon, plastic lab spoon, or equivalent and secure the cap(s) tightly. Place the remainder of the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval. Then, either place the sample into an appropriate, labeled container(s) and secure the cap(s) tightly; or, if composite samples are to be collected, place a sample from another sampling interval into the homogenization container and mix thoroughly. When compositing is complete, place the sample into an appropriate, labeled container(s) and secure the cap(s) tightly.

Sampling at Depth with a Split Spoon (Barrel) Sampler

The procedure for split spoon sampling describes the collection and extraction of undisturbed soil cores of 18 or 24 inches in length. A series of consecutive cores may be extracted with a split spoon sampler to give a complete soil column profile, or an auger may be used to drill down to the desired depth for sampling. The split spoon is then driven to its sampling depth through the bottom of the augured hole and the core extracted.

When split tube sampling is performed to gain geologic information, all work should be performed in accordance with ASTM D 1586-67 (reapproved 1974).

Follow these procedures for collecting soil samples with a split spoon.

1. Assemble the sampler by aligning both sides of the barrel and then screwing the bit onto the bottom and the heavier head piece onto the top.

2. Place the sampler in a perpendicular position on the sample material.

3. Using a sledge hammer or well ring, if available, drive the tube. Do not drive past the bottom of the head piece or compression of the sample will result.

4. Record in the site logbook or on field data sheets the length of the tube used to penetrate the material being sampled, and the number of blows required to obtain this depth.

5. Withdraw the sampler, and open by unscrewing the bit and head and splitting the barrel. If a split sample is desired, a cleaned, stainless steel knife should be used to divide the tube contents in half, longitudinally. This sampler is typically available in diameters of 2 and 3 1/2 inches. However, in order to obtain the required sample volume, use of a larger barrel may be required.

6. Without disturbing the core, transfer it to an appropriate labeled sample container(s) and seal tightly.

Test Pit/Trench Excavation

These relatively large excavations are used to remove sections of soil, when detailed examination of soil characteristics (horizontal structure, color, etc.) are required. It is the least cost effective sampling method due to the relatively high cost of backhoe operation.

Follow these procedures for collecting soil samples from test pit/trench excavations.

1. Prior to any excavation with a backhoe, it is important to ensure that all sampling locations are clear of utility lines and poles (subsurface as well as above surface).

2. Using the backhoe, dig a trench to approximately 3 feet in width and approximately 1 foot below the cleared sampling location. Place removed or excavated soils on plastic sheets. Trenches greater than 5 feet deep must be sloped or protected by a shoring system, as required by OSHA regulations.

3. Use a shovel to remove a 1- to 2-inch layer of soil from the vertical face of the pit where sampling is to be done.

4. Take samples using a trowel, scoop, or coring device at the desired intervals. Be sure to scrape the vertical face at the point of sampling

APPENDIX G

U.S. EPA Region 2 Division of Environmental Science and Assessment, Hazardous Waste Support Branch
Ground Water Sampling Procedure - Low Stress (Low Flow) Purging and Sampling
GW Sampling SOP. Final. Edison, NJ
March 1998

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION II

GROUND WATER SAMPLING PROCEDURE
LOW STRESS (Low Flow) PURGING AND SAMPLING

I. SCOPE & APPLICATION

This Low Stress (or Low-Flow) Purging and Sampling Procedure is the EPA Region II standard method for collecting low stress (low flow) ground water samples from monitoring wells. Low stress Purging and Sampling results in collection of ground water samples from monitoring wells that are representative of ground water conditions in the geological formation. This is accomplished by minimizing stress on the geological formation and minimizing disturbance of sediment that has collected in the well. The procedure applies to monitoring wells that have an inner casing with a diameter of 2.0 inches or greater, and maximum screened intervals of ten feet unless multiple intervals are sampled. The procedure is appropriate for collection of ground water samples that will be analyzed for volatile and semi-volatile organic compounds (VOCs and SVOCs), pesticides, polychlorinated biphenyls (PCBs), metals, and microbiological and other contaminants in association with all EPA programs.

This procedure does not address the collection of light or dense non-aqueous phase liquids (LNAPL or DNAPL) samples, and should be used for aqueous samples only. For sampling NAPLs, the reader is referred to the following EPA publications: DNAPL Site Evaluation (Cohen & Mercer, 1993) and the RCRA Ground-Water Monitoring: Draft Technical Guidance (EPA/530-R-93-001), and references therein.

II. METHOD SUMMARY

The purpose of the low stress purging and sampling procedure is to collect ground water samples from monitoring wells that are representative of ground water conditions in the geological formation. This is accomplished by setting the intake velocity of the sampling pump to a flow rate that limits drawdown inside the well casing.

Sampling at the prescribed (low) flow rate has three primary benefits. First, it minimizes disturbance of sediment in the bottom of the well,

oxygen. The key indicator parameter for all other samples is turbidity.

Cascading

To prevent cascading and/or air bubble formation in the tubing, care should be taken to ensure that the flow rate is sufficient to maintain pump suction. Minimize the length and diameter of tubing (i.e., 1/4 or 3/8 inch ID) to ensure that the tubing remains filled with ground water during sampling.

Cross-Contamination

To prevent cross-contamination between wells, it is strongly recommended that dedicated, in-place pumps be used. As an alternative, the potential for cross-contamination can be reduced by performing the more thorough "daily" decontamination procedures between sampling of each well in addition to the start of each sampling day (see Section VII, below).

Equipment Failure

Adequate equipment should be on-hand so that equipment failures do not adversely impact sampling activities.

IV. PLANNING DOCUMENTATION AND EQUIPMENT

- Approved site-specific Field Sampling Plan/Quality Assurance Project Plan (QAPP). This plan must specify the type of pump and other equipment to be used. The QAPP must also specify the depth to which the pump intake should be lowered in each well. Generally, the target depth will correspond to the mid-point of the most permeable zone in the screened interval. Borehole geologic and geophysical logs can be used to help select the most permeable zone. However, in some cases, other criteria may be used to select the target depth for the pump intake. In all cases, the target depth must be approved by the EPA hydrogeologist or EPA project scientist.

- Well construction data, location map, field data from last sampling event.

- Polyethylene sheeting.

Pre-Sampling Activities

1. Start at the well known or believed to have the least contaminated ground water and proceed systematically to the well with the most contaminated ground water. Check the well, the lock, and the locking cap for damage or evidence of tampering. Record observations.

2. Lay out sheet of polyethylene for placement of monitoring and sampling equipment.

3. Measure VOCs at the rim of the unopened well with a PID and FID instrument and record the reading in the field log book.

4. Remove well cap.

5. Measure VOCs at the rim of the opened well with a PID and an FID instrument and record the reading in the field log book.

6. If the well casing does not have a reference point (usually a V-cut or indelible mark in the well casing), make one. Note that the reference point should be surveyed for correction of ground water elevations to the mean geodesic datum (MSL).

7. Measure and record the depth to water (to 0.01 ft) in all wells to be sampled prior to purging. Care should be taken to minimize disturbance in the water column and dislodging of any particulate matter attached to the sides or settled at the bottom of the well.

8. If desired, measure and record the depth of any NAPLs using an interface probe. Care should be taken to minimize disturbance of any sediment that has accumulated at the bottom of the well. Record the observations in the log book. If LNAPLs and/or DNAPLs are detected, install the pump at this time, as described in step 9, below. Allow the well to sit for several days between the measurement or sampling of any DNAPLs and the low-stress purging and sampling of the ground water.

Sampling Procedures

9. Install Pump: Slowly lower the pump, safety cable, tubing and electrical lines into the well to the depth specified for that well in the EPA-approved QAPP or a depth otherwise approved by

turbulence by allowing the ground water to flow from the tubing gently down the inside of the container.

Ground water samples to be analyzed for volatile organic compounds (VOCs) require pH adjustment. The appropriate EPA Program Guidance should be consulted to determine whether pH adjustment is necessary. If pH adjustment is necessary for VOC sample preservation, the amount of acid to be added to each sample vial prior to sampling should be determined, drop by drop, on a separate and equal volume of water (e.g., 40 ml). Ground water purged from the well prior to sampling can be used for this purpose.

14. Remove Pump and Tubing: After collection of the samples, the tubing, unless permanently installed, must be properly discarded or dedicated to the well for resampling by hanging the tubing inside the well.

15. Measure and record well depth.

16. Close and lock the well.

VI. FIELD QUALITY CONTROL SAMPLES

Quality control samples must be collected to determine if sample collection and handling procedures have adversely affected the quality of the ground water samples. The appropriate EPA Program Guidance should be consulted in preparing the field QC sample requirements of the site-specific QAPP.

All field quality control samples must be prepared exactly as regular investigation samples with regard to sample volume, containers, and preservation. The following quality control samples should be collected during the sampling event:

- Field duplicates
- Trip blanks for VOCs only
- Equipment blank (not necessary if equipment is dedicated to the well)

As noted above, ground water samples should be collected systematically from wells with the lowest level of contamination through to wells with highest level of contamination. The equipment

F) Rinse pump parts with potable water.

G) Rinse the following pump parts with distilled/ deionized water: inlet screen, the shaft, the suction interconnector, the motor lead assembly, and the stator housing.

H) Place impeller assembly in a large glass beaker and rinse with 1% nitric acid (HNO_3).

I) Rinse impeller assembly with potable water.

J) Place impeller assembly in a large glass bleaker and rinse with isopropanol.

K) Rinse impeller assembly with distilled/deionized water.

18. **Between-Well Decon**

A) Pre-rinse: Operate pump in a deep basin containing 8 to 10 gallons of potable water for 5 minutes and flush other equipment with potable water for 5 minutes.

B) Wash: Operate pump in a deep basin containing 8 to 10 gallons of a non-phosphate detergent solution, such as Alconox, for 5 minutes and flush other equipment with fresh detergent solution for 5 minutes. Use the detergent sparingly.

C) Rinse: Operate pump in a deep basin of potable water for 5 minutes and flush other equipment with potable water for 5 minutes.

D) Final Rinse: Operate pump in a deep basin of distilled/deionized water to pump out 1 to 2 gallons of this final rinse water.

VIII. FIELD LOG BOOK

A field log book must be kept each time ground water monitoring activities are conducted in the field. The field log book should document the following:

- Well identification number and physical condition.
- Well depth, and measurement technique.
- Static water level depth, date, time, and measurement technique.

APPENDIX H

U.S.EPA Contract Laboratory Program (CLP)

Statement of Work (SOW) for Multi-Media, Multi-Concentration, Organic Analytical Service for Superfund (SOM01.1); Quick Reference Fact Sheet
Office of Emergency and Remedial Response (OERR)
Analytical Operations Center (AOC), Washington, DC.

July 2005

United States Environmental Protection Agency | Office of Solid Waste and Emergency Response | OSWER Document 540-F-05-008
EPA Publication 9240.1-50FS
July 2005

EPA

Multi-Media, Multi-Concentration, Organic Analytical Service for Superfund (SOM01.1)

Office of Superfund Remediation and Technology Innovation (OSRTI)
Analytical Services Branch (ASB) (5102G)

Quick Reference Fact Sheet

Under the legislative authority granted to the U.S. Environmental Protection Agency (EPA) under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), EPA develops standardized analytical methods for the measurement of various pollutants in environmental samples from known or suspected hazardous waste sites. Among the pollutants that are of concern to the EPA at such sites are a series of volatile, semivolatile, pesticide, and Aroclor compounds that are analyzed using gas chromatography coupled with mass spectrometry (GC/MS) and gas chromatography with an electron capture detector (GC/ECD). The Analytical Services Branch (ASB) of the Office of Superfund Remediation and Technology Innovation (OSRTI) offers an analytical service that provides data from the analysis of water and soil/sediment samples for organic compounds for use in the Superfund decision-making process. Through a series of standardized procedures and a strict chain-of-custody, the organic analytical service produces data of known and documented quality. This service is available through the Superfund Contract Laboratory Program (CLP).

DESCRIPTION OF SERVICES

This new organic analytical service provides a technical and contractual framework for laboratories to apply EPA/CLP analytical methods for the isolation, detection, and quantitative measurement of 52 volatile, 67 semivolatile, 21 pesticide, and 9 Aroclor target compounds in water and soil/sediment environmental samples. The CLP provides the methods to be used and the specific technical, reporting, and contractual requirements, including Quality Assurance (QA), Quality Control (QC), and Standard Operating Procedures (SOPs), by which EPA evaluates the data. This service uses GC/MS and GC/ECD methods to analyze the target compounds.

Three data delivery turnarounds are available to CLP customers: 7-day, 14-day, and 21-day turnaround after laboratory receipt of the last sample in the set. In addition, there are 48-hour (for trace volatiles and volatiles) and 72-hour (for semivolatiles, pesticides, and Aroclors) preliminary data submission options available. Changes to the organic method include the separation of pesticide and Aroclor methods, the inclusion of Selected Ion Monitoring (SIM) analysis, and the incorporation of the Staged Electronic Data Deliverable (SEDD) requirement for Electronic Data Deliverables (EDDs) in Extensible Markup Language (XML) format. Options under this service include a closed system purge-and-trap method for low-level volatile soil analysis and methanol preservation for medium-level volatile soil analysis. In addition, data users may request modifications to the SOW that may include, but are not limited to, additional compounds, sample matrices other than soil/sediment or water, lower quantitation limits, and other requirements to enhance method performance.

DATA USES

This analytical service provides data which EPA uses for a variety of purposes, such as determining the nature and extent of contamination at a hazardous waste site, assessing priorities for response based on risks to human health and the environment, determining appropriate cleanup actions, and determining when remedial actions are complete. The data may be used in all stages in the investigation of a hazardous waste site including, but not limited to: site inspections; Hazard Ranking System (HRS) scoring; remedial investigations/Feasibility Studies (FSs); remedial design; treatability studies; and removal actions. In addition, this service provides data that will be available for use in Superfund enforcement/litigation activities.

TARGET COMPOUNDS

Table 1 lists the compounds for which this service is applicable and the corresponding quantitation limits. Specific quantitation limits are highly matrix-dependent.

Table 1. Target Compound List (TCL) and Contract Required Quantitation Limits (CRQLs) for SOM01.1* (Con't)

	Quantitation Limits				
	Low Water by SIM (µg/L)	Low Water (µg/L)	Low Soil by SIM (µg/kg)	Low Soil (µg/kg)	Med. Soil (µg/kg)
SEMI-VOLATILES (CON'T)					
78. 1,1'-Biphenyl		5.0		170	5000
79. 2-Chloronapthalene		5.0		170	5000
80. 2-Nitroaniline		10		330	10000
81. Dimethylphthalate		5.0		170	5000
82. 2,6-Dinitrotoluene		5.0		170	5000
83. Acenaphthylene	0.10	5.0	3.3	170	5000
84. 3-Nitroaniline		10		330	10000
85. Acenaphthene	0.10	5.0	3.3	170	5000
86. 2,4-Dinitrophenol		10		330	10000
87. 4-Nitrophenol		10		330	10000
88. Dibenzofuran		5.0		170	5000
89. 2,4-Dinitrotoluene		5.0		170	5000
90. Diethylphthalate		5.0		170	5000
91. Fluorene	0.10	5.0	3.3	170	5000
92. 4-Chlorophenyl-phenyl ether		5.0		170	5000
93. 4-Nitroaniline		10		330	10000
94. 4,6-Dinitro-2-methylphenol		10		330	10000
95. N-Nitrosodiphenylamine		5.0		170	5000
96. 1,2,4,5-Tetra chlorobenzene		5.0		170	5000
97. 4-Bromophenyl-phenylether		5.0		170	5000
98. Hexachlorobenzene		5.0		170	5000
99. Atrazine		5.0		170	5000
100. Pentachlorophenol	0.20	10	6.7	330	10000
101. Phenanthrene	0.10	5.0	3.3	170	5000
102. Anthracene	0.10	5.0	3.3	170	5000
103. Carbazole		5.0		170	5000
104. Di-n-butylphthalate		5.0		170	5000
105. Fluoranthene	0.10	5.0	3.3	170	5000
106. Pyrene	0.10	5.0	3.3	170	5000
107. Butylbenzylphthalate		5.0		170	5000
108. 3,3'-Dichlorobenzidine		5.0		170	5000
109. Benzo (a) anthracene	0.10	5.0	3.3	170	5000
110. Chrysene	0.10	5.0	3.3	170	5000
111. Bis (2-ethylhexyl) phthalate		5.0		170	5000
112. Di-n-octylphthalate		5.0		170	5000
113. Benzo (b) fluoroanthene	0.10	5.0	3.3	170	5000
114. Benzo (k) fluoroanthene	0.10	5.0	3.3	170	5000

	Quantitation Limits				
	Low Water by SIM (µg/L)	Low Water (µg/L)	Low Soil by SIM (µg/L)	Low Soil (µg/kg)	Med. Soil (µg/kg)
SEMI-VOLATILES (CON'T)					
115. Benzo (a) pyrene	0.10	5.0	3.3	170	5000
116. Indeno (1,2,3-cd)-pyrene	0.10	5.0	3.3	170	5000
117. Dibenzo (a,h)-anthracene	0.10	5.0	3.3	170	5000
118. Benzo (g,h,i) perylene	0.10	5.0	3.3	170	5000
119. 2,3,4,6-Tetrachlorophenol		5.0		170	5000
PESTICIDES	Water (µg/L)			Soil (µg/kg)	
120. alpha-BHC	0.050			1.7	
121. beta-BHC	0.050			1.7	
122. delta-BHC	0.050			1.7	
123. gamma-BHC (Lindane)	0.050			1.7	
124. Heptachlor	0.050			1.7	
125. Aldrin	0.050			1.7	
126. Heptachlor epoxide	0.050			1.7	
127. Endosulfan I	0.050			1.7	
128. Dieldrin	0.10			3.3	
129. 4,4'-DDE	0.10			3.3	
130. Endrin	0.10			3.3	
131. Endosulfan II	0.10			3.3	
132. 4-4'-DDD	0.10			3.3	
133. Endosulfan sulfate	0.10			3.3	
134. 4-4'-DDT	0.10			3.3	
135. Methoxychlor	0.50			17	
136. Endrin ketone	0.10			3.3	
137. Endrin aldehyde	0.10			3.3	
138. alpha-Chlordane	0.050			1.7	
139. gamma-Chlordane	0.050			1.7	
140. Toxaphene	5.0			170	
AROCLORS	Water (µg/L)			Soil (µg/kg)	
141. Aroclor-1016	1.0			33	
142. Aroclor-1221	1.0			33	
143. Aroclor-1232	1.0			33	
144. Aroclor-1242	1.0			33	
145. Aroclor-1248	1.0			33	
146. Aroclor-1254	1.0			33	
147. Aroclor-1260	1.0			33	
148. Aroclor-1262	1.0			33	
149. Aroclor-1268	1.0			33	

* For volatiles, quantitation limits for medium soils are approximately 50 times the quantitation limits for low soils. For semivolatile medium soils, quantitation limits are approximately 30 times the quantitation limits for low soils.

Table 2. Methods and Instruments

Fraction	Water	Soil
Trace Volatiles	Purge-and-trap followed by GC/MS analysis	N/A
Volatiles	Purge-and-trap followed by GC/MS analysis	Purge-and-trap or closed-system purge-and-trap followed by GC/MS analysis
Semivolatiles	Continuous liquid-liquid extraction (CLLE) followed by GC/MS analysis	Sonication, automated SDS extraction, or pressurized fluid extraction followed by GC/MS analysis
Pesticides	CLLE or separatory funnel extraction followed by dual column GC/ECD analysis	Sonication, automated SDS extraction or pressurized fluid extraction followed by dual column GC/ECD analysis
Aroclors	CLLE or separatory funnel extraction followed by dual column GC/ECD analysis	Sonication, automated SDS extraction or pressurized fluid extraction followed by dual column GC/ECD analysis

Table 3. Quality Control (QC)

QC Operation	Frequency
Deuterated Monitoring Compounds (DMCs) (trace volatiles, volatiles, and semivolatiles)	Added to each sample, standard, and blank
Surrogates (pesticides and Aroclors)	Added to each sample, standard, and blank
Method Blanks (trace volatiles and volatiles)	Analyzed at least every 12 hours for each matrix and level
Method Blanks (semivolatiles, pesticides, and Aroclors)	Prepared with each group of 20 samples or less of same matrix and level, or each time samples are extracted by the same procedure
Instrument Blank (trace volatiles and volatiles)	Analyzed after a sample which contains compounds at concentrations greater than the calibration range
Instrument Blank (pesticides and Aroclors)	Every 12 hours on each GC column used for analysis
Storage Blanks (trace volatiles and volatiles)	Prepared and stored with each set of samples
GC/MS Mass Calibration and Ion Abundance Patterns (trace volatiles, volatiles, and semivolatiles)	Every 12 hours for each instrument used for analysis
GC Resolution Check (pesticides)	Prior to initial calibration, on each instrument used for analysis
Initial Calibration	Upon initial set up of each instrument, and each time continuing calibration fails to meet the acceptance criteria
Continuing Calibration	Every 12 hours for each instrument used for analysis
Internal Standards (trace volatiles, volatiles, and semivolatiles)	Added to each sample, standard, and blank
Matrix Spike and Matrix Spike Duplicate (MS/MSD)	Once every 20 or fewer samples of same fraction, matrix, and level in a Sample Delivery Group (SDG)
Laboratory Control Samples (LCSs) (pesticides and Aroclors)	Once every 20 or fewer samples of same fraction, matrix, and level in an SDG
Method Detection Limit (MDL)	Determined annually, per matrix and level

United States Environmental Protection Agency | Office of Solid Waste and Emergency Response | OSWER Document 540-F-05-008
EPA Publication 9240.1-50FS
July 2005

EPA

Summary of Major Changes Made to the Multi-Media, Multi-Concentration, Organic Analytical Service for Superfund (OLM04.3 to SOM01.1)

Office of Superfund Remediation and Technology Innovation (OSRTI)
Analytical Services Branch (ASB) (5102G)

Quick Reference Fact Sheet

Under the legislative authority granted to the U.S. Environmental Protection Agency (EPA) under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), EPA develops standardized analytical methods for the measurement of various pollutants in environmental samples from known or suspected hazardous waste sites. Among the pollutants that are of concern to EPA at such sites are a series of volatile, semivolatile, pesticide, and Aroclor compounds that are analyzed using Gas Chromatography coupled with Mass Spectrometry (GC/MS) and Gas Chromatography with an Electron Capture Detector (GC/ECD). The Analytical Services Branch (ASB) of the Office of Superfund Remediation and Technology Innovation (OSRTI) offers an analytical service that provides data from the analysis of water and soil/sediment samples for organic compounds for use in the Superfund decision-making process. Through a series of standardized procedures and a strict chain-of-custody, the low concentration organic analytical service produces data of known and documented
quality. This service is available through the Superfund Contract Laboratory Program (CLP).

OVERVIEW OF MAJOR CHANGES

This new organic analytical service provides a technical and contractual framework for laboratories to apply EPA/CLP analytical methods for the preparation, detection, and quantitative measurement of 52 volatile, 67 semivolatile, 21 pesticide, and 9 Aroclor target compounds in water samples.

i. The pesticide and Aroclor analytical methods have been divided into separate exhibits.

ii. A new method for the analysis of trace volatile target compounds has been added to SOM01.1.

iii. The number of volatile and semivolatile compounds has been modified to include three new volatile compounds and two new semivolatile compounds. Also, the Xylene target compound has been broken into o-Xylene and m, p-Xylene. The compounds that have been added are detailed in the **Modifications to Target Compounds** section and are marked with a double asterisk (**) in **Table 1**.

iv. SOM01.1 includes Selected Ion Monitoring (SIM) analysis, which can be used to analyze certain trace volatile and semivolatile compounds. For a complete list of these compounds, please refer to **Table 1**, Target Compound List and Contract Required Quantitation Limits (CRQLs) for SOM01.1.

v. SOM01.1 includes the requirement for the Staged Electronic Data Deliverable (SEDD) format for electronic deliverables. SEDD contains data elements arranged hierarchically by data nodes (parent elements), and consists of an Extensible Markup Language (XML) file(s) compliant with the XML specification 1.0 of the World Wide Web Consortium (W3C). The deliverable must be well-formed based on the W3C XML specification and must be valid based on the Document Type Definition (DTD).

MODIFICATION TO TARGET COMPOUNDS

Since the CLP began in 1980, compounds have been added and removed from the Target Compound List (TCL) based on advances in analytical methods, evaluation of method performance data, and to meet the needs of Superfund program participants.

Compounds that have been added to the SOW are marked with a double asterisk (**) in **Table 1**.

Table 1. Target Compound List (TCL) and Contract Required Quantitation Limits (CRQLs) for SOM01.1* (Con't)

	Quantitation Limits				
SEMIVOLATILES (CON'T)	Low Water by SIM (µg/L)	Water (µg/L)	Low Soil by SIM (µg/kg)	Low Soil (µg/kg)	Med. Soil (µg/kg)
83. Acenaphthylene	0.10	5.0	3.3	170	5000
84. 3-Nitroaniline		10		330	10000
85. Acenaphthene	0.10	5.0	3.3	170	5000
86. 2,4-Dinitrophenol		10		330	10000
87. 4-Nitrophenol		10		330	10000
88. Dibenzofuran		5.0		170	5000
89. 2,4-Dinitrotoluene		5.0		170	5000
90. Diethylphthalate		5.0		170	5000
91. Fluorene	0.10	5.0	3.3	170	5000
92. 4-Chlorophenyl-phenylether		5.0		170	5000
93. 4-Nitroaniline		10		330	10000
94. 4,6-Dinitro-2-methylphenol		10		330	10000
95. N-Nitrosodiphenylamine		5.0		170	5000
96. 1,2,4,5-Tetra chlorobenzene**		5.0		170	5000
97. 4-Bromophenyl-phenylether		5.0		170	5000
98. Hexachlorobenzene		5.0		170	5000
99. Atrazine		5.0		170	5000
100. Pentachlorophenol	0.20	10	6.7	330	10000
101. Phenanthrene	0.10	5.0	3.3	170	5000
Anthracene	0.10	5.0	3.3	170	5000
Carbazole		5.0		170	5000
104. Di-n-butylphthalate		5.0		170	5000
105. Fluoranthene	0.10	5.0	3.3	170	5000
106. Pyrene	0.10	5.0	3.3	170	5000
107. Butylbenzylphthalate		5.0		170	5000
108. 3,3'-Dichlorobenzidine		5.0		170	5000
109. Benzo (a) anthracene	0.10	5.0	3.3	170	5000
110. Chrysene	0.10	5.0	3.3	170	5000
111. Bis(2-ethylhexyl) phthalate		5.0		170	5000
112. Di-n-octylphthalate		5.0		170	5000
113. Benzo (b) fluoroanthene	0.10	5.0	3.3	170	5000
114. Benzo (k) fluoroanthene	0.10	5.0	3.3	170	5000
115. Benzo (a) pyrene	0.10	5.0	3.3	170	5000
116. Indeno (1,2,3-cd)-pyrene	0.10	5.0	3.3	170	5000
117. Dibenzo (a,h)-anthracene	0.10	5.0	3.3	170	5000
118. Benzo (g,h,i) perylene	0.10	5.0	3.3	170	5000
119. 2,3,4,6-Tetrachlorophenol**		5.0		170	5000

	Quantitation Limits	
PESTICIDES	Water (µg/L)	Soil (µg/kg)
120. alpha-BHC	0.050	1.7
121. beta-BHC	0.050	1.7
122. delta-BHC	0.050	1.7
123. gamma-BHC (Lindane)	0.050	1.7
124. Heptachlor	0.050	1.7
125. Aldrin	0.050	1.7
126. Heptachlor epoxide	0.050	1.7
127. Endosulfan I	0.050	1.7
128. Dieldrin	0.10	3.3
129. 4,4'-DDE	0.10	3.3
130. Endrin	0.10	3.3
131. Endosulfan II	0.10	3.3
132. 4-4'-DDD	0.10	3.3
133. Endosulfan sulfate	0.10	3.3
134. 4-4'-DDT	0.10	3.3
135. Methoxychlor	0.50	17
136. Endrin ketone	0.10	3.3
137. Endrin aldehyde	0.10	3.3
138. alpha-Chlordane	0.050	1.7
139. gamma-Chlordane	0.050	1.7
140. Toxaphene	5.0	170
AROCLORS	**Water (µg/L)**	**Soil (µg/kg)**
141. Aroclor-1016	1.0	33
142. Aroclor-1221	1.0	33
143. Aroclor-1232	1.0	33
144. Aroclor-1242	1.0	33
145. Aroclor-1248	1.0	33
146. Aroclor-1254	1.0	33
147. Aroclor-1260	1.0	33
148. Aroclor-1262**	1.0	33
149. Aroclor-1268**	1.0	33

* For volatile medium soils, quantitation limits are approximately 50 times the quantitation limits for low soils. For semivolatile medium soils, quantitation limits are approximately 30 times the quantitation limits for low soils.
** This is a newly-added target compound.

Aroclors

The following items were changed for Aroclors:

i. The Aroclors analytical method was split from pesticides into a separate exhibit.

ii. Acid cleanup is now required for sample extract cleanup.

iii. The analysis of an LCS is now required for this method.

iv. A five-point initial calibration is now required for Aroclor-1216 and Aroclor-1260. A single-point initial calibration is required for other Aroclors; however, if detected, then a five-point calibration is required.

v. Additional GC column options have been incorporated into the method.

CONTACTING EPA

For more information, or for suggestions to improve this analytical service, please contact:

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FAX: 703-603-9116

APPENDIX I

U.S.EPA Contract Laboratory Program (CLP)

Statement of Work (SOW) for Multi-Media, Multi-Concentration Inorganic Analysis (ILM0 5.3).Quick Reference Fact Sheet.
Office of Emergency and Remedial Response (OERR), Analytical Operations Center (AOC), Washington, DC.
March 2004

United States Environmental Protection Agency | Office of Solid Waste and Emergency Response | OSWER Document 9240.1-43FS
EPA Publication 540-F-04-001
February 2004

EPA

Multi-Media, Multi-Concentration, Inorganic Analytical Service for Superfund (ILM05.3)

Office of Superfund Remediation and Technology Innovation
Analytical Services Branch (5204G)

Quick Reference Fact Sheet

Under the legislative authority granted to the U.S. Environmental Protection Agency (EPA) under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), EPA develops standardized analytical methods for the measurement of various pollutants in environmental samples from known or suspected hazardous waste sites. Among the pollutants that are of concern to EPA at such sites is a series of inorganic analytes and cyanide that are analyzed using Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES), Inductively Coupled Plasma-Mass Spectrometry (ICP-MS), Cold Vapor Atomic Absorption (CVAA), and colorimetric techniques. The Analytical Services Branch (ASB) of the Office of Superfund Remediation and Technology Innovation (OSRTI) offers an analytical service that provides data from the analysis of water/aqueous and soil/sediment samples for inorganic analytes for use in the Superfund and other decision making processes. Through a series of standardized procedures and a strict chain-of-custody, the inorganic analytical service produces data of known and documented quality. This service is available through the Superfund Contract Laboratory Program (CLP).

DESCRIPTION OF SERVICES

The inorganic analytical service provides a technical and contractual framework for laboratories to utilize EPA/CLP analytical methods. These methods are used in the isolation, detection and quantitative measurement of 23 target analyte metals (including mercury) and cyanide in both water and soil/sediment environmental samples. The CLP provides the methods to be used and the specific technical, reporting, and contractual requirements, including Quality Assurance (QA), Quality Control (QC), and Standard Operating Procedures (SOPs), by which EPA evaluates the data.

Three data delivery turnaround times are available to CLP customers: 7, 14, and 21-day turnaround after receipt of the last sample in the set. A 72-hour preliminary data submission option also is available for all turnaround times. The data associated with these Preliminary Results is due within 72 hours after receipt of each sample at the laboratory. In addition, data users may request modifications to the SOW that may include, but are not limited to, additional analytes and modified quantitation limits.

DATA USES

This analytical service provides data that EPA uses for a variety of purposes. Examples include determining the nature and extent of contamination at a hazardous waste site, assessing priorities for response based on risks to human health and the environment, determining appropriate cleanup actions, and determining when remedial actions are complete. The data may be used in all stages in the investigation of a hazardous waste site including: site inspections, Hazard Ranking System scoring, remedial investigations/feasibility studies, remedial design, treatability studies, and removal actions. In addition, this service provides data that are available for use in Superfund enforcement/litigation activities.

TARGET ANALYTES

The inorganic analytes and quantitation limits for which this service is applicable are listed in **Table 1**. Specific detection limits are method and matrix dependent.

The list of target analytes for this service was originally derived from the EPA Priority Pollutant List of 129 compounds. In the years since the inception of the CLP, analytes have been added to and deleted from the Target Analyte List (TAL), based on advances in analytical methods, evaluation of method performance data, and the needs of the Superfund program.

METHODS AND INSTRUMENTATION

The Contractor laboratories will demonstrate the ability to meet certain program data quality objectives prior to analyzing field samples. The laboratories must document methods used to generate analytical results and determine Method Detection Limits (MDLs).

Table 2. Methods and Instruments

Analyte	Instrument	Method
Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, Tl, V, Zn	Inductively Coupled Plasma - Atomic Emission Spectroscopy (ICP-AES)	ICP analysis of atomic-line emission spectra.
Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Mn, Ni, Se, Ag, Tl, V, Zn	ICP - Mass Spectrometry (ICP-MS)	ICP analysis of ions separated on basis of mass-to-charge ratio.
Mercury (Hg)	Cold Vapor Atomic Absorption (CVAA)	Acid digestion/oxidation followed by reduction and CVAA analysis.
Cyanide (CN)	Colorimeter or Spectrophotometer	Distillation followed by colorimetric analysis.

Table 3. Quality Control

QC Operation	Frequency
Instrument Calibration	Daily or each time instrument is set up.
Initial Calibration Verification	Following each instrument calibration for each wavelength or mass used.
Initial Calibration Blank	Following each instrument calibration, immediately after the Initial Calibration Verification (ICV).
Continuing Calibration Verification	For each wavelength or mass used, at a frequency of 10% or every two hours of a run, whichever is more frequent, and at the beginning and end of each run.
Continuing Calibration Blank	10% or every two hours of a run, whichever is more frequent, and at the beginning and end of each run. Performed immediately after the last Continuing Calibration Verification (CCV).
CRQL Check Standard (CRI)	Every 20 analytical samples and at the beginning and end of each run, but not before the ICV. Performed before the Interference Check Sample.
Interference Check Sample	For ICP-AES, every 20 analytical samples and at the beginning and end of each run, immediately after the CRI. For ICP-MS, at the beginning of the run.
Serial Dilution for ICP	For each matrix type or for each SDG, whichever is more frequent.
Preparation Blank	For each SDG or each sample preparation and analysis procedure per batch of prepared samples.
Laboratory Control Sample	For each SDG or each sample preparation and analysis procedure per batch of prepared samples, except aqueous mercury and cyanide.
Spike Sample	For each matrix type or for each SDG, whichever is more frequent.
Post Digestion/Distillation Spike	Each time Spike Sample Recovery is outside QC limits.
Duplicate Sample Analysis	For each matrix type or for each SDG, whichever is more frequent.
ICP-MS Tune	Prior to calibration.
Method Detection Limit Determination	Prior to contract, annually thereafter, and after major instrument maintenance.
Interelement Corrections	Prior to contract, quarterly thereafter, and after major instrument adjustment.
Linear Range Analysis	Prior to contract, and quarterly thereafter.

APPENDIX J

U.S. EPA Mobile Analytical Laboratory
SOP # MAL-3: Determination of Trace Metals by Inductively Coupled Plasma-Mass Spectroscopy

DESA/HWSB. Edison, NJ
August 1999

STANDARD OPERATING PROCEDURE
U.S. EPA REGION 2 MOBILE ANALYTICAL LABORATORY
SOP# MAL-3

DRAFT

TITLE: Determination of Trace Metals by Inductively Coupled Plasma-Mass Spectrometry

Prepared by: _____ Date: _____
Mark Denno, Environmental Scientist
Hazardous Waste Support Branch

_____ Date: _____
Robert Finke, Chemist
Hazardous Waste Support Branch

_____ Date: _____
Peter Savoia, Chemist
Hazardous Waste Support Branch

Reviewed by: _____ Date: _____
Patricia Sheridan, Quality Assurance Officer
Hazardous Waste Support Branch

Approved by: _____ Date: _____
Robert Runyon, Chief
Hazardous Waste Support Branch

F:\USER\rfinke\SOPs\SOPMAL3.wpd

Element	CAS No.
Aluminum (Al)	7429-90-5
Antimony (Sb)	7440-36-0
Arsenic (As)	7440-38-2
Barium (Ba)	7440-39-3
Beryllium (Be)	7440-41-7
Cadmium (Cd)	7440-43-9
Calcium (Ca)	7440-70-2
Chromium (Cr)	7440-47-3
Cobalt (Co)	7440-48-4
Copper (Cu)	7440-50-8
Iron (Fe)	7439-89-6
Lead (Pb)	7439-92-1
Magnesium (Mg)	7439-95-4
Manganese (Mn)	7439-96-5
Mercury (Hg)	7439-97-6
Nickel (Ni)	7440-02-0
Potassium (K)	7440-09-7
Selenium (Se)	7782-49-2
Silver (Ag)	7440-22-4
Sodium (Na)	7440-23-5
Thallium (Tl)	7440-28-0
Vanadium (V)	7440-62-2
Zinc (Zn)	7440-66-6

DRAFT

2.0 Summary of Method

This SOP delineates the multi-elemental analysis of environmental samples for the determination of trace metal contaminants by ICP-MS. Prior to analysis, samples are first digested using an appropriate preparation procedure. Analytes isolated in the liquid sample digestate are nebulized to form an aerosol for aspiration into a radio-frequency plasma for desolvation, atomization, and ionization. The resulting ions produced by the high temperature of the plasma are then extracted by a differentially pumped vacuum interface and introduced into a mass spectrometer. The ions are then sorted according to their mass-to-charge ratios and quantified with a channel electron multiplier. A data handling system is then relied upon to process the ion information acquired by the mass spectrometer for reporting. Interferences related to this instrumental technique are always assessed and valid corrections applied or the data flagged to indicate problems. Corrections can include compensating for background ions contributed by either the plasma gas, reagents, and/or the sample matrix. Instrument drift, including variations in response, are corrected for by use of internal standards.

SAM	Site Assessment Manager.
SCST	Superfund Contract Support Team.
SOP	Standard Operating Procedure.
SW-846	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.
TAL	Target Analyte List.
TSA	Technical Systems Audit.
U.S. EPA	United States Environmental Protection Agency.

4. Health & Safety

When carrying out on-site screening assessments, the U.S. EPA Region 2 Mobile Analytical Laboratory will operate to provide "real-time" quantitative environmental measurement data directly in the field. To perform field work of this nature, laboratory personnel must always be aware of potential occupational environmental hazards. In practice, not all of the potential environmental hazards which may be inherent to a site mobilization of the laboratory can be readily anticipated. However, to mitigate these circumstances, laboratory personnel are to learn, follow, and enforce all published rules governing occupational health and safety. To facilitate these efforts, field certification and PPE requirements are administered according to the protocols set forth in the 1995 ***Edison Health and Safety Manual***.

Although the toxicity of most elements used or determined with this SOP are not precisely defined, arsenic, mercury, and lead are known or suspected carcinogens. For information purposes, an inventory of all chemical Materials Safety Data Sheets (MSDSs) are kept on file and made available to laboratory staff. As such, each calibration standard and environmental sample are to be handled with caution because of potential health hazards. Exposures should therefore be to kept to a minimum by following appropriate laboratory safety protocols (working inside a fume hood, donning laboratory coats, gloves, safety glasses & shoes, etc.). To ensure laboratory operations are conducted in a safe and responsible manner, the ***U.S. EPA Region 2 Mobile Analytical Laboratory Health and Safety Plan (HASP)*** is put forward to define these polices and procedures.

5.2.1 Serial dilution - If the analyte concentration is sufficiently high (minimally a factor of 10 above the instrumental detection limit after dilution), an analysis of a dilution should agree within 5% of the original determination (Or within some acceptable control limit that has been established for that matrix). If not, a chemical or physical interference effect should be suspected.

5.2.2 Spike addition - Matrix spike (MS) and matrix spike duplicate (MSD) are prepared to demonstrate matrix effects upon analyte recovery and reproducibility. MS and MSD are prepared and run according to the EPA Region 2 ICP preparation log and the EPA Region 2 Inorganic QA/QC Plan and Section 13.7.

5.2.3 Comparison with alternate method of analysis - When investigating a new sample matrix, comparison tests may be performed with other analytical techniques such as atomic absorption spectrometry, or other approved methodology.

6. Personnel Qualifications

6.1 Sample analysis must be performed by qualified personnel either experienced in the operation of ICP instrumentation and knowledgeable in ICP spectrometry, or under the direct supervision of an experienced and knowledgeable individual. The analyst must be thoroughly familiar with the SOP and the ICP reference manual supplied by the instrument manufacturer.

7. Apparatus

7.1 A sequential inductively coupled plasma mass spectrometer.

7.2 Radio frequency generator.

7.3 Argon gas supply from gas argon tank.

7.4 Mass flow controller.

7.5 Autosampler.

7.6 Peristaltic pump.

7.7 Balance - top loading to two decimal places.

DRAFT

10. Sample Handling and Preservation

10.1 Sample holding times and preservation are typically 180 days from sample collection to analysis for the standard 22 target elements and 28 days for mercury. The sample volumes required depend upon the number of different digestion procedures necessary for analysis and are listed in Appendix I.

In the determination of trace metals, containers can introduce either positive or negative errors in the measurement of trace metals by (a) contributing contaminants through leaching or surface desorption, and (b) depleting concentrations through adsorption. Thus the collection and treatment of the sample prior to analysis require particular attention. The following cleaning treatment sequence has been

determined to be adequate to minimize contamination in the sample bottle, whether borosilicate glass, linear polyethylene, polypropylene, or Teflon: detergent, tap water, and Type II water.

Note: Chromic acid should not be used to clean glassware, especially if chromium is to be included in the analytical scheme. Commercial, non-chromate products may be used in place of chromic acid if adequate cleaning is documented by an analytical quality control program. (Chromic acid should also not be used with plastic bottles.)

11. ICP Aqueous Sample Preparations

11.1 See Standard Operating Procedure - Mobile Laboratory: Method for Block Digestion of Aqueous Samples For Trace Metals Analysis.

12. Analysis Conditions: Sequential ICP-MS

12.1 Forward R.F. Power - 0.9-1.1 kilowatts.

12.2 Reflected RF Power - 5 watts or less.

12.3 Integration time 5.0 sec.

12.4 Incoming Argon pressure 50 psi.

12.5 Argon torch flow - 20 liters/min.

12.6 RF power 1150 W.

DRAFT

14. References

1. CLP Statement of Work (SOW) document Number ILMO5.3; Low/Medium Inorganic SOW.

2. Edison Facility Safety Manual, USEPA, Region 2, Part 2 - Laboratory Safety for specific guidelines.

3. Federal Register Vol. 49, No. 209. October 26, 1984. Appendix B to part 136.

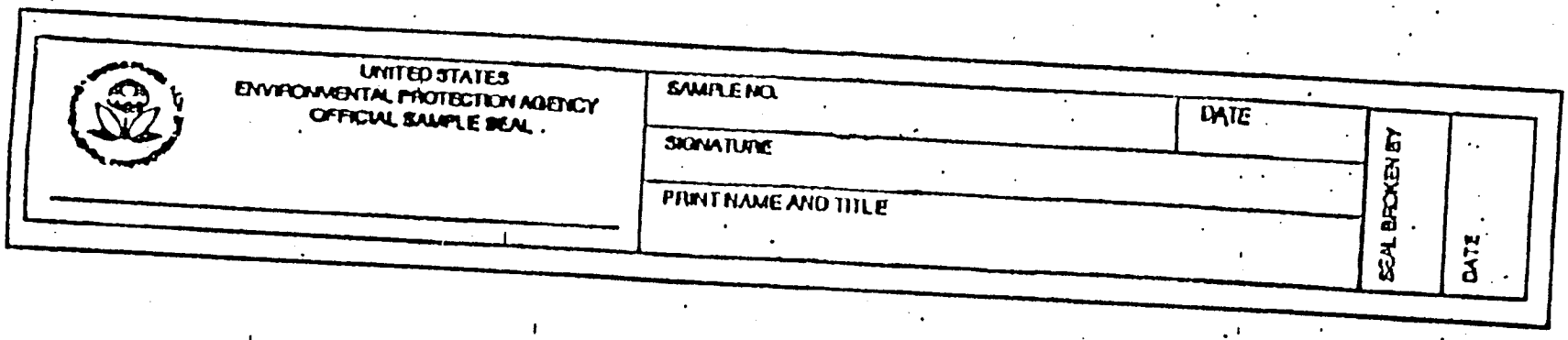
4. Quality Assurance/Quality Control Manual. U.S. EPA, Region 2

5. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW- 846, Third Edition, November 1986, Vol. 1A. U.S. EPA Office of Solid Waste and Emergency Response, Washington, DC.

DRAFT

APPENDIX K

Field Data Sheets and Sample Documentation Examples


UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
OFFICIAL SAMPLE SEAL
SAMPLE NO.
DATE
SIGNATURE
PRINT NAME AND TITLE
SEAL BROKEN BY
DATE

WELL DATA SHEET

Site Name _____ Date _____ Well # _____

Sampling Personnel _____

Evacuation Information:

Date/Time _____ Method _____ Total Depth _____

Well Casing Type/Diam. _____ Top of Casing to Water Level (ft) _____

Water Column Height _____ Total Volume Evacuated _____ Turbidity True Reading _____

Meter Calibration:

Date/Time _____ Meter Types _____

pH _____ Conductivity _____ Turbidity _____ D.O. _____ Redox _____

Sampling Information:

Date/Time _____ Method _____ Sample/Lab Number _____

Field Measurement Data:

Time	Volume Evacuated (gal)	DTW (feet)	Temp (°C)	Specific Conductance (µmhos/cm)	pH (su)	Dissolved Oxygen (mg/L)	Turbidity (NTU)

Weather/Comments/Observations/Sample Charac._____

APPENDIX C

CONTRACT LABORATORY PROGRAM

ORGANIC DATA PACKAGE

Functional Guidelines for Evaluating Organic Analysis

CASE No.: 35114
LABORATORY: Compuchem
SAMPLER: USEPA

SDG No.: B3L44
SITE: HM Quackenbush, Inc.
ANALYSIS: 6 S Trace VOA

DATA ASSESSMENT

The current SOP HW-33A/VOA (Revision 0) April 2006, USEPA Region II Data Validation SOP for Statement of Work SOM01.1 for evaluating organic data has been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material, "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's Signature: Hanif Sheikh Hanif Sheikh Date: June 12, 2006

Verified By: _____ Date: ____/____/2006

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.
The following action was taken in the samples and analytes shown due to excessive holding time.

No problems found for this qualification.

2. DMC's

All samples are spiked with surrogate compounds (DMC's) prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

DC-x The following volatile samples have DMC/SMC recoveries below the lower limit of the criteria window, and less than 20%.
Hits are qualified "J" and non-detects are qualified "R":

B3L70, B3L70RE
cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, 1,1,2-Trichloroethane, Chlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene,1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

B3L70
Trichloroethene, Toluene, Tetrachloroethene, Ethylbenzene, o-Xylenes, m,p-Xylene, Styrene, Isopropylbenzene

B3L74
Chlorobenzene, 1,3-Dichlorobenzene,1,4-Dichlorobenzene, 1,2-Dichlorobenzene,1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

DC-x The following volatile samples have DMC/SMC recoveries above the upper limit of the criteria window.
Hits are qualified "J" and non-detects are not flagged.

No Problems

DC-x The following volatile samples have DMC/SMC recoveries below the lower limit of the criteria window, but greater than 20%. Hits are qualified "J" and non-detects are qualified "UJ".

B3L54

cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, 1,1,2-Trichloroethane, Chlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

B3L48

Chlorobenzene, 1,3-Dichlorobenzene,1,4-Dichlorobenzene, 1,2-Dichlorobenzene,1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene, Trichloroethene, Toluene, Tetrachloroethene, Ethylbenzene, o-Xylenes, m,p-Xylene, Styrene, Isopropylbenzene

B3L70, B3L74, B3L70RE, B3L87RE

1,1-Dichloroethane, Bromochloroethane, Chloroform Dibromochloromethane, Bromoform, Benzene, Cyclohexane, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane

B3L74, B3L70RE, B3L74RE, B3L87RE

Trichloroethene, Toluene, Tetrachloroethene, Ethylbenzene, o-Xylenes, m,p-Xylene, Styrene, Isopropylbenzene, Trichlorofluoromethane, 1,1-Dichloroethene, 1,1,2-Trichloro-1,2,2-trifluoroethane, MethylAcetate, Methylene Chloride, Methyl-tert-ButylEther, Carbon Tetrachloride, 1,2-Dichloroethane 1,1,1-Trichloroethane, 1,2-Dibromoethane

B3L74, B3L74RE, B3L87, B3L87RE

1,1,2,2-Tetrachloroethane, 1,2-Dibromo-3-chloropropane

B3L87, B3L89

Chlorobenzene, 1,3-Dichlorobenzene,1,4-Dichlorobenzene, 1,2-Dichlorobenzene,1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene, Trichloroethene, Toluene, Tetrachloroethene, Ethylbenzene, o-Xylenes, m,p-Xylene, Styrene, Isopropylbenzene

B3L74RE, B3L87, B3L87RE
Cyclohexane, Methylcyclohexane, 1,2-Dichloropropane, Bromodichloromethane

B3L87RE
Chlorobenzene, 1,3-Dichlorobenzene,1,4-Dichlorobenzene, 1,2-Dichlorobenzene,1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

Not Applicable.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. If the concentration of the analyte is less than 1 times the blank contaminant level (2 times for common contaminants), the analytes are qualified as non-detects, "U". The following analytes in the sample shown were qualified with "U" for these reasons:

A) Method blank contamination:

DC-x The following volatile samples have analyte concentrations reported below the CRQL. The associated method blank concentration is also below the CRQL. Reported sample concentrations have been elevated to the CRQL.
Hits are qualified "U" and non-detects are not flagged.

No Problems

B) Field or rinse blank contamination:

Not Applicable. Field blank was not collected with these samples.

C) Trip blank contamination for VOA aqueous samples:

Not Applicable.

D) Storage Blank associated with VOA samples only

DC-x The following volatile samples have analyte concentrations reported below the CRQL and less than or equal to two times (2X) the associated storage blank concentration. Reported sample concentrations have been elevated to the CRQL.
Hits are qualified "U" and non-detects are not flagged.

No Problems

E) Tics "R" rejected:

The following Tics have been rejected "R". Their concentration is 5x less the associated Method blank concentration

No qualification of TICs

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene.

If the mass calibration is in error, all associated data will be classified as unusable "R".

No Problems

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. The response factor for the Target Compound List (TCL) must be ≥0.05, and ≥0.01 for the twenty-two analytes with poor response in both the initial and continuing calibrations. A value < 0.05, or < 0.01 for the poor performers indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J". All non-detects for that compound will be rejected "R".

DC-x The following volatile samples are associated with an initial calibration relative response factor (RRF50) outside expanded criteria.
Hits are qualified "J" and non-detects are flagged "R".

R----→ 1,4-Dioxane --------→ B3L48, B3L54, B3L70, B3L74, B3L70RE, B3L74RE, B3L87 B3L89, B3L87RE, VBLKAC, VBLKGB, VBLKGG, VHBLKZC

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be < 20%, < 40% for the poor performers, and < 50% for 1,4-Dioxane. %D must be < 25%, < 40% for the poor performers, and < 50% for 1,4-Dioxane. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria (> 90%), non-detects data may be qualified "R".

The following analytes in the sample shown were qualified for %RSD and %D:

8. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +200%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to +200%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction.

No Problems

9. COMPOUND IDENTIFICATION:

A) Volatile Fraction:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

No problems found for this qualification.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

1,4-Dioxane-d8 - Average response factor (RRF) is below contractual criteria in **initial calibration.** I

1,4-Dioxane – Continuing response factor RF50 is below Contractual criteria in the following **opening** CCV calibrations:

11. FIELD DOCUMENTATION:

12. OTHER PROBLEMS

13. This package contains reextractions, reanalyses or dilutions. Upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.

Functional Guidelines for Evaluating Organic Analysis

CASE No.: 35114
LABORATORY: Compuchem
SAMPLER: USEPA

SDG No.: B3L92
SITE: HM Quackenbush, Inc.
ANALYSIS: 6 S Trace VOA

DATA ASSESSMENT

The current SOP HW-33A/VOA (Revision 0) April 2006, USEPA Region II Data Validation SOP for Statement of Work SOM01.1 for evaluating organic data has been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material, "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's Signature: Hanif Sheikh Date: June 12, 2006

Verified By: _____ Date: ____/____/2006

1. **HOLDING TIME:**

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.
The following action was taken in the samples and analytes shown due to excessive holding time.

No problems found for this qualification.

2. **DMC's**

All samples are spiked with surrogate compounds (DMC's) prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

DC-x The following volatile samples have DMC/SMC recoveries above the upper limit of the criteria window.
Hits are qualified "J" and non-detects are not flagged.

No Problems

DC-x The following volatile samples have DMC/SMC recoveries below the lower limit of the criteria window, but greater than 20%.
Hits are qualified "J" and non-detects are qualified "UJ".

B3LB0, B3LC1, B3LC2, B3L92RE, B3LB0RE, B3LC1RE, B3LC2RE
Benzene, Cyclohexane, Methylcyclohexane, 1,2-Dichloropropane
Bromodichloromethane cis-1,3-Dichloropropene,
trans-1,3-Dichloropropene, 1,1,2-Trichloroethane

B3LB0, B3L92RE, B3LB0RE
1,1-Dichloroethane, Bromochloromethane, Chloroform,
Dibromochloromethane, Bromoform

B3L92, B3LB6, B3LC1
Chlorobenzene, 1,3-Dichlorobenzene,
1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 1,2,4-Trichlorobenzene,
1,2,3-Trichlorobenzene, Trichloroethene, Toluene,
Tetrachloroethene, Ethylbenzene, o-Xylenes, m,p-Xylene,
Styrene, Isopropylbenzene

B3LB0, B3LC2, B3L92RE, B3LB0RE, B3LC1RE, B3LC2RE
Chlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene,1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene, Trichloroethene, Toluene, Tetrachloroethene, Ethylbenzene, o-Xylenes, m,p-Xylene, Styrene, Isopropylbenzene, Trichlorofluoromethane, 1,1-Dichloroethene,1,1,2-Trichloro-1,2,2-trifluoroethane, Methyl Acetate, Methylene Chloride,Methyl tert-Butyl Ether, Carbon Tetrachloride, 1,2-Dichloroethane 1,1,1-Trichloroethane, 1,2-Dibromoethane

B3LB0
1,1,2,2-Tetrachloroethane, 1,2-Dibromo-3-chloropropane

B3L92
cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, 1,1,2-Trichloroethane

B3LB5
Chlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene,1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

Not Applicable.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. If the concentration of the analyte is less than 1 times the blank contaminant level (2 times for common contaminants), the analytes are qualified as non-detects, "U". The following analytes in the sample shown were qualified with "U" for these reasons:

A) Method blank contamination:

DC-x The following volatile samples have analyte concentrations reported below the CRQL. The associated method blank concentration is also below the CRQL. Reported sample concentrations have been elevated to the CRQL.
Hits are qualified "U" and non-detects are not flagged.

No Problems

B) Field or rinse blank contamination:

Not Applicable. Field blank was not collected with these samples.

C) Trip blank contamination for VOA aqueous samples:

Not Applicable.

D) Storage Blank associated with VOA samples only

DC-x The following volatile samples have analyte concentrations reported below the CRQL and less than or equal to two times (2X) the associated storage blank concentration. Reported sample concentrations have been elevated to the CRQL.
Hits are qualified "U" and non-detects are not flagged.

No Problems

E) Tics "R" rejected:

The following Tics have been rejected "R". Their concentration is 5x less the associated Method blank concentration

No qualification of TICs

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene.

If the mass calibration is in error, all associated data will be classified as unusable "R".

No Problems

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

) **Response Factor GC/MS:**

The response factor measures the instrument's response to specific chemical compounds. The response factor for the Target Compound List (TCL) must be ≥0.05, and ≥0.01 for the twenty-two analytes with poor response in both the initial and continuing calibrations. A value < 0.05, or < 0.01 for the poor performers indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J". All non-detects for that compound will be rejected "R".

DC-x The following volatile samples are associated with an initial calibration relative response factor (RRF50) outside expanded criteria.
Hits are qualified "J" and non-detects are flagged "R".

R----→ 1,4-Dioxane ---------→ B3L92, B3IB0, B3LB5, B3LB6, B3LB6, B3LC1, B3LC2, B3L92RE, B3IB0RE, B3LC1RE, B3LC2RE, VBLKGB, VBLKGG, VHBLKZC

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be < 20%, < 40% for the poor performers, and < 50% for 1,4-Dioxane. %D must be < 25%, < 40% for the poor performers, and < 50% for 1,4-Dioxane. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria (> 90%), non-detects data may be qualified "R".

The following analytes in the sample shown were qualified for %RSD and %D:

8. **INTERNAL STANDARDS PERFORMANCE GC/MS:**

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +200%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to +200%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction.

No Problems

9. COMPOUND IDENTIFICATION:

A) Volatile Fraction:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

No problems found for this qualification.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

1,4-Dioxane-d8 - Average response factor (RRF) is below contractual criteria in **initial calibration.** I

1,4-Dioxane – Continuing response factor RF50 is below Contractual criteria in the following **opening** CCV calibrations:

11. FIELD DOCUMENTATION:

12. OTHER PROBLEMS

13. **This package contains reextractions, reanalyses or dilutions. Upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.**

Functional Guidelines for Evaluating Organic Analysis

CASE No.: 35114
LABORATORY: Compuchem
SAMPLER: USEPA

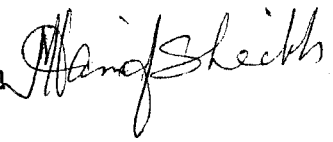
SDG No.: B3L44
SITE: HM Quckenbush
ANALYSIS: 14(S) BNA

DATA ASSESSMENT

The current SOP HW-35SVOA (Revision 0) April 2006, USEPA Region II Data Validation SOP for Statement of Work SOM01.1 for evaluating organic data have been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material, "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's
Signature: Hanif Sheikh 

Date: June 9, 2006

Verified By: _____

Date: ____/____/2006

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.
The following action was taken in the samples and analytes shown due to excessive holding time.

No problems found for this qualification.

2. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

All DMC Recoveries are within the control limits. No qualifications.

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

Not Applicable.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects, "U".
The following analytes in the sample shown were qualified with "U" for these reasons:

A) Method blank contamination:

DC-xx The following semivolatile samples have analytes below the CRQL. The associate Method blank value is also below the CRQL. The reported sample concentration is elevated to the CRQL.

B3L44, B3L51, B3L56, B3L58, B3L68, B3L72, B3L73, B3L75, B3L79, B3L80, B3L84, B3L85, B3L90
Di-n-butylphthalate,
Bis(2-ethylhexyl)phthalate

B3L45
Di-n-butylphthalate
Butyl benzylthalate
Bis(2-ethylhexyl)phthalate

B) Field or rinse blank contamination:

Not Applicable. No field blank was collected.

C) Tics "R" rejected:

The following Tics have been rejected "R". They have been identified as Aldol condensation byproducts.

None

The following Tics have been rejected "R". Their concentration is five times (5x) less the associated method blank concentration.

None

The following Tics have been rejected "R". They have been identified as target analytes from a different fraction.

None

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene and for semi-volatiles Decafluorotriphenyl-phosphine (DFTPP).

If the mass calibration is in error, all associated data will be classified as unusable "R".

No problems found for this qualification.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The

continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. The response factor for the Target Compound List (TCL) must be ≥ 0.05 in both initial and continuing calibrations. A value < 0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J". All non-detects for that compound will be rejected "R".

No problems found for this qualification.

7. Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be < 30% and %D must be < 25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria, non-detects data may be qualified "R".

The following analytes in the sample shown were qualified for %D:

Compound 2,3,4,6-Tetrachlorophenol results were qualified in samples B3L45 & SBLKGM due to the %D of the Continuing Calibration being grater than ± 25%

8. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +100%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction.

No problems found for this qualification.

9. COMPOUND IDENTIFICATION:

A) Semi-Volatile Fractions:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit,

the sample peak must be within ± 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

No problems found for this qualification.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

11. FIELD DOCUMENTATION:

12. OTHER PROBLEMS

13. This package contains reextractions, reanalyses or dilutions. Upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.

Functional Guidelines for Evaluating Organic Analysis

CASE No.: 35114
LABORATORY: Compuchem
SAMPLER: USEPA

SDG No.: B3L92
SITE: HM Quckenbush
ANALYSIS: 14(S) BNA

DATA ASSESSMENT

The current SOP HW-35SVOA (Revision 0) April 2006, USEPA Region II Data Validation SOP for Statement of Work SOM01.1 for evaluating organic data have been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material, "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's
Signature: Hanif Sheikh

Date: June 12, 2006

Verified By: _____

Date: ____/____/2006

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.
The following action was taken in the samples and analytes shown due to excessive holding time.

No problems found for this qualification.

2. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

Percent recovery for the Deuterated Monitoring Compounds (DMC's)was below the acceptance range for few samples. . Hits are qualified as "J" and non-detects as UJ" of the following associated compounds

Samples: B3LA6, B3LA7, B3LC1
Fluoranthene, Pyrene, Benzo(a)anthracene,Chrysene

Benzo(b)fluroanthene,Benzo(k)fluroanthene,Benzo(a)pyrene,
Indeno(1,2,3-cd)pyrene,Dibenzo(a,h)anthracene,
Benzo(g,h,i)pertlene

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

Not Applicable.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-

contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects, "U".
The following analytes in the sample shown were qualified with "U" for these reasons:

A) Method blank contamination:

DC-xx The following semivolatile samples have analytes below the CRQL. The associate Method blank value is also below the CRQL. The reported sample concentration is elevated to the CRQL.

B3L94, B3L95, B3L96, B3L97, B3L98, B3L98DL, B3LA3
Di-n-butylphthalate,
Bis(2-ethylhexyl)phthalate

B3LA6, B3LA7, B3LB2, B3LB3, B3LC1, B3LC2, B3LC3, B3LC4
Acetophenone
Bis(2-ethylhexyl)phthalate

B) Field or rinse blank contamination:

Not Applicable. No field blank was collected.

C) Tics "R" rejected:

The following Tics have been rejected "R". They have been identified as Aldol condensation byproducts.

None

The following Tics have been rejected "R". Their concentration is five times (5x) less the associated method blank concentration.

None

The following Tics have been rejected "R". They have been identified as target analytes from a different fraction.

Two TICs in sample B3LB2 and one TIC in sample B3LC2 were rejected

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene and for semi-volatiles Decafluorotriphenyl-phosphine (DFTPP).

If the mass calibration is in error, all associated data will be classified as unusable "R".

No problems found for this qualification.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. The response factor for the Target Compound List (TCL) must be ≥ 0.05 in both initial and continuing calibrations. A value < 0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J". All non-detects for that compound will be rejected "R".

No problems found for this qualification.

7. Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be < 30% and %D must be < 25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria, non-detects data may be qualified "R".

The following analytes in the sample shown were qualified for %D:

No Problems

8. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +100%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction.

No problems found for this qualification.

9. COMPOUND IDENTIFICATION:

A) Semi-Volatile Fractions:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

No problems found for this qualification.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

11. FIELD DOCUMENTATION:

12. OTHER PROBLEMS

13. This package contains reextractions, reanalyses or dilutions. Upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.

Functional Guidelines for Evaluating Organic Analysis

CASE No.: 35114
LABORATORY: Compuchem
SAMPLER: USEPA

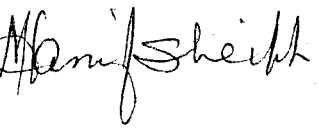
SDG No.: B3L60
SITE: HM Quckenbush
ANALYSIS: 6 W BNA

DATA ASSESSMENT

The current SOP HW-35SVOA (Revision 0) April 2006, USEPA Region II Data Validation SOP for Statement of Work SOM01.1 for evaluating organic data have been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material, "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's
Signature: Hanif Sheikh  Date: June 12, 2006

Verified By: _____ Date: ____/____/2006

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.
The following action was taken in the samples and analytes shown due to excessive holding time.

Sample B3L63 exceeded the Holding Time. Hit were flagged "J" and non-detects were flagged "UJ".

2. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

Percent recovery for the Deuterated Monitoring Compounds (DMC's)was below the acceptance range for few samples. . Hits are qualified as "J" and non-detects as UJ" of the following associated compounds

Samples: B3L60
Benzo(b)fluroanthene,Benzo(k)fluroanthene,Benzo(a)pyrene,
Indeno(1,2,3-cd)pyrene,Dibenzo(a,h)anthracene,
Benzo(g,h,i)pertlene

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

Not Applicable.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects, "U".
The following analytes in the sample shown were qualified with "U" for these reasons:

A) **Method blank contamination:**

DC-xx The following semivolatile samples have analytes below the CRQL. The associate Method blank value is also below the CRQL. The reported sample concentration is elevated to the CRQL.

B3L60, B3L61, B3L62
Naphthalene,
Bis (2-Ethylhexyl Phthalate

B3L63
Bis(2-ethylhexyl)phthalate

B) **Field or rinse blank contamination:**

No qualifications. Both rinse blanks were not contamination.

C) Tics "R" rejected:

The following Tics have been rejected "R". They have been identified as Aldol condensation byproducts.

None

The following Tics have been rejected "R". Their concentration is five times (5x) less the associated method blank concentration.

None

The following Tics have been rejected "R". They have been identified as target analytes from a different fraction.

None

5. **MASS SPECTROMETER TUNING:**

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene and for semi-volatiles Decafluorotriphenyl-phosphine (DFTPP).

If the mass calibration is in error, all associated data will be classified as unusable "R".

No problems found for this qualification.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. The response factor for the Target Compound List (TCL) must be ≥ 0.05 in both initial and continuing calibrations. A value < 0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J". All non-detects for that compound will be rejected "R".

No problems found for this qualification.

7. Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be < 30% and %D must be < 25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria, non-detects data may be qualified "R".

The following analytes in the sample shown were qualified for %D:

Percent Difference (%D) for the Continuing Calibration for N-Nitroso-di-propylamine was found to be 27.5%. Hits of the following samples are flagged "J" and non-detects are flagged "UJ".

B3AL8, B3AL9, SBLKML

Percent Difference (%D) exceeded the acceptance limits for the Continuing Calibration. Hits of the following compounds in the samples indicated are flagged "J" and non-detects flagged "UJ".

SBLKMD
2,4,5- Trichlorophenol,
Pentachlorophenol
Fluoranthene
2,3,4,6-Tetrachlorophenol

8. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +100%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction.

No problems found for this qualification.

9. COMPOUND IDENTIFICATION:

A) Semi-Volatile Fractions:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

No problems found for this qualification.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

11. FIELD DOCUMENTATION:

12. OTHER PROBLEMS

13. This package contains reextractions, reanalyses or dilutions. Upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.

None

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L48

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917703

Sample wt/vol: 6.49(g/mL) G Lab File ID: 917703RA90

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: not dec. 11 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U
67-64-1	Acetone	6	J
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl acetate	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L48

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3I

Matrix: (soil/water) SOIL Lab Sample ID: 917703

Sample wt/vol: 6.49(g/mL) G Lab File ID: 917703RA90

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: not dec. 11 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	12	J
108-87-2	Methylcyclohexane	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5	UJ
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	UJ
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	UJ
100-41-4	Ethylbenzene	5	UJ
100-42-5	Styrene	5	UJ
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	UJ
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	UJ
106-46-7	1,4-Dichlorobenzene	5	UJ
95-50-1	1,2-Dichlorobenzene	5	UJ
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	UJ
74-97-5	Bromochloromethane	5	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L48

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917703

Sample wt/vol: 6.49(g/mL) G Lab File ID: 917703RA90

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: not dec. 11 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L54

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3I

Matrix: (soil/water) SOIL Lab Sample ID: 917705

Sample wt/vol: 4.88(g/mL) G Lab File ID: 917705B90

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: not dec. 8 Date Analyzed: 02/26/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6	U
74-87-3	Chloromethane	6	U
75-01-4	Vinyl chloride	6	U
74-83-9	Bromomethane	6	U
75-00-3	Chloroethane	6	U
75-69-4	Trichlorofluoromethane	6	U
75-35-4	1,1-Dichloroethene	6	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	6	U
67-64-1	Acetone	11	U
75-15-0	Carbon disulfide	6	U
79-20-9	Methyl acetate	6	U
75-09-2	Methylene chloride	6	U
156-60-5	trans-1,2-Dichloroethene	6	U
1634-04-4	Methyl tert-butyl ether	6	U
75-34-3	1,1-Dichloroethane	6	U
156-59-2	cis-1,2-Dichloroethene	6	U
78-93-3	2-Butanone	11	U
67-66-3	Chloroform	6	U
71-55-6	1,1,1-Trichloroethane	6	U
110-82-7	Cyclohexane	6	U
56-23-5	Carbon tetrachloride	6	U
71-43-2	Benzene	6	U
107-06-2	1,2-Dichloroethane	6	U

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L54

Lab Name: COMPUCHEM Contract: EPW05028

b Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917705

Sample wt/vol: 4.88(g/mL) G Lab File ID: 917705B90

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: not dec. 8 Date Analyzed: 02/26/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	35	
108-87-2	Methylcyclohexane	6	U
78-87-5	1,2-Dichloropropane	6	U
75-27-4	Bromodichloromethane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	UJ
108-10-1	4-Methyl-2-pentanone	11	U
108-88-3	Toluene	6	U
10061-02-6	trans-1,3-Dichloropropene	6	UJ
79-00-5	1,1,2-Trichloroethane	6	UJ
127-18-4	Tetrachloroethene	6	U
591-78-6	2-Hexanone	11	U
124-48-1	Dibromochloromethane	6	U
106-93-4	1,2-Dibromoethane	6	U
108-90-7	Chlorobenzene	6	UJ
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
75-25-2	Bromoform	6	U
98-82-8	Isopropylbenzene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
541-73-1	1,3-Dichlorobenzene	6	UJ
106-46-7	1,4-Dichlorobenzene	6	UJ
95-50-1	1,2-Dichlorobenzene	6	UJ
96-12-8	1,2-Dibromo-3-chloropropane	6	U
120-82-1	1,2,4-Trichlorobenzene	6	UJ
74-97-5	Bromochloromethane	6	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L54

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3I

Matrix: (soil/water) SOIL Lab Sample ID: 917705

Sample wt/vol: 4.88(g/mL) G Lab File ID: 917705B90

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: not dec. 8 Date Analyzed: 02/26/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L70RE

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917710

Sample wt/vol: 3.84(g/mL) G Lab File ID: 917710RA90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 11 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	7	U
74-87-3	Chloromethane	7	U
75-01-4	Vinyl chloride	7	U
74-83-9	Bromomethane	7	U
75-00-3	Chloroethane	7	U
75-69-4	Trichlorofluoromethane	7	UJ
75-35-4	1,1-Dichloroethene	7	UJ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	7	UJ
67-64-1	Acetone	28	
75-15-0	Carbon disulfide	7	U
79-20-9	Methyl acetate	7	UJ
75-09-2	Methylene chloride	7	UJ
156-60-5	trans-1,2-Dichloroethene	7	U
1634-04-4	Methyl tert-butyl ether	7	UJ
75-34-3	1,1-Dichloroethane	7	UJ
156-59-2	cis-1,2-Dichloroethene	7	U
78-93-3	2-Butanone	15	U
67-66-3	Chloroform	7	UJ
71-55-6	1,1,1-Trichloroethane	7	UJ
110-82-7	Cyclohexane	7	UJ
56-23-5	Carbon tetrachloride	7	UJ
71-43-2	Benzene	7	UJ
107-06-2	1,2-Dichloroethane	7	UJ

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L70RE

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3I

Matrix: (soil/water) SOIL Lab Sample ID: 917710

Sample wt/vol: 3.84(g/mL) G Lab File ID: 917710RA90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 11 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	7	UJ
108-87-2	Methylcyclohexane	7	UJ
78-87-5	1,2-Dichloropropane	7	UJ
75-27-4	Bromodichloromethane	7	UJ
10061-01-5	cis-1,3-Dichloropropene	7	~~UJ~~ R
108-10-1	4-Methyl-2-pentanone	15	U
108-88-3	Toluene	7	UJ
10061-02-6	trans-1,3-Dichloropropene	7	~~UJ~~ R
79-00-5	1,1,2-Trichloroethane	7	~~UJ~~ R
127-18-4	Tetrachloroethene	7	UJ
591-78-6	2-Hexanone	15	U
124-48-1	Dibromochloromethane	7	UJ
106-93-4	1,2-Dibromoethane	7	UJ
108-90-7	Chlorobenzene	7	UJ
100-41-4	Ethylbenzene	7	UJ
100-42-5	Styrene	7	UJ
75-25-2	Bromoform	7	UJ
98-82-8	Isopropylbenzene	7	UJ
79-34-5	1,1,2,2-Tetrachloroethane	7	U
541-73-1	1,3-Dichlorobenzene	7	~~UJ~~ R
106-46-7	1,4-Dichlorobenzene	7	~~UJ~~ R
95-50-1	1,2-Dichlorobenzene	7	~~UJ~~ R
96-12-8	1,2-Dibromo-3-chloropropane	7	U
120-82-1	1,2,4-Trichlorobenzene	7	~~UJ~~ R
74-97-5	Bromochloromethane	7	UJ

VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L70RE

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917710

Sample wt/vol: 3.84(g/mL) G Lab File ID: 917710RA90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 11 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
123-91-1	1,4-Dioxane	150	~~U~~ R
87-61-6	1,2,3-Trichlorobenzene	7	~~U~~ R

1F

EPA SAMPLE NO.

B3L70RE

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3

Matrix: (soil/water) SOIL Lab Sample ID: 917710

Sample wt/vol: 3.84(g/mL) G Lab File ID: 917710RA90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 11 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	5.33	22	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L74RE

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917713

Sample wt/vol: 6.43(g/mL) G Lab File ID: 917713RA90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 11 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	UJ
75-35-4	1,1-Dichloroethene	5	UJ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5	UJ
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl acetate	5	UJ
75-09-2	Methylene chloride	5	UJ
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	UJ
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	UJ
110-82-7	Cyclohexane	5	UJ
56-23-5	Carbon tetrachloride	5	UJ
71-43-2	Benzene	5	UJ
107-06-2	1,2-Dichloroethane	5	UJ

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L74RE

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3I

Matrix: (soil/water) SOIL Lab Sample ID: 917713

Sample wt/vol: 6.43(g/mL) G Lab File ID: 917713RA90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 11 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	5	UJ
108-87-2	Methylcyclohexane	5	UJ
78-87-5	1,2-Dichloropropane	5	UJ
75-27-4	Bromodichloromethane	5	UJ
10061-01-5	cis-1,3-Dichloropropene	5	UJ
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5	UJ
10061-02-6	trans-1,3-Dichloropropene	5	UJ
79-00-5	1,1,2-Trichloroethane	5	UJ
127-18-4	Tetrachloroethene	5	UJ
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	UJ
108-90-7	Chlorobenzene	5	UJ
100-41-4	Ethylbenzene	5	UJ
100-42-5	Styrene	5	UJ
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	UJ
79-34-5	1,1,2,2-Tetrachloroethane	5	UJ
541-73-1	1,3-Dichlorobenzene	5	UJ
106-46-7	1,4-Dichlorobenzene	5	UJ
95-50-1	1,2-Dichlorobenzene	5	UJ
96-12-8	1,2-Dibromo-3-chloropropane	5	UJ
120-82-1	1,2,4-Trichlorobenzene	5	UJ
74-97-5	Bromochloromethane	5	U

VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L74RE

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917713

Sample wt/vol: 6.43(g/mL) G Lab File ID: 917713RA90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 11 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
123-91-1	1,4-Dioxane	100	U R
87-61-6	1,2,3-Trichlorobenzene	5	U J

1F

EPA SAMPLE NO.

B3L74RE

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L

Matrix: (soil/water) SOIL Lab Sample ID: 917713

Sample wt/vol: 6.43 (g/mL) G Lab File ID: 917713RA90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 11 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	5.33	5	J
2.					
3.					
4.					
5.					
6.					
7.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L87

Lab Name: COMPUCHEM Contract: EPW05028

b Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917719

Sample wt/vol: 6.92(g/mL) G Lab File ID: 917719A90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 12 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U
67-64-1	Acetone	19	
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl acetate	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L87

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3I

Matrix: (soil/water) SOIL Lab Sample ID: 917719

Sample wt/vol: 6.92(g/mL) G Lab File ID: 917719A90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 12 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	5	UJ
108-87-2	Methylcyclohexane	5	UJ
78-87-5	1,2-Dichloropropane	5	UJ
75-27-4	Bromodichloromethane	5	UJ
10061-01-5	cis-1,3-Dichloropropene	5	UJ
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5	UJ
10061-02-6	trans-1,3-Dichloropropene	5	UJ
79-00-5	1,1,2-Trichloroethane	5	UJ
127-18-4	Tetrachloroethene	5	UJ
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	UJ
100-41-4	Ethylbenzene	5	UJ
100-42-5	Styrene	5	UJ
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	UJ
79-34-5	1,1,2,2-Tetrachloroethane	5	UJ
541-73-1	1,3-Dichlorobenzene	5	UJ
106-46-7	1,4-Dichlorobenzene	5	UJ
95-50-1	1,2-Dichlorobenzene	5	UJ
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	UJ
74-97-5	Bromochloromethane	5	U

VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L87

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917719

Sample wt/vol: 6.92(g/mL) G Lab File ID: 917719A90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 12 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
123-91-1	1,4-Dioxane	100	U R
87-61-6	1,2,3-Trichlorobenzene	5	UJ

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L87

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3I

Matrix: (soil/water) SOIL Lab Sample ID: 917719

Sample wt/vol: 6.92(g/mL) G Lab File ID: 917719A90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 12 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	5.22	11	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L89

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917720

Sample wt/vol: 5.84(g/mL) G Lab File ID: 917720A90

Level: (low/med) LOW Date Received: 02/24/06 OLM 5-15-06

% Moisture: not dec. 15 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	UJ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5	UJ
67-64-1	Acetone	5	UJ
75-15-0	Carbon disulfide	14	
79-20-9	Methyl acetate	5	U
75-09-2	Methylene chloride	5	UJ
156-60-5	trans-1,2-Dichloroethene	5	UJ
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	UJ
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	UJ
107-06-2	1,2-Dichloroethane	5	U
		5	UJ

AMENDED DATA OLM 5-15-06

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L89

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L4

Matrix: (soil/water) SOIL Lab Sample ID: 917720

Sample wt/vol: 5.84(g/mL) G Lab File ID: 917720A90

Level: (low/med) LOW Date Received: 02/24/06 5-15-06

% Moisture: not dec. 15 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	5	UJ
108-87-2	Methylcyclohexane	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5	UJ
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	UJ
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	UJ
108-90-7	Chlorobenzene	5	UJ
100-41-4	Ethylbenzene	5	UJ
100-42-5	Styrene	5	UJ
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	UJ
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	UJ
106-46-7	1,4-Dichlorobenzene	5	UJ
95-50-1	1,2-Dichlorobenzene	5	UJ
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	UJ
74-97-5	Bromochloromethane	5	U

AMENDED DATA 5-15-06

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L89

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917720

Sample wt/vol: 5.84(g/mL) G Lab File ID: 917720A90

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. 15 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L92

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]

Matrix: (soil/water) SOIL Lab Sample ID: 918301

Sample wt/vol: 6.59(g/mL) G Lab File ID: 918301A90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 16 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U
67-64-1	Acetone	13	
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl acetate	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1B

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L92

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918301

Sample wt/vol: 6.59(g/mL) G Lab File ID: 918301A90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 16 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	5	U J
108-87-2	Methylcyclohexane	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U J
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	2	J J
10061-02-6	trans-1,3-Dichloropropene	5	U J
79-00-5	1,1,2-Trichloroethane	5	U J
127-18-4	Tetrachloroethene	5	U J
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U J
100-41-4	Ethylbenzene	5	U J
100-42-5	Styrene	5	U J
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U J
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U J
106-46-7	1,4-Dichlorobenzene	5	U J
95-50-1	1,2-Dichlorobenzene	5	U J
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U J
74-97-5	Bromochloromethane	5	U

VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L92

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918301

Sample wt/vol: 6.59(g/mL) G Lab File ID: 918301A90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 16 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
123-91-1	1,4-Dioxane	100	~~U~~ R
87-61-6	1,2,3-Trichlorobenzene	5	U J

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L92

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918301

Sample wt/vol: 6.59(g/mL) G Lab File ID: 918301A90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 16 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	5.33	11	J
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LB0

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L[illegible]

Matrix: (soil/water) SOIL Lab Sample ID: 918310

Sample wt/vol: 4.49(g/mL) G Lab File ID: 918310A90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 16 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	7	U
74-87-3	Chloromethane	7	U
75-01-4	Vinyl chloride	7	U
74-83-9	Bromomethane	7	U
75-00-3	Chloroethane	7	U
75-69-4	Trichlorofluoromethane	7	UJ
75-35-4	1,1-Dichloroethene	7	UJ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	7	UJ
67-64-1	Acetone	21	
75-15-0	Carbon disulfide	7	U
79-20-9	Methyl acetate	7	UJ
75-09-2	Methylene chloride	7	U
156-60-5	trans-1,2-Dichloroethene	7	U
1634-04-4	Methyl tert-butyl ether	7	UJ
75-34-3	1,1-Dichloroethane	7	UJ
156-59-2	cis-1,2-Dichloroethene	7	U
78-93-3	2-Butanone	13	U
67-66-3	Chloroform	7	UJ
71-55-6	1,1,1-Trichloroethane	5	UJ
110-82-7	Cyclohexane	7	UJ
56-23-5	Carbon tetrachloride	7	UJ
71-43-2	Benzene	7	UJ
107-06-2	1,2-Dichloroethane	7	UJ

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LB0

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918310

Sample wt/vol: 4.49(g/mL) G Lab File ID: 918310A90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 16 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	7	UJ
108-87-2	Methylcyclohexane	7	UJ
78-87-5	1,2-Dichloropropane	7	UJ
75-27-4	Bromodichloromethane	7	UJ
10061-01-5	cis-1,3-Dichloropropene	7	UJ
108-10-1	4-Methyl-2-pentanone	13	U
108-88-3	Toluene	7	UJ
10061-02-6	trans-1,3-Dichloropropene	7	UJ
79-00-5	1,1,2-Trichloroethane	7	UJ
127-18-4	Tetrachloroethene	7	UJ
591-78-6	2-Hexanone	13	U
124-48-1	Dibromochloromethane	7	UJ
106-93-4	1,2-Dibromoethane	7	UJ
108-90-7	Chlorobenzene	7	UJ
100-41-4	Ethylbenzene	7	UJ
100-42-5	Styrene	7	UJ
75-25-2	Bromoform	7	UJ
98-82-8	Isopropylbenzene	7	UJ
79-34-5	1,1,2,2-Tetrachloroethane	7	UJ
541-73-1	1,3-Dichlorobenzene	7	UJ
106-46-7	1,4-Dichlorobenzene	7	UJ
95-50-1	1,2-Dichlorobenzene	7	UJ
96-12-8	1,2-Dibromo-3-chloropropane	7	UJ
120-82-1	1,2,4-Trichlorobenzene	7	UJ
74-97-5	Bromochloromethane	7	UJ

VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LB0

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]

Matrix: (soil/water) SOIL Lab Sample ID: 918310

Sample wt/vol: 4.49(g/mL) G Lab File ID: 918310A90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 16 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
123-91-1	1,4-Dioxane	130	~~U~~ R
87-61-6	1,2,3-Trichlorobenzene	7	UJ

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3LB0

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918310

Sample wt/vol: 4.49(g/mL) G Lab File ID: 918310A90

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: not dec. 16 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LB5

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]

Matrix: (soil/water) SOIL Lab Sample ID: 918314

Sample wt/vol: 6.27(g/mL) G Lab File ID: 918314A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 37 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6	U
74-87-3	Chloromethane	6	U
75-01-4	Vinyl chloride	6	U
74-83-9	Bromomethane	6	U
75-00-3	Chloroethane	6	U
75-69-4	Trichlorofluoromethane	6	U
75-35-4	1,1-Dichloroethene	6	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	6	U
67-64-1	Acetone	13	U
75-15-0	Carbon disulfide	6	U
79-20-9	Methyl acetate	6	U
75-09-2	Methylene chloride	6	U
156-60-5	trans-1,2-Dichloroethene	6	U
1634-04-4	Methyl tert-butyl ether	6	U
75-34-3	1,1-Dichloroethane	6	U
156-59-2	cis-1,2-Dichloroethene	6	U
78-93-3	2-Butanone	13	U
67-66-3	Chloroform	6	U
71-55-6	1,1,1-Trichloroethane	6	U
110-82-7	Cyclohexane	6	U
56-23-5	Carbon tetrachloride	6	U
71-43-2	Benzene	6	U
107-06-2	1,2-Dichloroethane	6	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LB5

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918314

Sample wt/vol: 6.27(g/mL) G Lab File ID: 918314A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 37 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	190	
108-87-2	Methylcyclohexane	6	U
78-87-5	1,2-Dichloropropane	6	U
75-27-4	Bromodichloromethane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
108-10-1	4-Methyl-2-pentanone	13	U
108-88-3	Toluene	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
79-00-5	1,1,2-Trichloroethane	6	U
127-18-4	Tetrachloroethene	4	J
591-78-6	2-Hexanone	13	U
124-48-1	Dibromochloromethane	6	U
106-93-4	1,2-Dibromoethane	6	U
108-90-7	Chlorobenzene	6	UJ
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
75-25-2	Bromoform	6	U
98-82-8	Isopropylbenzene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
541-73-1	1,3-Dichlorobenzene	6	UJ
106-46-7	1,4-Dichlorobenzene	6	UJ
95-50-1	1,2-Dichlorobenzene	6	UJ
96-12-8	1,2-Dibromo-3-chloropropane	6	U
120-82-1	1,2,4-Trichlorobenzene	6	UJ
74-97-5	Bromochloromethane	6	U

VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LB5

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918314

Sample wt/vol: 6.27(g/mL) G Lab File ID: 918314A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 37 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
123-91-1	1,4-Dioxane	130	~~U~~ R
87-61-6	1,2,3-Trichlorobenzene	6	U J

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3LB5

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918314

Sample wt/vol: 6.27(g/mL) G Lab File ID: 918314A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 37 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LB6

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]

Matrix: (soil/water) SOIL Lab Sample ID: 918315

Sample wt/vol: 6.57(g/mL) G Lab File ID: 918315A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 22 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U
67-64-1	Acetone	17	
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl acetate	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LB6

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918315

Sample wt/vol: 6.57(g/mL) G Lab File ID: 918315A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 22 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	150	J
108-87-2	Methylcyclohexane	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5	UJ
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	4	JJ
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	UJ
100-41-4	Ethylbenzene	5	UJ
100-42-5	Styrene	5	UJ
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	UJ
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	UJ
106-46-7	1,4-Dichlorobenzene	5	UJ
95-50-1	1,2-Dichlorobenzene	5	UJ
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	UJ
74-97-5	Bromochloromethane	5	U

VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LB6

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]

Matrix: (soil/water) SOIL Lab Sample ID: 918315

Sample wt/vol: 6.57(g/mL) G Lab File ID: 918315A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 22 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
123-91-1	1,4-Dioxane	100	~~U~~ R
87-61-6	1,2,3-Trichlorobenzene	5	UJ

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3LB6

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918315

Sample wt/vol: 6.57(g/mL) G Lab File ID: 918315A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 22 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC1

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B?

Matrix: (soil/water) SOIL Lab Sample ID: 918316

Sample wt/vol: 6.58(g/mL) G Lab File ID: 918316A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 13 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl acetate	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC1

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918316

Sample wt/vol: 6.58(g/mL) G Lab File ID: 918316A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 13 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	5	U J
108-87-2	Methylcyclohexane	5	U J
78-87-5	1,2-Dichloropropane	5	U J
75-27-4	Bromodichloromethane	5	U J
10061-01-5	cis-1,3-Dichloropropene	5	U J
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5	U J
10061-02-6	trans-1,3-Dichloropropene	5	U J
79-00-5	1,1,2-Trichloroethane	5	U J
127-18-4	Tetrachloroethene	5	U J
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U J
100-41-4	Ethylbenzene	5	U J
100-42-5	Styrene	5	U J
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U J
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U J
106-46-7	1,4-Dichlorobenzene	5	U J
95-50-1	1,2-Dichlorobenzene	5	U J
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U J
74-97-5	Bromochloromethane	5	U

VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC1

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B

Matrix: (soil/water) SOIL Lab Sample ID: 918316

Sample wt/vol: 6.58(g/mL) G Lab File ID: 918316A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 13 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
123-91-1	1,4-Dioxane	100	~~U~~ R
87-61-6	1,2,3-Trichlorobenzene	5	U J

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3LC1

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918316

Sample wt/vol: 6.58(g/mL) G Lab File ID: 918316A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 13 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC2

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B?

Matrix: (soil/water) SOIL Lab Sample ID: 918317

Sample wt/vol: 6.84(g/mL) G Lab File ID: 918317A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 13 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	UJ
75-35-4	1,1-Dichloroethene	5	UJ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5	UJ
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl acetate	5	UJ
75-09-2	Methylene chloride	5	UJ
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	UJ
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	UJ
110-82-7	Cyclohexane	5	UJ
56-23-5	Carbon tetrachloride	5	UJ
71-43-2	Benzene	5	UJ
107-06-2	1,2-Dichloroethane	5	UJ

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC2

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918317

Sample wt/vol: 6.84(g/mL) G Lab File ID: 918317A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 13 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-01-6	Trichloroethene	5	UJ
108-87-2	Methylcyclohexane	5	UJ
78-87-5	1,2-Dichloropropane	5	UJ
75-27-4	Bromodichloromethane	5	UJ
10061-01-5	cis-1,3-Dichloropropene	5	UJ
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5	UJ
10061-02-6	trans-1,3-Dichloropropene	5	UJ
79-00-5	1,1,2-Trichloroethane	5	UJ
127-18-4	Tetrachloroethene	5	UJ
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	UJ
108-90-7	Chlorobenzene	5	UJ
100-41-4	Ethylbenzene	5	UJ
100-42-5	Styrene	5	UJ
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	UJ
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	UJ
106-46-7	1,4-Dichlorobenzene	5	UJ
95-50-1	1,2-Dichlorobenzene	5	UJ
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	UJ
74-97-5	Bromochloromethane	5	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC2

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3

Matrix: (soil/water) SOIL Lab Sample ID: 918317

Sample wt/vol: 6.84(g/mL) G Lab File ID: 918317A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 13 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
123-91-1	1,4-Dioxane	100	~~U~~ R
87-61-6	1,2,3-Trichlorobenzene	5	U J

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3LC2

Lab Name: COMPUCHEM Contract: EPW05028

ab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918317

Sample wt/vol: 6.84(g/mL) G Lab File ID: 918317A90

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: not dec. 13 Date Analyzed: 02/27/06

GC Column: RTX-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ul) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L44

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L

Matrix: (soil/water) SOIL Lab Sample ID: 917701

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917701DA62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 40 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.2 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	2800	U
108-95-2	Phenol	510	J
111-44-4	Bis(2-chloroethyl)ether	2800	U
95-57-8	2-Chlorophenol	2800	U
95-48-7	2-Methylphenol	2800	U
108-60-1	2,2'-Oxybis(1-chloropropane)	2800	U
98-86-2	Acetophenone	2400	J
106-44-5	4-Methylphenol	2800	U
621-64-7	N-Nitroso-di-n-propylamine	2800	U
67-72-1	Hexachloroethane	2800	U
98-95-3	Nitrobenzene	2800	U
78-59-1	Isophorone	2800	U
88-75-5	2-Nitrophenol	2800	U
105-67-9	2,4-Dimethylphenol	2800	U
111-91-1	Bis(2-chloroethoxy)methane	2800	U
120-83-2	2,4-Dichlorophenol	2800	U
91-20-3	Naphthalene	2800	U
106-47-8	4-Chloroaniline	2800	U
87-68-3	Hexachlorobutadiene	2800	U
105-60-2	Caprolactam	2800	U
59-50-7	4-Chloro-3-methylphenol	2800	U
91-57-6	2-Methylnaphthalene	2800	U
77-47-4	Hexachlorocyclopentadiene	2800	U
88-06-2	2,4,6-Trichlorophenol	2800	U
95-95-4	2,4,5-Trichlorophenol	2800	U
92-52-4	1,1'-Biphenyl	2800	U
91-58-7	2-Chloronaphthalene	2800	U
88-74-4	2-Nitroaniline	5500	U
131-11-3	Dimethylphthalate	2800	U
606-20-2	2,6-Dinitrotoluene	2800	U
208-96-8	Acenaphthylene	2800	U
99-09-2	3-Nitroaniline	5500	U
83-32-9	Acenaphthene	2800	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L44

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917701

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917701DA62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 40 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.2 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	5500	U
100-02-7	4-Nitrophenol	5500	U
132-64-9	Dibenzofuran	2800	U
121-14-2	2,4-Dinitrotoluene	2800	U
84-66-2	Diethylphthalate	2800	U
86-73-7	Fluorene	280	J
7005-72-3	4-Chlorophenyl-phenylether	2800	U
100-01-6	4-Nitroaniline	5500	U
534-52-1	4,6-Dinitro-2-methylphenol	5500	U
86-30-6	N-Nitrosodiphenylamine (1)	2800	U
95-94-3	1,2,4,5-Tetrachlorobenzene	2800	U
101-55-3	4-Bromophenyl-phenylether	2800	U
118-74-1	Hexachlorobenzene	2800	U
1912-24-9	Atrazine	2800	U
87-86-5	Pentachlorophenol	5500	U
85-01-8	Phenanthrene	430	J
120-12-7	Anthracene	2800	U
84-74-2	Di-n-butylphthalate	2800	U
206-44-0	Fluoranthene	2800	U
129-00-0	Pyrene	2800	U
85-68-7	Butylbenzylphthalate	2800	U
91-94-1	3,3'-Dichlorobenzidine	2800	U
56-55-3	Benzo(a)anthracene	2800	U
218-01-9	Chrysene	2800	U
117-81-7	Bis(2-ethylhexyl)phthalate	30000	B
117-84-0	Di-n-octylphthalate	440	J
205-99-2	Benzo(b)fluoranthene	2800	U
207-08-9	Benzo(k)fluoranthene	2800	U
50-32-8	Benzo(a)pyrene	2800	U
193-39-5	Indeno(1,2,3-cd)pyrene	2800	U
53-70-3	Dibenzo(a,h)anthracene	2800	U
191-24-2	Benzo(g,h,i)perylene	2800	U
58-90-2	2,3,4,6-Tetrachlorophenol	2800	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L44

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L

Matrix: (soil/water) SOIL Lab Sample ID: 917701

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917701DA62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 40 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.2 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	2800	U

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L44

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917701

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 917701DA62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 40 Decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.2 Extraction: (Type) SONC

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	19.74	22000	J
2.		UNKNOWN	24.76	5800	J
3.	2425-54-9	TETRADECANE, 1-CHLORO-	25.50	6600	NJ
4.		UNKNOWN	25.82	4400	J
5.		UNKNOWN	25.87	5200	J
6.		UNKNOWN	25.96	3800	J
7.		UNKNOWN	26.39	5600	J
8.		UNKNOWN	26.43	3600	J
9.		UNKNOWN	26.50	8700	J
10.		UNKNOWN	26.58	3300	J
11.		UNKNOWN	26.67	4100	J
12.		UNKNOWN	27.37	3400	J
13.		UNKNOWN	27.43	12000	J
14.		UNKNOWN	28.50	5400	J
15.		UNKNOWN	28.72	3600	J
16.	629-72-1	PENTADECANE, 1-BROMO-	28.88	12000	NJ
17.	62016-79-9	HEPTACOSANE, 1-CHLORO-	29.28	8700	NJ
18.	62016-79-9	HEPTACOSANE, 1-CHLORO-	29.46	12000	NJ
19.		UNKNOWN	29.65	4200	J
20.	112-71-0	TETRADECANE, 1-BROMO-	29.70	15000	NJ
21.					
22.					
23.					
24.					
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29.					
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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L45

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3

Matrix: (soil/water) SOIL Lab Sample ID: 917702

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917702DA60

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 22 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 04/08/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 3.7 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	6500	U
108-95-2	Phenol	4200	J
111-44-4	Bis(2-chloroethyl)ether	6500	U
95-57-8	2-Chlorophenol	6500	U
95-48-7	2-Methylphenol	6500	U
108-60-1	2,2'-Oxybis(1-chloropropane)	6500	U
98-86-2	Acetophenone	2600	J
106-44-5	4-Methylphenol	6500	U
621-64-7	N-Nitroso-di-n-propylamine	6500	U
67-72-1	Hexachloroethane	6500	U
98-95-3	Nitrobenzene	6500	U
78-59-1	Isophorone	6500	U
88-75-5	2-Nitrophenol	6500	U
105-67-9	2,4-Dimethylphenol	6500	U
111-91-1	Bis(2-chloroethoxy)methane	6500	U
120-83-2	2,4-Dichlorophenol	6500	U
91-20-3	Naphthalene	6500	U
106-47-8	4-Chloroaniline	6500	U
87-68-3	Hexachlorobutadiene	6500	U
105-60-2	Caprolactam	6500	U
59-50-7	4-Chloro-3-methylphenol	6500	U
91-57-6	2-Methylnaphthalene	6500	U
77-47-4	Hexachlorocyclopentadiene	6500	U
88-06-2	2,4,6-Trichlorophenol	6500	U
95-95-4	2,4,5-Trichlorophenol	6500	U
92-52-4	1,1'-Biphenyl	6500	U
91-58-7	2-Chloronaphthalene	6500	U
88-74-4	2-Nitroaniline	13000	U
131-11-3	Dimethylphthalate	6500	U
606-20-2	2,6-Dinitrotoluene	6500	U
208-96-8	Acenaphthylene	6500	U
99-09-2	3-Nitroaniline	13000	U
83-32-9	Acenaphthene	6500	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L45

Lab Name: COMPUCHEM Contract: EPW05028

b Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917702

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917702DA60

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 22 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 04/08/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 3.7 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	13000	U
100-02-7	4-Nitrophenol	13000	U
132-64-9	Dibenzofuran	6500	U
121-14-2	2,4-Dinitrotoluene	6500	U
84-66-2	Diethylphthalate	6500	U
86-73-7	Fluorene	6500	U
7005-72-3	4-Chlorophenyl-phenylether	6500	U
100-01-6	4-Nitroaniline	13000	U
534-52-1	4,6-Dinitro-2-methylphenol	13000	U
86-30-6	N-Nitrosodiphenylamine (1)	6500	U
95-94-3	1,2,4,5-Tetrachlorobenzene	6500	U
101-55-3	4-Bromophenyl-phenylether	6500	U
118-74-1	Hexachlorobenzene	6500	U
1912-24-9	Atrazine	6500	U
87-86-5	Pentachlorophenol	13000	U
85-01-8	Phenanthrene	6500	U
120-12-7	Anthracene	6500	U
84-74-2	Di-n-butylphthalate	6500	U
206-44-0	Fluoranthene	6500	U
129-00-0	Pyrene	6500	U
85-68-7	Butylbenzylphthalate	6500	U
91-94-1	3,3'-Dichlorobenzidine	6500	U
56-55-3	Benzo(a)anthracene	6500	U
218-01-9	Chrysene	6500	U
117-81-7	Bis(2-ethylhexyl)phthalate	31000	B
117-84-0	Di-n-octylphthalate	2700	J
205-99-2	Benzo(b)fluoranthene	6500	U
207-08-9	Benzo(k)fluoranthene	6500	U
50-32-8	Benzo(a)pyrene	6500	U
193-39-5	Indeno(1,2,3-cd)pyrene	6500	U
53-70-3	Dibenzo(a,h)anthracene	6500	U
191-24-2	Benzo(g,h,i)perylene	6500	U
58-90-2	2,3,4,6-Tetrachlorophenol	6500	U J

(1) - Cannot be separated from Diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L45

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3I

Matrix: (soil/water) SOIL Lab Sample ID: 917702

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917702DA60

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 22 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 04/08/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 3.7 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	6500	U

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L45

Lab Name: COMPUCHEM Contract: EPW05028

b Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917702

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 917702DA60

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 22 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 04/08/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 3.7 Extraction: (Type) SONC

Number TICs found: 17 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	111-82-0	DODECANOIC ACID, METHYL ESTE	21.12	34000	NJ
2.	19047-85-9	PHOSPHONIC ACID, DIOCTADECYL	26.30	15000	NJ
3.	74685-33-9	3-EICOSENE, (E)-	26.71	17000	NJ
4.		UNKNOWN	27.25	8600	J
5.		UNKNOWN	28.69	10000	J
.		UNKNOWN	28.93	9000	J
.	0-00-0	E-15-HEPTADECENAL	29.04	6800	NJ
8.		UNKNOWN	29.69	13000	J
9.		UNKNOWN	30.53	10000	J
10.		UNKNOWN	31.50	7200	J
11.		UNKNOWN	31.60	8500	J
12.		UNKNOWN	31.67	13000	J
13.		UNKNOWN	31.85	8700	J
14.		UNKNOWN	33.36	6400	J
15.	62016-79-9	HEPTACOSANE, 1-CHLORO-	33.41	7900	NJ
16.		UNKNOWN	33.55	13000	J
17.		UNKNOWN	37.41	24000	J
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L51

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L[illegible]

Matrix: (soil/water) SOIL Lab Sample ID: 917704

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917704A62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 9 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	190	U
108-95-2	Phenol	190	U
111-44-4	Bis(2-chloroethyl)ether	190	U
95-57-8	2-Chlorophenol	190	U
95-48-7	2-Methylphenol	190	U
108-60-1	2,2'-Oxybis(1-chloropropane)	190	U
98-86-2	Acetophenone	72	J
106-44-5	4-Methylphenol	190	U
621-64-7	N-Nitroso-di-n-propylamine	190	U
67-72-1	Hexachloroethane	190	U
98-95-3	Nitrobenzene	190	U
78-59-1	Isophorone	190	U
88-75-5	2-Nitrophenol	190	U
105-67-9	2,4-Dimethylphenol	190	U
111-91-1	Bis(2-chloroethoxy)methane	190	U
120-83-2	2,4-Dichlorophenol	190	U
91-20-3	Naphthalene	190	U
106-47-8	4-Chloroaniline	190	U
87-68-3	Hexachlorobutadiene	190	U
105-60-2	Caprolactam	190	U
59-50-7	4-Chloro-3-methylphenol	190	U
91-57-6	2-Methylnaphthalene	190	U
77-47-4	Hexachlorocyclopentadiene	190	U
88-06-2	2,4,6-Trichlorophenol	190	U
95-95-4	2,4,5-Trichlorophenol	190	U
92-52-4	1,1'-Biphenyl	190	U
91-58-7	2-Chloronaphthalene	190	U
88-74-4	2-Nitroaniline	360	U
131-11-3	Dimethylphthalate	190	U
606-20-2	2,6-Dinitrotoluene	190	U
208-96-8	Acenaphthylene	190	U
99-09-2	3-Nitroaniline	360	U
83-32-9	Acenaphthene	190	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L51

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917704

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917704A62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 9 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	360	U
100-02-7	4-Nitrophenol	360	U
132-64-9	Dibenzofuran	190	U
121-14-2	2,4-Dinitrotoluene	190	U
84-66-2	Diethylphthalate	190	U
86-73-7	Fluorene	190	U
7005-72-3	4-Chlorophenyl-phenylether	190	U
100-01-6	4-Nitroaniline	360	U
534-52-1	4,6-Dinitro-2-methylphenol	360	U
86-30-6	N-Nitrosodiphenylamine (1)	190	U
95-94-3	1,2,4,5-Tetrachlorobenzene	190	U
101-55-3	4-Bromophenyl-phenylether	190	U
118-74-1	Hexachlorobenzene	190	U
1912-24-9	Atrazine	190	U
87-86-5	Pentachlorophenol	360	U
85-01-8	Phenanthrene	190	U
120-12-7	Anthracene	190	U
84-74-2	Di-n-butylphthalate	190	U
206-44-0	Fluoranthene	190	U
129-00-0	Pyrene	190	U
85-68-7	Butylbenzylphthalate	190	U
91-94-1	3,3'-Dichlorobenzidine	190	U
56-55-3	Benzo(a)anthracene	190	U
218-01-9	Chrysene	19	J
117-81-7	Bis(2-ethylhexyl)phthalate	~~190~~ 66	~~JB~~ J
117-84-0	Di-n-octylphthalate	190	U
205-99-2	Benzo(b)fluoranthene	190	U
207-08-9	Benzo(k)fluoranthene	190	U
50-32-8	Benzo(a)pyrene	190	U
193-39-5	Indeno(1,2,3-cd)pyrene	190	U
53-70-3	Dibenzo(a,h)anthracene	190	U
191-24-2	Benzo(g,h,i)perylene	190	U
58-90-2	2,3,4,6-Tetrachlorophenol	190	U

(1) - Cannot be separated from Diphenylamine

1G

EPA SAMPLE NO.

B3L51

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L

Matrix: (soil/water) SOIL Lab Sample ID: 917704

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 917704A62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 9 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.4 Extraction: (Type) SONC

Number TICs found: 30

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	23.04	290	J
2.		UNKNOWN	24.11	310	J
3.		UNKNOWN	24.99	380	J
4.		UNKNOWN	25.08	280	J
5.		UNKNOWN	25.47	310	J
6.		UNKNOWN	25.57	280	J
7.		UNKNOWN	25.81	300	J
8.		UNKNOWN	27.18	380	J
9.		UNKNOWN	27.30	320	J
10.		UNKNOWN	27.95	320	J
11.		UNKNOWN	28.00	330	J
12.		UNKNOWN	28.06	590	J
13.		UNKNOWN	28.17	320	J
14.		UNKNOWN	28.46	190	J
15.		UNKNOWN	28.76	130	J
16.		UNKNOWN	29.00	440	J
17.		UNKNOWN	29.48	380	J
18.		UNKNOWN	29.62	300	J
19.		UNKNOWN	29.73	390	J
20.		UNKNOWN	30.03	290	J
21.		UNKNOWN	30.14	490	J
22.		UNKNOWN	30.34	180	J
23.		UNKNOWN	30.44	370	J
24.		UNKNOWN	30.57	640	J
25.		UNKNOWN	30.61	340	J
26.		UNKNOWN	31.15	900	J
27.		UNKNOWN	31.92	420	J
28.		UNKNOWN	32.02	270	J
29.		UNKNOWN	32.75	290	J
30.		UNKNOWN	33.50	250	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L56

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917706

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917706A62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 14 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	200	U
108-95-2	Phenol	200	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	200	U
95-48-7	2-Methylphenol	200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	200	U
621-64-7	N-Nitroso-di-n-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	200	U
105-67-9	2,4-Dimethylphenol	200	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	200	U
91-20-3	Naphthalene	200	U
106-47-8	4-Chloroaniline	200	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	200	U
91-57-6	2-Methylnaphthalene	200	U
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	200	U
95-95-4	2,4,5-Trichlorophenol	200	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	200	U
131-11-3	Dimethylphthalate	380	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	200	U
83-32-9	Acenaphthene	380	U
		200	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L56

b Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917706

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917706A62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 14 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	380	U
100-02-7	4-Nitrophenol	380	U
132-64-9	Dibenzofuran	200	U
121-14-2	2,4-Dinitrotoluene	200	U
84-66-2	Diethylphthalate	200	U
86-73-7	Fluorene	200	U
005-72-3	4-Chlorophenyl-phenylether	200	U
100-01-6	4-Nitroaniline	380	U
534-52-1	4,6-Dinitro-2-methylphenol	380	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
95-94-3	1,2,4,5-Tetrachlorobenzene	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	380	U
85-01-8	Phenanthrene	200	U
120-12-7	Anthracene	200	U
84-74-2	Di-n-butylphthalate	200 ~~26~~	JB U
206-44-0	Fluoranthene	22	J
129-00-0	Pyrene	23	J
85-68-7	Butylbenzylphthalate	24	J
91-94-1	3,3'-Dichlorobenzidine	200	U
56-55-3	Benzo(a)anthracene	26	J
218-01-9	Chrysene	38	J
117-81-7	Bis(2-ethylhexyl)phthalate	200 ~~140~~	JB U
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	20	J
207-08-9	Benzo(k)fluoranthene	21	J
50-32-8	Benzo(a)pyrene	22	J
193-39-5	Indeno(1,2,3-cd)pyrene	22	J
53-70-3	Dibenzo(a,h)anthracene	21	J
191-24-2	Benzo(g,h,i)perylene	24	J
58-90-2	2,3,4,6-Tetrachlorophenol	200	U

(1) - Cannot be separated from Diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L56

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917706

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917706A62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 14 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	24	J

1G

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B3L56

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917706

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 917706A62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 14 Decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500 (uL) Date Analyzed: 03/03/06

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.8 Extraction: (Type) SONC

Number TICs found: 30 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	15.93	850	JB
2.	36653-82-4	1-HEXADECANOL	23.78	7000	NJ
3.	0-00-0	Z-8-HEXADECENE	23.78	7000	NJ
4.		UNKNOWN	24.10	130	J
5.		UNKNOWN	25.62	110	J
6.		UNKNOWN	26.05	86	J
7.		UNKNOWN	26.45	93	J
8.		UNKNOWN	26.64	78	J
9.		UNKNOWN	27.62	280	J
10.		UNKNOWN	27.93	100	J
11.		UNKNOWN	28.06	80	J
12.		UNKNOWN	28.28	200	J
13.		UNKNOWN	28.49	180	J
14.		UNKNOWN	28.53	130	J
15.		UNKNOWN	28.62	160	J
16.		UNKNOWN	28.65	150	J
17.		UNKNOWN	28.76	140	J
18.		UNKNOWN	28.79	130	J
19.		UNKNOWN	28.98	220	J
20.		UNKNOWN	29.00	200	J
21.		UNKNOWN	29.06	270	J
22.		UNKNOWN	29.23	310	J
23.		UNKNOWN	29.66	160	J
24.		UNKNOWN	29.70	220	J
25.		UNKNOWN	30.00	240	J
26.		UNKNOWN	30.12	400	J
27.		UNKNOWN	30.41	200	J
28.		UNKNOWN	30.53	130	J
29.		UNKNOWN	31.12	220	J
30.		UNKNOWN	31.88	130	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L58

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917707

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917707A62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 6 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	180	U
108-95-2	Phenol	180	U
111-44-4	Bis(2-chloroethyl)ether	180	U
95-57-8	2-Chlorophenol	180	U
95-48-7	2-Methylphenol	180	U
108-60-1	2,2'-Oxybis(1-chloropropane)	180	U
98-86-2	Acetophenone	180	U
106-44-5	4-Methylphenol	180	U
621-64-7	N-Nitroso-di-n-propylamine	180	U
67-72-1	Hexachloroethane	180	U
98-95-3	Nitrobenzene	180	U
78-59-1	Isophorone	180	U
88-75-5	2-Nitrophenol	180	U
105-67-9	2,4-Dimethylphenol	180	U
111-91-1	Bis(2-chloroethoxy)methane	180	U
120-83-2	2,4-Dichlorophenol	180	U
91-20-3	Naphthalene	180	U
106-47-8	4-Chloroaniline	180	U
87-68-3	Hexachlorobutadiene	180	U
105-60-2	Caprolactam	180	U
59-50-7	4-Chloro-3-methylphenol	180	U
91-57-6	2-Methylnaphthalene	180	U
77-47-4	Hexachlorocyclopentadiene	180	U
88-06-2	2,4,6-Trichlorophenol	180	U
95-95-4	2,4,5-Trichlorophenol	180	U
92-52-4	1,1'-Biphenyl	180	U
91-58-7	2-Chloronaphthalene	180	U
88-74-4	2-Nitroaniline	350	U
131-11-3	Dimethylphthalate	36	J
606-20-2	2,6-Dinitrotoluene	180	U
208-96-8	Acenaphthylene	180	U
99-09-2	3-Nitroaniline	350	U
83-32-9	Acenaphthene	180	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L58

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917707

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917707A62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 6 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	350	U
100-02-7	4-Nitrophenol	350	U
132-64-9	Dibenzofuran	180	U
121-14-2	2,4-Dinitrotoluene	180	U
84-66-2	Diethylphthalate	180	U
86-73-7	Fluorene	180	U
7005-72-3	4-Chlorophenyl-phenylether	180	U
100-01-6	4-Nitroaniline	350	U
534-52-1	4,6-Dinitro-2-methylphenol	350	U
86-30-6	N-Nitrosodiphenylamine (1)	180	U
95-94-3	1,2,4,5-Tetrachlorobenzene	180	U
101-55-3	4-Bromophenyl-phenylether	180	U
118-74-1	Hexachlorobenzene	180	U
1912-24-9	Atrazine	180	U
87-86-5	Pentachlorophenol	350	U
85-01-8	Phenanthrene	26	J
120-12-7	Anthracene	180	U
84-74-2	Di-n-butylphthalate	180	U
206-44-0	Fluoranthene	180	U
129-00-0	Pyrene	180	U
85-68-7	Butylbenzylphthalate	180	U
91-94-1	3,3'-Dichlorobenzidine	180	U
56-55-3	Benzo(a)anthracene	180	U
218-01-9	Chrysene	40	J
117-81-7	Bis(2-ethylhexyl)phthalate	350	B
117-84-0	Di-n-octylphthalate	180	U
205-99-2	Benzo(b)fluoranthene	180	U
207-08-9	Benzo(k)fluoranthene	180	U
50-32-8	Benzo(a)pyrene	180	U
193-39-5	Indeno(1,2,3-cd)pyrene	180	U
53-70-3	Dibenzo(a,h)anthracene	180	U
191-24-2	Benzo(g,h,i)perylene	180	U
58-90-2	2,3,4,6-Tetrachlorophenol	180	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L58

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917707

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917707A62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 6 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	180	U

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L58

ab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917707

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 917707A62

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: 6 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.8 Extraction: (Type) SONC

Number TICs found: 23 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	23.89	2900	J
2.		UNKNOWN	24.50	340	J
3.		UNKNOWN	24.76	410	J
4.		UNKNOWN	25.17	310	J
5.		UNKNOWN	25.82	400	J
6.		UNKNOWN	25.88	390	J
7.		UNKNOWN	26.14	550	J
8.		UNKNOWN	26.24	680	J
9.		UNKNOWN	26.38	480	J
10.		UNKNOWN	26.67	420	J
11.		UNKNOWN	27.90	400	J
12.		UNKNOWN	27.96	750	J
13.		UNKNOWN	28.01	420	J
14.		UNKNOWN	28.46	980	J
15.		UNKNOWN	28.51	480	J
16.		UNKNOWN	28.54	380	J
17.		UNKNOWN	28.79	350	J
18.		UNKNOWN	29.02	870	J
19.		UNKNOWN	29.08	950	J
20.		UNKNOWN	29.26	920	J
21.		UNKNOWN	30.16	960	J
22.		UNKNOWN	31.15	620	J
23.		UNKNOWN	31.31	440	J
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L68

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917709

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917709DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 11 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.6 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	380	U
108-95-2	Phenol	380	U
111-44-4	Bis(2-chloroethyl)ether	380	U
95-57-8	2-Chlorophenol	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-Oxybis(1-chloropropane)	380	U
98-86-2	Acetophenone	120	J
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	Bis(2-chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
105-60-2	Caprolactam	380	U
59-50-7	4-Chloro-3-methylphenol	62	J
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
92-52-4	1,1'-Biphenyl	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	740	U
131-11-3	Dimethylphthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U
208-96-8	Acenaphthylene	380	U
99-09-2	3-Nitroaniline	740	U
83-32-9	Acenaphthene	380	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L68

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917709

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917709DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 11 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.6 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	740	U
100-02-7	4-Nitrophenol	740	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
86-73-7	Fluorene	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
100-01-6	4-Nitroaniline	740	U
534-52-1	4,6-Dinitro-2-methylphenol	740	U
86-30-6	N-Nitrosodiphenylamine (1)	380	U
95-94-3	1,2,4,5-Tetrachlorobenzene	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
1912-24-9	Atrazine	380	U
87-86-5	Pentachlorophenol	740	U
85-01-8	Phenanthrene	55	J
120-12-7	Anthracene	380	U
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	100	J
129-00-0	Pyrene	76	J
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)anthracene	56	J
218-01-9	Chrysene	68	J
117-81-7	Bis(2-ethylhexyl)phthalate	380 ~~100~~	JB U
117-84-0	Di-n-octylphthalate	380	U
205-99-2	Benzo(b)fluoranthene	66	J
207-08-9	Benzo(k)fluoranthene	61	J
50-32-8	Benzo(a)pyrene	56	J
193-39-5	Indeno(1,2,3-cd)pyrene	41	J
53-70-3	Dibenzo(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)perylene	380	U
58-90-2	2,3,4,6-Tetrachlorophenol	380	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L68

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917709

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917709DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 11 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.6 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	380	U

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L68

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917709

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 917709DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 11 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.6 Extraction: (Type) SONC

Number TICs found: 30 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	23.03	330	J
2.		UNKNOWN	27.98	260	J
3.		UNKNOWN	28.19	240	J
4.		UNKNOWN	28.54	220	J
5.		UNKNOWN	28.62	640	J
6.		UNKNOWN	28.79	440	J
7.		UNKNOWN	28.96	330	J
8.		UNKNOWN	29.00	590	J
9.		UNKNOWN	29.12	480	J
10.		UNKNOWN	29.22	500	J
11.		UNKNOWN	29.25	540	J
12.		UNKNOWN	29.36	2200	J
13.		UNKNOWN	29.48	320	J
14.		UNKNOWN	29.64	230	J
15.		UNKNOWN	29.69	310	J
16.		UNKNOWN	29.72	400	J
17.		UNKNOWN	29.78	310	J
18.		UNKNOWN	29.89	560	J
19.		UNKNOWN	30.01	930	J
20.		UNKNOWN	30.11	450	J
21.		UNKNOWN	30.14	670	J
22.		UNKNOWN	30.32	230	J
23.		UNKNOWN	30.45	530	J
24.		UNKNOWN	30.48	300	J
25.		UNKNOWN	30.56	680	J
26.		UNKNOWN	30.76	290	J
27.		UNKNOWN	31.14	830	J
28.		UNKNOWN	31.90	390	J
29.		UNKNOWN	32.02	270	J
30.		UNKNOWN	32.58	260	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L72

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917711

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917711A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 14 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	200	U
108-95-2	Phenol	200	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	200	U
95-48-7	2-Methylphenol	200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	200	U
621-64-7	N-Nitroso-di-n-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	200	U
105-67-9	2,4-Dimethylphenol	200	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	200	U
91-20-3	Naphthalene	200	U
106-47-8	4-Chloroaniline	200	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	200	U
91-57-6	2-Methylnaphthalene	200	U
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	200	U
95-95-4	2,4,5-Trichlorophenol	200	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	380	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	380	U
83-32-9	Acenaphthene	200	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L72

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917711

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917711A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 14 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	380	U
100-02-7	4-Nitrophenol	380	U
132-64-9	Dibenzofuran	200	U
121-14-2	2,4-Dinitrotoluene	200	U
84-66-2	Diethylphthalate	200	U
86-73-7	Fluorene	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
100-01-6	4-Nitroaniline	380	U
534-52-1	4,6-Dinitro-2-methylphenol	380	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
95-94-3	1,2,4,5-Tetrachlorobenzene	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	380	U
85-01-8	Phenanthrene	200	U
120-12-7	Anthracene	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	U
129-00-0	Pyrene	200	U
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
56-55-3	Benzo(a)anthracene	200	U
218-01-9	Chrysene	200	U
117-81-7	Bis(2-ethylhexyl)phthalate	200 21 ~~JB~~ J	
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	U
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U
58-90-2	2,3,4,6-Tetrachlorophenol	200	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L72

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917711

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917711A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 14 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	200	U

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L72

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917711

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 917711A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 14 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

Number TICs found: 4 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	15.94	430	JB
2.		UNKNOWN	17.60	95	J
3.		UNKNOWN	31.65	100	J
4.		UNKNOWN	32.04	94	J
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
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18.					
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22.					
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27.					
28.					
29.					
30.					

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L73

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917712

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917712A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 14 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	200	U
108-95-2	Phenol	200	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	200	U
95-48-7	2-Methylphenol	200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	200	U
98-86-2	Acetophenone	23	J
106-44-5	4-Methylphenol	200	U
621-64-7	N-Nitroso-di-n-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	200	U
105-67-9	2,4-Dimethylphenol	200	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	200	U
91-20-3	Naphthalene	200	U
106-47-8	4-Chloroaniline	200	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	200	U
91-57-6	2-Methylnaphthalene	200	U
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	200	U
95-95-4	2,4,5-Trichlorophenol	200	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	380	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	380	U
83-32-9	Acenaphthene	200	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L73

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917712

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917712A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 14 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	380	U
100-02-7	4-Nitrophenol	380	U
132-64-9	Dibenzofuran	200	U
121-14-2	2,4-Dinitrotoluene	200	U
84-66-2	Diethylphthalate	200	U
86-73-7	Fluorene	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
100-01-6	4-Nitroaniline	380	U
534-52-1	4,6-Dinitro-2-methylphenol	380	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
95-94-3	1,2,4,5-Tetrachlorobenzene	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	380	U
85-01-8	Phenanthrene	200	U
120-12-7	Anthracene	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	U
129-00-0	Pyrene	200	U
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
56-55-3	Benzo(a)anthracene	200	U
218-01-9	Chrysene	200	U
117-81-7	Bis(2-ethylhexyl)phthalate	200 ~~20~~	~~JB~~ U
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	U
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U
58-90-2	2,3,4,6-Tetrachlorophenol	200	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L73

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917712

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917712A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 14 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	200	U

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L73

b Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917712

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 917712A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 14 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	15.93	330	JB
2.					
3.					
4.					
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6.					
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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L75

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917714

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917714A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 6 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	180	U
108-95-2	Phenol	180	U
111-44-4	Bis(2-chloroethyl)ether	180	U
95-57-8	2-Chlorophenol	180	U
95-48-7	2-Methylphenol	180	U
108-60-1	2,2'-Oxybis(1-chloropropane)	180	U
98-86-2	Acetophenone	180	U
106-44-5	4-Methylphenol	180	U
621-64-7	N-Nitroso-di-n-propylamine	180	U
67-72-1	Hexachloroethane	180	U
98-95-3	Nitrobenzene	180	U
78-59-1	Isophorone	180	U
88-75-5	2-Nitrophenol	180	U
105-67-9	2,4-Dimethylphenol	180	U
111-91-1	Bis(2-chloroethoxy)methane	180	U
120-83-2	2,4-Dichlorophenol	180	U
91-20-3	Naphthalene	180	U
106-47-8	4-Chloroaniline	180	U
87-68-3	Hexachlorobutadiene	180	U
105-60-2	Caprolactam	180	U
59-50-7	4-Chloro-3-methylphenol	180	U
91-57-6	2-Methylnaphthalene	180	U
77-47-4	Hexachlorocyclopentadiene	180	U
88-06-2	2,4,6-Trichlorophenol	180	U
95-95-4	2,4,5-Trichlorophenol	180	U
92-52-4	1,1'-Biphenyl	180	U
91-58-7	2-Chloronaphthalene	180	U
88-74-4	2-Nitroaniline	350	U
131-11-3	Dimethylphthalate	180	U
606-20-2	2,6-Dinitrotoluene	180	U
208-96-8	Acenaphthylene	180	U
99-09-2	3-Nitroaniline	350	U
83-32-9	Acenaphthene	180	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L75

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917714

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917714A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 6 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	350	U
100-02-7	4-Nitrophenol	350	U
132-64-9	Dibenzofuran	180	U
121-14-2	2,4-Dinitrotoluene	180	U
84-66-2	Diethylphthalate	180	U
86-73-7	Fluorene	180	U
7005-72-3	4-Chlorophenyl-phenylether	180	U
100-01-6	4-Nitroaniline	350	U
534-52-1	4,6-Dinitro-2-methylphenol	350	U
86-30-6	N-Nitrosodiphenylamine (1)	180	U
95-94-3	1,2,4,5-Tetrachlorobenzene	180	U
101-55-3	4-Bromophenyl-phenylether	180	U
118-74-1	Hexachlorobenzene	180	U
1912-24-9	Atrazine	180	U
87-86-5	Pentachlorophenol	350	U
85-01-8	Phenanthrene	36	J
120-12-7	Anthracene	180	U
84-74-2	Di-n-butylphthalate	180	U
206-44-0	Fluoranthene	49	J
129-00-0	Pyrene	40	J
85-68-7	Butylbenzylphthalate	180	U
91-94-1	3,3'-Dichlorobenzidine	180	U
56-55-3	Benzo(a)anthracene	28	J
218-01-9	Chrysene	24	J
117-81-7	Bis(2-ethylhexyl)phthalate	180 ~~30~~	~~JB~~ U
117-84-0	Di-n-octylphthalate	180	U
205-99-2	Benzo(b)fluoranthene	19	J
207-08-9	Benzo(k)fluoranthene	23	J
50-32-8	Benzo(a)pyrene	24	J
193-39-5	Indeno(1,2,3-cd)pyrene	180	U
53-70-3	Dibenzo(a,h)anthracene	180	U
191-24-2	Benzo(g,h,i)perylene	180	U
58-90-2	2,3,4,6-Tetrachlorophenol	180	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L75

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917714

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917714A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 6 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	180	U

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L75

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917714

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 917714A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 6 Decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Extraction: (Type) SONC

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	15.93	870	JB
2.		UNKNOWN	34.89	72	J
3.					
4.					
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1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B3L79

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917715

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917715A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 8 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	180	U
108-95-2	Phenol	180	U
111-44-4	Bis(2-chloroethyl)ether	180	U
95-57-8	2-Chlorophenol	180	U
95-48-7	2-Methylphenol	180	U
108-60-1	2,2'-Oxybis(1-chloropropane)	180	U
98-86-2	Acetophenone	180	U
106-44-5	4-Methylphenol	180	U
621-64-7	N-Nitroso-di-n-propylamine	180	U
67-72-1	Hexachloroethane	180	U
98-95-3	Nitrobenzene	180	U
78-59-1	Isophorone	180	U
88-75-5	2-Nitrophenol	180	U
105-67-9	2,4-Dimethylphenol	180	U
111-91-1	Bis(2-chloroethoxy)methane	180	U
120-83-2	2,4-Dichlorophenol	180	U
91-20-3	Naphthalene	180	U
106-47-8	4-Chloroaniline	180	U
87-68-3	Hexachlorobutadiene	180	U
105-60-2	Caprolactam	180	U
59-50-7	4-Chloro-3-methylphenol	180	U
91-57-6	2-Methylnaphthalene	180	U
77-47-4	Hexachlorocyclopentadiene	180	U
88-06-2	2,4,6-Trichlorophenol	180	U
95-95-4	2,4,5-Trichlorophenol	180	U
92-52-4	1,1'-Biphenyl	180	U
91-58-7	2-Chloronaphthalene	180	U
88-74-4	2-Nitroaniline	360	U
131-11-3	Dimethylphthalate	180	U
606-20-2	2,6-Dinitrotoluene	180	U
208-96-8	Acenaphthylene	180	U
99-09-2	3-Nitroaniline	360	U
83-32-9	Acenaphthene	180	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L79

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917715

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917715A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 8 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	360	U
100-02-7	4-Nitrophenol	360	U
132-64-9	Dibenzofuran	180	U
121-14-2	2,4-Dinitrotoluene	180	U
84-66-2	Diethylphthalate	180	U
86-73-7	Fluorene	180	U
7005-72-3	4-Chlorophenyl-phenylether	180	U
100-01-6	4-Nitroaniline	180	U
534-52-1	4,6-Dinitro-2-methylphenol	360	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
95-94-3	1,2,4,5-Tetrachlorobenzene	180	U
101-55-3	4-Bromophenyl-phenylether	180	U
118-74-1	Hexachlorobenzene	180	U
1912-24-9	Atrazine	180	U
87-86-5	Pentachlorophenol	180	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	180	U
84-74-2	Di-n-butylphthalate	180	U
206-44-0	Fluoranthene	180	U
129-00-0	Pyrene	180	U
85-68-7	Butylbenzylphthalate	180	U
91-94-1	3,3'-Dichlorobenzidine	180	U
56-55-3	Benzo(a)anthracene	180	U
218-01-9	Chrysene	180	U
117-81-7	Bis(2-ethylhexyl)phthalate	180 ~~33~~	~~JB~~ U
117-84-0	Di-n-octylphthalate	180	U
205-99-2	Benzo(b)fluoranthene	180	U
207-08-9	Benzo(k)fluoranthene	180	U
50-32-8	Benzo(a)pyrene	180	U
193-39-5	Indeno(1,2,3-cd)pyrene	180	U
53-70-3	Dibenzo(a,h)anthracene	180	U
191-24-2	Benzo(g,h,i)perylene	180	U
58-90-2	2,3,4,6-Tetrachlorophenol	180	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L79

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917715

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917715A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 8 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	180	U

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L79

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917715

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 917715A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 8 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	15.93	260	JB
2.					
3.					
4.					
5.					
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L80

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917716

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917716DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 6 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	900	U
108-95-2	Phenol	900	U
111-44-4	Bis(2-chloroethyl)ether	900	U
95-57-8	2-Chlorophenol	900	U
95-48-7	2-Methylphenol	900	U
108-60-1	2,2'-Oxybis(1-chloropropane)	900	U
98-86-2	Acetophenone	900	U
106-44-5	4-Methylphenol	900	U
621-64-7	N-Nitroso-di-n-propylamine	900	U
67-72-1	Hexachloroethane	900	U
98-95-3	Nitrobenzene	900	U
78-59-1	Isophorone	900	U
88-75-5	2-Nitrophenol	900	U
105-67-9	2,4-Dimethylphenol	900	U
111-91-1	Bis(2-chloroethoxy)methane	900	U
120-83-2	2,4-Dichlorophenol	900	U
91-20-3	Naphthalene	900	U
106-47-8	4-Chloroaniline	900	U
87-68-3	Hexachlorobutadiene	900	U
105-60-2	Caprolactam	900	U
59-50-7	4-Chloro-3-methylphenol	900	U
91-57-6	2-Methylnaphthalene	900	U
77-47-4	Hexachlorocyclopentadiene	900	U
88-06-2	2,4,6-Trichlorophenol	900	U
95-95-4	2,4,5-Trichlorophenol	900	U
92-52-4	1,1'-Biphenyl	900	U
91-58-7	2-Chloronaphthalene	900	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethylphthalate	900	U
606-20-2	2,6-Dinitrotoluene	900	U
208-96-8	Acenaphthylene	900	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	900	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L80

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917716

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917716DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 6 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	900	U
121-14-2	2,4-Dinitrotoluene	900	U
84-66-2	Diethylphthalate	900	U
86-73-7	Fluorene	900	U
7005-72-3	4-Chlorophenyl-phenylether	900	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	900	U
95-94-3	1,2,4,5-Tetrachlorobenzene	900	U
101-55-3	4-Bromophenyl-phenylether	900	U
118-74-1	Hexachlorobenzene	900	U
1912-24-9	Atrazine	900	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	110	J
120-12-7	Anthracene	900	U
84-74-2	Di-n-butylphthalate	900	U
206-44-0	Fluoranthene	900	U
129-00-0	Pyrene	160	J
85-68-7	Butylbenzylphthalate	900	U
91-94-1	3,3'-Dichlorobenzidine	900	U
56-55-3	Benzo(a)anthracene	130	J
218-01-9	Chrysene	170	J
117-81-7	Bis(2-ethylhexyl)phthalate	900 ~~210~~	~~JB~~ U
117-84-0	Di-n-octylphthalate	900	U
205-99-2	Benzo(b)fluoranthene	900	U
207-08-9	Benzo(k)fluoranthene	900	U
50-32-8	Benzo(a)pyrene	900	U
193-39-5	Indeno(1,2,3-cd)pyrene	900	U
53-70-3	Dibenzo(a,h)anthracene	900	U
191-24-2	Benzo(g,h,i)perylene	900	U
58-90-2	2,3,4,6-Tetrachlorophenol	900	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L80

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917716

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917716DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 6 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	900	U

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L80

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917716

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 917716DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 6 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

Number TICs found: 9 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	23.05	440	J
2.		UNKNOWN	25.93	360	J
3.		UNKNOWN	27.59	410	J
4.		UNKNOWN	28.52	410	J
5.		UNKNOWN	28.63	900	J
6.		UNKNOWN	29.70	640	J
7.		UNKNOWN	30.41	360	J
8.		UNKNOWN	31.12	740	J
9.		UNKNOWN	32.20	470	J
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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L84

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917717

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917717A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 5 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	20	J
108-95-2	Phenol	180	U
111-44-4	Bis(2-chloroethyl)ether	180	U
95-57-8	2-Chlorophenol	180	U
95-48-7	2-Methylphenol	180	U
108-60-1	2,2'-Oxybis(1-chloropropane)	180	U
98-86-2	Acetophenone	180	U
106-44-5	4-Methylphenol	180	U
621-64-7	N-Nitroso-di-n-propylamine	180	U
67-72-1	Hexachloroethane	180	U
98-95-3	Nitrobenzene	180	U
78-59-1	Isophorone	180	U
88-75-5	2-Nitrophenol	180	U
105-67-9	2,4-Dimethylphenol	180	U
111-91-1	Bis(2-chloroethoxy)methane	180	U
120-83-2	2,4-Dichlorophenol	180	U
91-20-3	Naphthalene	180	U
106-47-8	4-Chloroaniline	180	U
87-68-3	Hexachlorobutadiene	180	U
105-60-2	Caprolactam	180	U
59-50-7	4-Chloro-3-methylphenol	180	U
91-57-6	2-Methylnaphthalene	180	U
77-47-4	Hexachlorocyclopentadiene	180	U
88-06-2	2,4,6-Trichlorophenol	180	U
95-95-4	2,4,5-Trichlorophenol	180	U
92-52-4	1,1'-Biphenyl	180	U
91-58-7	2-Chloronaphthalene	180	U
88-74-4	2-Nitroaniline	350	U
131-11-3	Dimethylphthalate	180	U
606-20-2	2,6-Dinitrotoluene	180	U
208-96-8	Acenaphthylene	180	U
99-09-2	3-Nitroaniline	350	U
83-32-9	Acenaphthene	180	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L84

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917717

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917717A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 5 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	350	U
100-02-7	4-Nitrophenol	350	U
132-64-9	Dibenzofuran	180	U
121-14-2	2,4-Dinitrotoluene	180	U
84-66-2	Diethylphthalate	180	U
86-73-7	Fluorene	180	U
7005-72-3	4-Chlorophenyl-phenylether	180	U
100-01-6	4-Nitroaniline	350	U
534-52-1	4,6-Dinitro-2-methylphenol	350	U
86-30-6	N-Nitrosodiphenylamine (1)	180	U
95-94-3	1,2,4,5-Tetrachlorobenzene	180	U
101-55-3	4-Bromophenyl-phenylether	180	U
118-74-1	Hexachlorobenzene	180	U
1912-24-9	Atrazine	180	U
87-86-5	Pentachlorophenol	350	U
85-01-8	Phenanthrene	25	J
120-12-7	Anthracene	180	U
84-74-2	Di-n-butylphthalate	180	U
206-44-0	Fluoranthene	72	J
129-00-0	Pyrene	68	J
85-68-7	Butylbenzylphthalate	180	U
91-94-1	3,3'-Dichlorobenzidine	180	U
56-55-3	Benzo(a)anthracene	46	J
218-01-9	Chrysene	50	J
117-81-7	Bis(2-ethylhexyl)phthalate	180 ~~43~~ ~~JB~~ U	
117-84-0	Di-n-octylphthalate	180	U
205-99-2	Benzo(b)fluoranthene	47	J
207-08-9	Benzo(k)fluoranthene	59	J
50-32-8	Benzo(a)pyrene	56	J
193-39-5	Indeno(1,2,3-cd)pyrene	57	J
53-70-3	Dibenzo(a,h)anthracene	180	U
191-24-2	Benzo(g,h,i)perylene	47	J
58-90-2	2,3,4,6-Tetrachlorophenol	180	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L84

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L

Matrix: (soil/water) SOIL Lab Sample ID: 917717

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917717A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 5 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	180	U

1G

EPA SAMPLE NO.

B3L84

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917717

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 917717A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 5 Decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7 Extraction: (Type) SONC

Number TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	100-51-6	BENZYL ALCOHOL	9.84	720	NJ
2.		UNKNOWN	14.10	77	J
3.		UNKNOWN	15.92	320	JB
4.		UNKNOWN	24.38	120	J
5.		UNKNOWN	31.83	73	J
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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L85

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L

Matrix: (soil/water) SOIL Lab Sample ID: 917718

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917718DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 11 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	380	U
108-95-2	Phenol	380	U
111-44-4	Bis(2-chloroethyl)ether	380	U
95-57-8	2-Chlorophenol	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-Oxybis(1-chloropropane)	380	U
98-86-2	Acetophenone	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	Bis(2-chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
105-60-2	Caprolactam	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
92-52-4	1,1'-Biphenyl	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	740	U
131-11-3	Dimethylphthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U
208-96-8	Acenaphthylene	380	U
99-09-2	3-Nitroaniline	740	U
83-32-9	Acenaphthene	380	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L85

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917718

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917718DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 11 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	740	U
100-02-7	4-Nitrophenol	740	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
86-73-7	Fluorene	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
100-01-6	4-Nitroaniline	740	U
534-52-1	4,6-Dinitro-2-methylphenol	740	U
86-30-6	N-Nitrosodiphenylamine (1)	380	U
95-94-3	1,2,4,5-Tetrachlorobenzene	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
1912-24-9	Atrazine	380	U
87-86-5	Pentachlorophenol	740	U
85-01-8	Phenanthrene	270	J
120-12-7	Anthracene	64	J
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	480	
129-00-0	Pyrene	380	J
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)anthracene	230	J
218-01-9	Chrysene	270	J
117-81-7	Bis(2-ethylhexyl)phthalate	380 ~~300~~	~~JB~~ U
117-84-0	Di-n-octylphthalate	520	
205-99-2	Benzo(b)fluoranthene	260	J
207-08-9	Benzo(k)fluoranthene	240	J
50-32-8	Benzo(a)pyrene	240	J
193-39-5	Indeno(1,2,3-cd)pyrene	190	J
53-70-3	Dibenzo(a,h)anthracene	51	J
191-24-2	Benzo(g,h,i)perylene	160	J
58-90-2	2,3,4,6-Tetrachlorophenol	380	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L85

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3

Matrix: (soil/water) SOIL Lab Sample ID: 917718

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917718DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 11 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	52	J

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L85

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917718

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 917718DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 11 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 7.8 Extraction: (Type) SONC

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	26.07	210	J
2.		UNKNOWN	26.39	360	J
3.		UNKNOWN	28.03	260	J
4.		UNKNOWN	28.14	250	J
5.		UNKNOWN	28.18	250	J
6.		UNKNOWN	28.27	440	J
7.		UNKNOWN	28.35	500	J
8.		UNKNOWN	28.48	230	J
9.		UNKNOWN	28.52	720	J
10.		UNKNOWN	28.56	200	J
11.		UNKNOWN	28.68	1000	J
12.		UNKNOWN	28.78	270	J
13.		UNKNOWN	28.94	1200	J
14.		UNKNOWN	29.00	860	J
15.		UNKNOWN	29.03	750	J
16.		UNKNOWN	29.10	860	J
17.		UNKNOWN	29.20	660	J
18.		UNKNOWN	29.27	450	J
19.		UNKNOWN	31.82	230	J
20.		UNKNOWN	34.87	160	J
21.					
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L90

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L

Matrix: (soil/water) SOIL Lab Sample ID: 917721

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917721A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 6 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	180	U
108-95-2	Phenol	180	U
111-44-4	Bis(2-chloroethyl)ether	180	U
95-57-8	2-Chlorophenol	180	U
95-48-7	2-Methylphenol	180	U
108-60-1	2,2'-Oxybis(1-chloropropane)	180	U
98-86-2	Acetophenone	180	U
106-44-5	4-Methylphenol	180	U
621-64-7	N-Nitroso-di-n-propylamine	180	U
67-72-1	Hexachloroethane	180	U
98-95-3	Nitrobenzene	180	U
78-59-1	Isophorone	180	U
88-75-5	2-Nitrophenol	180	U
105-67-9	2,4-Dimethylphenol	180	U
111-91-1	Bis(2-chloroethoxy)methane	180	U
120-83-2	2,4-Dichlorophenol	180	U
91-20-3	Naphthalene	180	U
106-47-8	4-Chloroaniline	180	U
87-68-3	Hexachlorobutadiene	180	U
105-60-2	Caprolactam	180	U
59-50-7	4-Chloro-3-methylphenol	180	U
91-57-6	2-Methylnaphthalene	180	U
77-47-4	Hexachlorocyclopentadiene	180	U
88-06-2	2,4,6-Trichlorophenol	180	U
95-95-4	2,4,5-Trichlorophenol	180	U
92-52-4	1,1'-Biphenyl	180	U
91-58-7	2-Chloronaphthalene	180	U
88-74-4	2-Nitroaniline	350	U
131-11-3	Dimethylphthalate	180	U
606-20-2	2,6-Dinitrotoluene	180	U
208-96-8	Acenaphthylene	180	U
99-09-2	3-Nitroaniline	350	U
83-32-9	Acenaphthene	180	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L90

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917721

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917721A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 6 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	350	U
100-02-7	4-Nitrophenol	350	U
132-64-9	Dibenzofuran	180	U
121-14-2	2,4-Dinitrotoluene	180	U
84-66-2	Diethylphthalate	180	U
86-73-7	Fluorene	180	U
7005-72-3	4-Chlorophenyl-phenylether	180	U
100-01-6	4-Nitroaniline	350	U
534-52-1	4,6-Dinitro-2-methylphenol	350	U
86-30-6	N-Nitrosodiphenylamine (1)	180	U
95-94-3	1,2,4,5-Tetrachlorobenzene	180	U
101-55-3	4-Bromophenyl-phenylether	180	U
118-74-1	Hexachlorobenzene	180	U
1912-24-9	Atrazine	180	U
87-86-5	Pentachlorophenol	350	U
85-01-8	Phenanthrene	24	J
120-12-7	Anthracene	180	U
84-74-2	Di-n-butylphthalate	180	U
206-44-0	Fluoranthene	32	J
129-00-0	Pyrene	26	J
85-68-7	Butylbenzylphthalate	180	U
91-94-1	3,3'-Dichlorobenzidine	180	U
56-55-3	Benzo(a)anthracene	180	U
218-01-9	Chrysene	180	U
117-81-7	Bis(2-ethylhexyl)phthalate	180 ~~110~~ ~~JB~~ U	
117-84-0	Di-n-octylphthalate	180	U
205-99-2	Benzo(b)fluoranthene	180	U
207-08-9	Benzo(k)fluoranthene	180	U
50-32-8	Benzo(a)pyrene	19	J
193-39-5	Indeno(1,2,3-cd)pyrene	180	U
53-70-3	Dibenzo(a,h)anthracene	180	U
191-24-2	Benzo(g,h,i)perylene	180	U
58-90-2	2,3,4,6-Tetrachlorophenol	180	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L90

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L

Matrix: (soil/water) SOIL Lab Sample ID: 917721

Sample wt/vol: 30.0(g/mL) G Lab File ID: 917721A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 6 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	180	U

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L90

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L44

Matrix: (soil/water) SOIL Lab Sample ID: 917721

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 917721A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 6 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

Number TICs found: 10 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	15.93	690	JB
2.	20653-64-9	BENZENAMINE, 5-FLUORO-2-(4-F	20.88	1400	NJ
3.	23586-64-3	BENZENE, 1,1'-(3,3-DIMETHYL-	21.83	220	NJ
4.		UNKNOWN	22.07	150	J
5.		UNKNOWN	24.39	75	J
6.		UNKNOWN	26.85	110	J
7.	2772-45-4	PHENOL, 2,4-BIS(1-METHYL-1-P	26.99	1100	NJ
8.		UNKNOWN	27.45	440	J
9.		UNKNOWN	27.76	200	J
10.		UNKNOWN	33.25	160	J
11.					
12.					
13.					
14.					
15.					
16.					
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18.					
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29.					
30.					

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L94

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918302

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918302A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 5 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	180	U
108-95-2	Phenol	180	U
111-44-4	Bis(2-chloroethyl)ether	180	U
95-57-8	2-Chlorophenol	180	U
95-48-7	2-Methylphenol	180	U
108-60-1	2,2'-Oxybis(1-chloropropane)	180	U
98-86-2	Acetophenone	180	U
106-44-5	4-Methylphenol	180	U
621-64-7	N-Nitroso-di-n-propylamine	180	U
67-72-1	Hexachloroethane	180	U
98-95-3	Nitrobenzene	180	U
78-59-1	Isophorone	180	U
88-75-5	2-Nitrophenol	180	U
105-67-9	2,4-Dimethylphenol	180	U
111-91-1	Bis(2-chloroethoxy)methane	180	U
120-83-2	2,4-Dichlorophenol	180	U
91-20-3	Naphthalene	180	U
106-47-8	4-Chloroaniline	180	U
87-68-3	Hexachlorobutadiene	180	U
105-60-2	Caprolactam	180	U
59-50-7	4-Chloro-3-methylphenol	180	U
91-57-6	2-Methylnaphthalene	180	U
77-47-4	Hexachlorocyclopentadiene	180	U
88-06-2	2,4,6-Trichlorophenol	180	U
95-95-4	2,4,5-Trichlorophenol	180	U
92-52-4	1,1'-Biphenyl	180	U
91-58-7	2-Chloronaphthalene	180	U
88-74-4	2-Nitroaniline	350	U
131-11-3	Dimethylphthalate	180	U
606-20-2	2,6-Dinitrotoluene	180	U
208-96-8	Acenaphthylene	180	U
99-09-2	3-Nitroaniline	350	U
83-32-9	Acenaphthene	180	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L94

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918302

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918302A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 5 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	350	U
100-02-7	4-Nitrophenol	350	U
132-64-9	Dibenzofuran	180	U
121-14-2	2,4-Dinitrotoluene	180	U
84-66-2	Diethylphthalate	180	U
86-73-7	Fluorene	180	U
7005-72-3	4-Chlorophenyl-phenylether	180	U
100-01-6	4-Nitroaniline	350	U
534-52-1	4,6-Dinitro-2-methylphenol	350	U
86-30-6	N-Nitrosodiphenylamine (1)	180	U
95-94-3	1,2,4,5-Tetrachlorobenzene	180	U
101-55-3	4-Bromophenyl-phenylether	180	U
118-74-1	Hexachlorobenzene	180	U
1912-24-9	Atrazine	180	U
87-86-5	Pentachlorophenol	350	U
85-01-8	Phenanthrene	180	U
120-12-7	Anthracene	180	U
84-74-2	Di-n-butylphthalate	180	U
206-44-0	Fluoranthene	180	U
129-00-0	Pyrene	180	U
85-68-7	Butylbenzylphthalate	180	U
91-94-1	3,3'-Dichlorobenzidine	180	U
56-55-3	Benzo(a)anthracene	180	U
218-01-9	Chrysene	180	U
117-81-7	Bis(2-ethylhexyl)phthalate	180 ~~22~~	~~JB~~ U
117-84-0	Di-n-octylphthalate	180	U
205-99-2	Benzo(b)fluoranthene	180	U
207-08-9	Benzo(k)fluoranthene	180	U
50-32-8	Benzo(a)pyrene	180	U
193-39-5	Indeno(1,2,3-cd)pyrene	180	U
53-70-3	Dibenzo(a,h)anthracene	180	U
191-24-2	Benzo(g,h,i)perylene	180	U
58-90-2	2,3,4,6-Tetrachlorophenol	180	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L94

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]2

Matrix: (soil/water) SOIL Lab Sample ID: 918302

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918302A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 5 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	180	U

1G

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B3L94

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918302

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 918302A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 5 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5 Extraction: (Type) SONC

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	15.98	300	JB
2.		UNKNOWN	20.53	170	J
3.					
4.					
5.					
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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L95

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B[illegible]2

Matrix: (soil/water) SOIL Lab Sample ID: 918303

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918303A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 4 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	180	U
108-95-2	Phenol	180	U
111-44-4	Bis(2-chloroethyl)ether	180	U
95-57-8	2-Chlorophenol	180	U
95-48-7	2-Methylphenol	180	U
108-60-1	2,2'-Oxybis(1-chloropropane)	180	U
98-86-2	Acetophenone	19	J
106-44-5	4-Methylphenol	180	U
621-64-7	N-Nitroso-di-n-propylamine	180	U
67-72-1	Hexachloroethane	180	U
98-95-3	Nitrobenzene	180	U
78-59-1	Isophorone	180	U
88-75-5	2-Nitrophenol	180	U
105-67-9	2,4-Dimethylphenol	180	U
111-91-1	Bis(2-chloroethoxy)methane	180	U
120-83-2	2,4-Dichlorophenol	180	U
91-20-3	Naphthalene	180	U
106-47-8	4-Chloroaniline	180	U
87-68-3	Hexachlorobutadiene	180	U
105-60-2	Caprolactam	180	U
59-50-7	4-Chloro-3-methylphenol	180	U
91-57-6	2-Methylnaphthalene	180	U
77-47-4	Hexachlorocyclopentadiene	180	U
88-06-2	2,4,6-Trichlorophenol	180	U
95-95-4	2,4,5-Trichlorophenol	180	U
92-52-4	1,1'-Biphenyl	180	U
91-58-7	2-Chloronaphthalene	180	U
88-74-4	2-Nitroaniline	340	U
131-11-3	Dimethylphthalate	180	U
606-20-2	2,6-Dinitrotoluene	180	U
208-96-8	Acenaphthylene	180	U
99-09-2	3-Nitroaniline	340	U
83-32-9	Acenaphthene	180	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L95

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918303

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918303A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 4 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	340	U
100-02-7	4-Nitrophenol	340	U
132-64-9	Dibenzofuran	180	U
121-14-2	2,4-Dinitrotoluene	180	U
84-66-2	Diethylphthalate	180	U
86-73-7	Fluorene	180	U
7005-72-3	4-Chlorophenyl-phenylether	180	U
100-01-6	4-Nitroaniline	340	U
534-52-1	4,6-Dinitro-2-methylphenol	340	U
86-30-6	N-Nitrosodiphenylamine (1)	180	U
95-94-3	1,2,4,5-Tetrachlorobenzene	180	U
101-55-3	4-Bromophenyl-phenylether	180	U
118-74-1	Hexachlorobenzene	180	U
1912-24-9	Atrazine	180	U
87-86-5	Pentachlorophenol	340	U
85-01-8	Phenanthrene	180	U
120-12-7	Anthracene	180	U
84-74-2	Di-n-butylphthalate	180	U
206-44-0	Fluoranthene	180	U
129-00-0	Pyrene	180	U
85-68-7	Butylbenzylphthalate	180	U
91-94-1	3,3'-Dichlorobenzidine	180	U
56-55-3	Benzo(a)anthracene	180	U
218-01-9	Chrysene	180	U
117-81-7	Bis(2-ethylhexyl)phthalate	180 ~~22~~ ~~JB~~ U	
117-84-0	Di-n-octylphthalate	180	U
205-99-2	Benzo(b)fluoranthene	180	U
207-08-9	Benzo(k)fluoranthene	180	U
50-32-8	Benzo(a)pyrene	180	U
193-39-5	Indeno(1,2,3-cd)pyrene	180	U
53-70-3	Dibenzo(a,h)anthracene	180	U
191-24-2	Benzo(g,h,i)perylene	180	U
58-90-2	2,3,4,6-Tetrachlorophenol	180	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L95

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]2

Matrix: (soil/water) SOIL Lab Sample ID: 918303

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918303A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 4 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	180	U

1G

EPA SAMPLE NO.

B3L95

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918303

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 918303A62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 4 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.3 Extraction: (Type) SONC

Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	14.14	300	J
2.		UNKNOWN	15.98	840	JB
3.		UNKNOWN	28.12	430	J
4.		UNKNOWN	28.74	130	J
5.					
6.					
7.					
8.					
9.					
10.					
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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L96

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918304

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918304DJA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 39 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/09/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 9.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	8400	U
108-95-2	Phenol	8400	U
111-44-4	Bis(2-chloroethyl)ether	8400	U
95-57-8	2-Chlorophenol	8400	U
95-48-7	2-Methylphenol	8400	U
108-60-1	2,2'-Oxybis(1-chloropropane)	8400	U
98-86-2	Acetophenone	8400	U
106-44-5	4-Methylphenol	8400	U
621-64-7	N-Nitroso-di-n-propylamine	8400	U
67-72-1	Hexachloroethane	8400	U
98-95-3	Nitrobenzene	8400	U
78-59-1	Isophorone	8400	U
88-75-5	2-Nitrophenol	8400	U
105-67-9	2,4-Dimethylphenol	8400	U
111-91-1	Bis(2-chloroethoxy)methane	8400	U
120-83-2	2,4-Dichlorophenol	8400	U
91-20-3	Naphthalene	8400	U
106-47-8	4-Chloroaniline	8400	U
87-68-3	Hexachlorobutadiene	8400	U
105-60-2	Caprolactam	8400	U
59-50-7	4-Chloro-3-methylphenol	8400	U
91-57-6	2-Methylnaphthalene	8400	U
77-47-4	Hexachlorocyclopentadiene	8400	U
88-06-2	2,4,6-Trichlorophenol	8400	U
95-95-4	2,4,5-Trichlorophenol	8400	U
92-52-4	1,1'-Biphenyl	8400	U
91-58-7	2-Chloronaphthalene	8400	U
88-74-4	2-Nitroaniline	16000	U
131-11-3	Dimethylphthalate	8400	U
606-20-2	2,6-Dinitrotoluene	8400	U
208-96-8	Acenaphthylene	8400	U
99-09-2	3-Nitroaniline	16000	U
83-32-9	Acenaphthene	8400	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L96

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918304

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918304DJA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 39 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/09/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 9.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	16000	U
100-02-7	4-Nitrophenol	16000	U
132-64-9	Dibenzofuran	8400	U
121-14-2	2,4-Dinitrotoluene	8400	U
84-66-2	Diethylphthalate	8400	U
86-73-7	Fluorene	8400	U
7005-72-3	4-Chlorophenyl-phenylether	8400	U
100-01-6	4-Nitroaniline	16000	U
534-52-1	4,6-Dinitro-2-methylphenol	16000	U
86-30-6	N-Nitrosodiphenylamine (1)	8400	U
95-94-3	1,2,4,5-Tetrachlorobenzene	8400	U
101-55-3	4-Bromophenyl-phenylether	8400	U
118-74-1	Hexachlorobenzene	8400	U
1912-24-9	Atrazine	8400	U
87-86-5	Pentachlorophenol	16000	U
85-01-8	Phenanthrene	8400	U
120-12-7	Anthracene	8400	U
84-74-2	Di-n-butylphthalate	8400	U
206-44-0	Fluoranthene	8400	U
129-00-0	Pyrene	8400	U
85-68-7	Butylbenzylphthalate	1800	J
91-94-1	3,3'-Dichlorobenzidine	8400	U
56-55-3	Benzo(a)anthracene	8400	U
218-01-9	Chrysene	8400	U
117-81-7	Bis(2-ethylhexyl)phthalate	48000	B
117-84-0	Di-n-octylphthalate	2500	J
205-99-2	Benzo(b)fluoranthene	8400	U
207-08-9	Benzo(k)fluoranthene	8400	U
50-32-8	Benzo(a)pyrene	8400	U
193-39-5	Indeno(1,2,3-cd)pyrene	8400	U
53-70-3	Dibenzo(a,h)anthracene	8400	U
191-24-2	Benzo(g,h,i)perylene	8400	U
58-90-2	2,3,4,6-Tetrachlorophenol	8400	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L96

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]2

Matrix: (soil/water) SOIL Lab Sample ID: 918304

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918304DJA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 39 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/09/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 9.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	8400	U

1G

EPA SAMPLE NO.

B3L96

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918304

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 918304DJA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 39 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/09/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 9.4 Extraction: (Type) SONC

Number TICs found: 26 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	585-34-2	PHENOL, M-TERT-BUTYL-	15.90	63000	NJ
2.	3386-33-2	OCTADECANE, 1-CHLORO-	24.86	5600	NJ
3.		UNKNOWN	25.41	3500	J
4.		UNKNOWN	26.07	5300	J
5.		UNKNOWN	26.94	4700	J
6.	62016-76-6	NONADECANE, 1-CHLORO-	27.59	6700	NJ
7.		UNKNOWN	27.74	4800	J
8.		UNKNOWN	27.78	4800	J
9.		UNKNOWN	27.92	4000	J
10.		UNKNOWN	28.23	10000	J
11.		UNKNOWN	28.38	7900	J
12.		UNKNOWN	28.40	11000	J
13.		UNKNOWN	28.85	5900	J
14.		UNKNOWN	28.95	5100	J
15.		UNKNOWN	28.97	5600	J
16.		UNKNOWN	29.03	6900	J
17.		UNKNOWN	29.22	15000	J
18.		UNKNOWN	29.32	7700	J
19.		UNKNOWN	29.64	5600	J
20.		UNKNOWN	30.22	5700	J
21.	62016-79-9	HEPTACOSANE, 1-CHLORO-	30.38	5400	NJ
22.		UNKNOWN	30.49	6300	J
23.		UNKNOWN	30.93	11000	J
24.		UNKNOWN	31.08	8400	J
25.	32390-26-4	BINAPHTHYL SULPHONE	31.55	4600	NJ
26.		UNKNOWN	32.65	5800	J
27.					
28.					
29.					
30.					

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L97

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]2

Matrix: (soil/water) SOIL Lab Sample ID: 918305

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918305DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 30 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 100.0

GPC Cleanup: (Y/N) Y pH: 9.7 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	24000	U
108-95-2	Phenol	24000	U
111-44-4	Bis(2-chloroethyl)ether	24000	U
95-57-8	2-Chlorophenol	24000	U
95-48-7	2-Methylphenol	24000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	24000	U
98-86-2	Acetophenone	24000	U
106-44-5	4-Methylphenol	24000	U
621-64-7	N-Nitroso-di-n-propylamine	24000	U
67-72-1	Hexachloroethane	24000	U
98-95-3	Nitrobenzene	24000	U
78-59-1	Isophorone	24000	U
88-75-5	2-Nitrophenol	24000	U
105-67-9	2,4-Dimethylphenol	24000	U
111-91-1	Bis(2-chloroethoxy)methane	24000	U
120-83-2	2,4-Dichlorophenol	24000	U
91-20-3	Naphthalene	24000	U
106-47-8	4-Chloroaniline	24000	U
87-68-3	Hexachlorobutadiene	24000	U
105-60-2	Caprolactam	24000	U
59-50-7	4-Chloro-3-methylphenol	24000	U
91-57-6	2-Methylnaphthalene	24000	U
77-47-4	Hexachlorocyclopentadiene	24000	U
88-06-2	2,4,6-Trichlorophenol	24000	U
95-95-4	2,4,5-Trichlorophenol	24000	U
92-52-4	1,1'-Biphenyl	24000	U
91-58-7	2-Chloronaphthalene	24000	U
88-74-4	2-Nitroaniline	47000	U
131-11-3	Dimethylphthalate	24000	U
606-20-2	2,6-Dinitrotoluene	24000	U
208-96-8	Acenaphthylene	24000	U
99-09-2	3-Nitroaniline	47000	U
83-32-9	Acenaphthene	24000	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L97

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918305

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918305DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 30 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 100.0

GPC Cleanup: (Y/N) Y pH: 9.7 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	47000	U
100-02-7	4-Nitrophenol	47000	U
132-64-9	Dibenzofuran	24000	U
121-14-2	2,4-Dinitrotoluene	24000	U
84-66-2	Diethylphthalate	24000	U
86-73-7	Fluorene	24000	U
7005-72-3	4-Chlorophenyl-phenylether	24000	U
100-01-6	4-Nitroaniline	47000	U
534-52-1	4,6-Dinitro-2-methylphenol	47000	U
86-30-6	N-Nitrosodiphenylamine (1)	24000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	24000	U
101-55-3	4-Bromophenyl-phenylether	24000	U
118-74-1	Hexachlorobenzene	24000	U
1912-24-9	Atrazine	24000	U
87-86-5	Pentachlorophenol	47000	U
85-01-8	Phenanthrene	24000	U
120-12-7	Anthracene	24000	U
84-74-2	Di-n-butylphthalate	24000	U
206-44-0	Fluoranthene	24000	U
129-00-0	Pyrene	24000	U
85-68-7	Butylbenzylphthalate	24000	U
91-94-1	3,3'-Dichlorobenzidine	24000	U
56-55-3	Benzo(a)anthracene	24000	U
218-01-9	Chrysene	24000	U
117-81-7	Bis(2-ethylhexyl)phthalate	30000	B
117-84-0	Di-n-octylphthalate	6100	J
205-99-2	Benzo(b)fluoranthene	24000	U
207-08-9	Benzo(k)fluoranthene	24000	U
50-32-8	Benzo(a)pyrene	24000	U
193-39-5	Indeno(1,2,3-cd)pyrene	24000	U
53-70-3	Dibenzo(a,h)anthracene	24000	U
191-24-2	Benzo(g,h,i)perylene	24000	U
58-90-2	2,3,4,6-Tetrachlorophenol	24000	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L97

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918305

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918305DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 30 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 100.0

GPC Cleanup: (Y/N) Y pH: 9.7 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	24000	U

1G

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B3L97

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918305

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 918305DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 30 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 100.0

GPC Cleanup: (Y/N) Y pH: 9.7 Extraction: (Type) SONC

Number TICs found: 22 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	10.77	17000	J
2.		UNKNOWN	10.86	17000	J
3.		UNKNOWN	11.68	13000	J
4.		UNKNOWN	12.40	17000	J
5.		UNKNOWN	12.51	36000	J
6.		UNKNOWN	12.76	31000	J
7.		UNKNOWN	12.99	13000	J
8.		UNKNOWN	13.08	16000	J
9.		UNKNOWN	13.18	13000	J
10.		UNKNOWN	13.44	51000	J
11.		UNKNOWN	13.52	31000	J
12.		UNKNOWN	13.75	29000	J
13.		UNKNOWN	27.14	9700	J
14.		UNKNOWN	27.99	10000	J
15.		UNKNOWN	28.45	14000	J
16.		UNKNOWN	29.02	9800	J
17.		UNKNOWN	29.10	12000	J
18.		UNKNOWN	29.28	19000	J
19.		UNKNOWN	29.48	15000	J
20.		UNKNOWN	29.85	14000	J
21.		UNKNOWN	31.03	22000	J
22.	32390-26-4	BINAPHTHYL SULPHONE	31.65	11000	NJ
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L98

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]2

Matrix: (soil/water) SOIL Lab Sample ID: 918306

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918306DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 62 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	940	J
108-95-2	Phenol	1800	U
111-44-4	Bis(2-chloroethyl)ether	1800	U
95-57-8	2-Chlorophenol	1800	U
95-48-7	2-Methylphenol	1800	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1800	U
98-86-2	Acetophenone	570	J
106-44-5	4-Methylphenol	1800	U
621-64-7	N-Nitroso-di-n-propylamine	1800	U
67-72-1	Hexachloroethane	1800	U
98-95-3	Nitrobenzene	1800	U
78-59-1	Isophorone	1800	U
88-75-5	2-Nitrophenol	1800	U
105-67-9	2,4-Dimethylphenol	1800	U
111-91-1	Bis(2-chloroethoxy)methane	1800	U
120-83-2	2,4-Dichlorophenol	1800	U
91-20-3	Naphthalene	220	J
106-47-8	4-Chloroaniline	1800	U
87-68-3	Hexachlorobutadiene	1800	U
105-60-2	Caprolactam	1800	U
59-50-7	4-Chloro-3-methylphenol	1800	U
91-57-6	2-Methylnaphthalene	1800	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	1800	U
95-95-4	2,4,5-Trichlorophenol	1800	U
92-52-4	1,1'-Biphenyl	1800	U
91-58-7	2-Chloronaphthalene	1800	U
88-74-4	2-Nitroaniline	3500	U
131-11-3	Dimethylphthalate	250	J
606-20-2	2,6-Dinitrotoluene	1800	U
208-96-8	Acenaphthylene	1800	U
99-09-2	3-Nitroaniline	3500	U
83-32-9	Acenaphthene	220	J

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L98

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918306

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918306DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 62 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	3500	U
100-02-7	4-Nitrophenol	3500	U
132-64-9	Dibenzofuran	1800	U
121-14-2	2,4-Dinitrotoluene	1800	U
84-66-2	Diethylphthalate	1800	U
86-73-7	Fluorene	270	J
7005-72-3	4-Chlorophenyl-phenylether	1800	U
100-01-6	4-Nitroaniline	3500	U
534-52-1	4,6-Dinitro-2-methylphenol	3500	U
86-30-6	N-Nitrosodiphenylamine (1)	1800	U
95-94-3	1,2,4,5-Tetrachlorobenzene	1800	U
101-55-3	4-Bromophenyl-phenylether	1800	U
118-74-1	Hexachlorobenzene	1800	U
1912-24-9	Atrazine	1800	U
87-86-5	Pentachlorophenol	3500	U
85-01-8	Phenanthrene	1700	J
120-12-7	Anthracene	390	J
84-74-2	Di-n-butylphthalate	1300 ~~430~~	~~JB~~ U
206-44-0	Fluoranthene	1900	
129-00-0	Pyrene	360	J
85-68-7	Butylbenzylphthalate	1500	J
91-94-1	3,3'-Dichlorobenzidine	1800	U
56-55-3	Benzo(a)anthracene	940	J
218-01-9	Chrysene	740	J
117-81-7	Bis(2-ethylhexyl)phthalate	* 20000 ~~29000~~	~~EB~~
117-84-0	Di-n-octylphthalate	2100	
205-99-2	Benzo(b)fluoranthene	650	J
207-08-9	Benzo(k)fluoranthene	650	J
50-32-8	Benzo(a)pyrene	1800	U
193-39-5	Indeno(1,2,3-cd)pyrene	1800	U
53-70-3	Dibenzo(a,h)anthracene	1800	U
191-24-2	Benzo(g,h,i)perylene	1800	U
58-90-2	2,3,4,6-Tetrachlorophenol	1800	U

(1) - Cannot be separated from Diphenylamine

* Dilution Result

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L98

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B

Matrix: (soil/water) SOIL Lab Sample ID: 918306

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918306DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 62 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	190	J

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3L98

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918306

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 918306DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 62 Decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) Y pH: 8.3 Extraction: (Type) SONC

Number TICs found: 30

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	14.73	6900	J
2.		UNKNOWN	22.85	7100	J
3.		UNKNOWN	24.44	3300	J
4.		UNKNOWN	25.06	3800	J
5.		UNKNOWN	26.39	2500	J
6.	3386-33-2	OCTADECANE, 1-CHLORO-	28.12	2500	NJ
7.		UNKNOWN	28.34	3400	J
8.		UNKNOWN	28.36	4000	J
9.		UNKNOWN	28.52	4700	J
10.		UNKNOWN	28.57	2500	J
11.		UNKNOWN	28.71	2600	J
12.		UNKNOWN	29.07	5800	J
13.		UNKNOWN	29.16	2400	J
14.		UNKNOWN	29.21	3800	J
15.		UNKNOWN	29.36	2800	J
16.	55401-65-5	PENTALENE, OCTAHYDRO-2-[(2-O	29.44	4900	NJ
17.		UNKNOWN	29.55	5300	J
18.		UNKNOWN	29.61	11000	J
19.		UNKNOWN	29.72	3100	J
20.		UNKNOWN	29.80	3400	J
21.		UNKNOWN	30.09	3200	J
22.		UNKNOWN	30.23	4600	J
23.		UNKNOWN	30.64	5600	J
24.		UNKNOWN	30.82	2600	J
25.		UNKNOWN	31.23	6500	J
26.		UNKNOWN	31.40	2400	J
27.		UNKNOWN	32.01	2900	J
28.		UNKNOWN	33.47	25000	J
29.		UNKNOWN	33.62	3300	J
30.		UNKNOWN	33.82	2900	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LA3

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918307

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918307DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 7 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.7 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	370	U
108-95-2	Phenol	370	U
111-44-4	Bis(2-chloroethyl)ether	370	U
95-57-8	2-Chlorophenol	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-Oxybis(1-chloropropane)	370	U
98-86-2	Acetophenone	100	J
106-44-5	4-Methylphenol	370	U
621-64-7	N-Nitroso-di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	Bis(2-chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
105-60-2	Caprolactam	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
92-52-4	1,1'-Biphenyl	370	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	710	U
131-11-3	Dimethylphthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
208-96-8	Acenaphthylene	370	U
99-09-2	3-Nitroaniline	710	U
83-32-9	Acenaphthene	370	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LA3

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918307

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918307DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 7 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.7 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	710	U
100-02-7	4-Nitrophenol	710	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethylphthalate	370	U
86-73-7	Fluorene	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
100-01-6	4-Nitroaniline	710	U
534-52-1	4,6-Dinitro-2-methylphenol	710	U
86-30-6	N-Nitrosodiphenylamine (1)	370	U
95-94-3	1,2,4,5-Tetrachlorobenzene	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
1912-24-9	Atrazine	370	U
87-86-5	Pentachlorophenol	710	U
85-01-8	Phenanthrene	330	J
120-12-7	Anthracene	81	J
84-74-2	Di-n-butylphthalate	370	U
206-44-0	Fluoranthene	700	
129-00-0	Pyrene	600	
85-68-7	Butylbenzylphthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)anthracene	380	
218-01-9	Chrysene	390	
117-81-7	Bis(2-ethylhexyl)phthalate	370 ~~130~~	JB U
117-84-0	Di-n-octylphthalate	370	U
205-99-2	Benzo(b)fluoranthene	420	
207-08-9	Benzo(k)fluoranthene	440	
50-32-8	Benzo(a)pyrene	430	
193-39-5	Indeno(1,2,3-cd)pyrene	340	J
53-70-3	Dibenzo(a,h)anthracene	77	J
191-24-2	Benzo(g,h,i)perylene	280	J
58-90-2	2,3,4,6-Tetrachlorophenol	370	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LA3

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918307

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918307DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 7 decanted: (Y/N) N Date Extracted: 02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.7 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	64	J

1G

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B3LA3

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918307

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 918307DA62

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 7 Decanted: (Y/N) N Date Extracted:02/25/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.7 Extraction: (Type) SONC

Number TICs found: 16 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	23.10	230	J
2.		UNKNOWN	26.09	240	J
3.		UNKNOWN	27.65	210	J
4.		UNKNOWN	27.90	140	J
5.		UNKNOWN	28.08	200	J
6.		UNKNOWN	28.30	210	J
7.		UNKNOWN	28.82	220	J
8.		UNKNOWN	29.08	290	J
9.		UNKNOWN	29.21	150	J
10.	198-55-0	PERYLENE	29.39	560	NJ
11.		UNKNOWN	29.62	210	J
12.		UNKNOWN	29.68	250	J
13.		UNKNOWN	29.86	160	J
14.		UNKNOWN	30.04	240	J
15.		UNKNOWN	31.19	270	J
16.		UNKNOWN	35.11	220	J
17.					
18.					
19.					
20.					
21.					
22.					
23.					
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27.					
28.					
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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LA6

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]

Matrix: (soil/water) SOIL Lab Sample ID: 918308

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918308A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 14 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	200	U
108-95-2	Phenol	200	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	200	U
95-48-7	2-Methylphenol	200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	200	U
621-64-7	N-Nitroso-di-n-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	200	U
105-67-9	2,4-Dimethylphenol	200	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	200	U
91-20-3	Naphthalene	200	U
106-47-8	4-Chloroaniline	200	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	200	U
91-57-6	2-Methylnaphthalene	200	U
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	200	U
95-95-4	2,4,5-Trichlorophenol	200	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	380	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	380	U
83-32-9	Acenaphthene	200	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LA6

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918308

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918308A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 14 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	380	U
100-02-7	4-Nitrophenol	380	U
132-64-9	Dibenzofuran	200	U
121-14-2	2,4-Dinitrotoluene	200	U
84-66-2	Diethylphthalate	200	U
86-73-7	Fluorene	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
100-01-6	4-Nitroaniline	380	U
534-52-1	4,6-Dinitro-2-methylphenol	380	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
95-94-3	1,2,4,5-Tetrachlorobenzene	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	380	U
85-01-8	Phenanthrene	30	J
120-12-7	Anthracene	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	UJ
129-00-0	Pyrene	200	UJ
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
56-55-3	Benzo(a)anthracene	200	UJ
218-01-9	Chrysene	200	UJ
117-81-7	Bis(2-ethylhexyl)phthalate	330	B
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	UJ
207-08-9	Benzo(k)fluoranthene	200	UJ
50-32-8	Benzo(a)pyrene	200	UJ
193-39-5	Indeno(1,2,3-cd)pyrene	200	UJ
53-70-3	Dibenzo(a,h)anthracene	200	UJ
191-24-2	Benzo(g,h,i)perylene	200	UJ
58-90-2	2,3,4,6-Tetrachlorophenol	200	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LA6

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]

Matrix: (soil/water) SOIL Lab Sample ID: 918308

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918308A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 14 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	200	U

1G

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B3LA6

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918308

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 918308A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 14 Decanted: (Y/N) N Date Extracted:02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3 Extraction: (Type) SONC

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALCOHOL	22.63	94	J
2.					
3.					
4.					
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29.					
30.					

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LA7

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3

Matrix: (soil/water) SOIL Lab Sample ID: 918309

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918309A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 5 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.0 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	180	U
108-95-2	Phenol	180	U
111-44-4	Bis(2-chloroethyl)ether	180	U
95-57-8	2-Chlorophenol	180	U
95-48-7	2-Methylphenol	180	U
108-60-1	2,2'-Oxybis(1-chloropropane)	180	U
98-86-2	Acetophenone	180	U
106-44-5	4-Methylphenol	180	U
621-64-7	N-Nitroso-di-n-propylamine	180	U
67-72-1	Hexachloroethane	180	U
98-95-3	Nitrobenzene	180	U
78-59-1	Isophorone	180	U
88-75-5	2-Nitrophenol	180	U
105-67-9	2,4-Dimethylphenol	180	U
111-91-1	Bis(2-chloroethoxy)methane	180	U
120-83-2	2,4-Dichlorophenol	180	U
91-20-3	Naphthalene	180	U
106-47-8	4-Chloroaniline	180	U
87-68-3	Hexachlorobutadiene	180	U
105-60-2	Caprolactam	180	U
59-50-7	4-Chloro-3-methylphenol	180	U
91-57-6	2-Methylnaphthalene	180	U
77-47-4	Hexachlorocyclopentadiene	180	U
88-06-2	2,4,6-Trichlorophenol	180	U
95-95-4	2,4,5-Trichlorophenol	180	U
92-52-4	1,1'-Biphenyl	180	U
91-58-7	2-Chloronaphthalene	180	U
88-74-4	2-Nitroaniline	350	U
131-11-3	Dimethylphthalate	180	U
606-20-2	2,6-Dinitrotoluene	180	U
208-96-8	Acenaphthylene	180	U
99-09-2	3-Nitroaniline	350	U
83-32-9	Acenaphthene	180	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LA7

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918309

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918309A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 5 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.0 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	350	U
100-02-7	4-Nitrophenol	350	U
132-64-9	Dibenzofuran	180	U
121-14-2	2,4-Dinitrotoluene	180	U
84-66-2	Diethylphthalate	180	U
86-73-7	Fluorene	180	U
7005-72-3	4-Chlorophenyl-phenylether	180	U
100-01-6	4-Nitroaniline	350	U
534-52-1	4,6-Dinitro-2-methylphenol	350	U
86-30-6	N-Nitrosodiphenylamine (1)	180	U
95-94-3	1,2,4,5-Tetrachlorobenzene	180	U
101-55-3	4-Bromophenyl-phenylether	180	U
118-74-1	Hexachlorobenzene	180	U
1912-24-9	Atrazine	180	U
87-86-5	Pentachlorophenol	350	U
85-01-8	Phenanthrene	49	J
120-12-7	Anthracene	180	U
84-74-2	Di-n-butylphthalate	180	U
206-44-0	Fluoranthene	26	J
129-00-0	Pyrene	180	U J
85-68-7	Butylbenzylphthalate	180	U
91-94-1	3,3'-Dichlorobenzidine	180	U
56-55-3	Benzo(a)anthracene	180	U J
218-01-9	Chrysene	180	U J
117-81-7	Bis(2-ethylhexyl)phthalate	350	B
117-84-0	Di-n-octylphthalate	180	U
205-99-2	Benzo(b)fluoranthene	180	U J
207-08-9	Benzo(k)fluoranthene	180	U
50-32-8	Benzo(a)pyrene	180	U
193-39-5	Indeno(1,2,3-cd)pyrene	180	U
53-70-3	Dibenzo(a,h)anthracene	180	U
191-24-2	Benzo(g,h,i)perylene	180	U J
58-90-2	2,3,4,6-Tetrachlorophenol	180	U

(1) - Cannot be separated from Diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LA7

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918309

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918309A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 5 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.0 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	180	U

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3LA7

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918309

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 918309A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 5 Decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.0 Extraction: (Type) SONC

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	36653-82-4	1-HEXADECANOL	22.60	790	NJ
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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28.					
29.					
30.					

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B3LB2

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918311

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918311D2A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 18 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	2100	U
108-95-2	Phenol	2100	U
111-44-4	Bis(2-chloroethyl)ether	2100	U
95-57-8	2-Chlorophenol	2100	U
95-48-7	2-Methylphenol	2100	U
108-60-1	2,2'-Oxybis(1-chloropropane)	2100	U
98-86-2	Acetophenone	2100	U
106-44-5	4-Methylphenol	2100	U
621-64-7	N-Nitroso-di-n-propylamine	2100	U
67-72-1	Hexachloroethane	2100	U
98-95-3	Nitrobenzene	2100	U
78-59-1	Isophorone	2100	U
88-75-5	2-Nitrophenol	2100	U
105-67-9	2,4-Dimethylphenol	2100	U
111-91-1	Bis(2-chloroethoxy)methane	2100	U
120-83-2	2,4-Dichlorophenol	2100	U
91-20-3	Naphthalene	490	J
106-47-8	4-Chloroaniline	2100	U
87-68-3	Hexachlorobutadiene	2100	U
105-60-2	Caprolactam	2100	U
59-50-7	4-Chloro-3-methylphenol	2100	U
91-57-6	2-Methylnaphthalene	2100	U
77-47-4	Hexachlorocyclopentadiene	2100	U
88-06-2	2,4,6-Trichlorophenol	2100	U
95-95-4	2,4,5-Trichlorophenol	2100	U
92-52-4	1,1'-Biphenyl	2100	U
91-58-7	2-Chloronaphthalene	2100	U
88-74-4	2-Nitroaniline	4000	U
131-11-3	Dimethylphthalate	2100	U
606-20-2	2,6-Dinitrotoluene	2100	U
208-96-8	Acenaphthylene	780	J
99-09-2	3-Nitroaniline	4000	U
83-32-9	Acenaphthene	740	J

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LB2

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918311

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918311D2A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 18 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	4000	U
100-02-7	4-Nitrophenol	4000	U
132-64-9	Dibenzofuran	510	J
121-14-2	2,4-Dinitrotoluene	2100	U
84-66-2	Diethylphthalate	2100	U
86-73-7	Fluorene	900	J
7005-72-3	4-Chlorophenyl-phenylether	2100	U
100-01-6	4-Nitroaniline	4000	U
534-52-1	4,6-Dinitro-2-methylphenol	4000	U
86-30-6	N-Nitrosodiphenylamine (1)	2100	U
95-94-3	1,2,4,5-Tetrachlorobenzene	2100	U
101-55-3	4-Bromophenyl-phenylether	2100	U
118-74-1	Hexachlorobenzene	2100	U
1912-24-9	Atrazine	2100	U
87-86-5	Pentachlorophenol	4000	U
85-01-8	Phenanthrene	8900	
120-12-7	Anthracene	2600	
84-74-2	Di-n-butylphthalate	430	J
206-44-0	Fluoranthene	17000	
129-00-0	Pyrene	7900	
85-68-7	Butylbenzylphthalate	2100	U
91-94-1	3,3'-Dichlorobenzidine	2100	U
56-55-3	Benzo(a)anthracene	7900	
218-01-9	Chrysene	8300	
117-81-7	Bis(2-ethylhexyl)phthalate	3500	B
117-84-0	Di-n-octylphthalate	2100	U
205-99-2	Benzo(b)fluoranthene	8500	
207-08-9	Benzo(k)fluoranthene	7100	
50-32-8	Benzo(a)pyrene	3600	
193-39-5	Indeno(1,2,3-cd)pyrene	4000	
53-70-3	Dibenzo(a,h)anthracene	3100	
191-24-2	Benzo(g,h,i)perylene	370	J
58-90-2	2,3,4,6-Tetrachlorophenol	2100	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LB2

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3

Matrix: (soil/water) SOIL Lab Sample ID: 918311

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918311D2A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 18 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	1300	J

1G

EPA SAMPLE NO.

B3LB2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918311

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 918311D2A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 18 Decanted: (Y/N) N Date Extracted:02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.4 Extraction: (Type) SONC

Number TICs found: 30

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	21.48	1200	J
2.	243-17-4	11H-BENZO[B]FLUORENE	23.78	1800	NJ
3.		UNKNOWN	24.83	1300	J
4.		UNKNOWN	25.11	2100	J
5.		UNKNOWN	26.09	1300	J
6.	1705-84-6	TRIPHENYLENE, 2-METHYL-	26.38	1900	NJ
7.		UNKNOWN	26.83	1300	J
8.		UNKNOWN	27.04	2200	J
9.		UNKNOWN	27.36	1800	J
10.		UNKNOWN	27.72	2000	J
11.	50-32-8	BENZO[A]PYRENE	27.82	~~3100~~ ~~NJ~~ R	
12.		UNKNOWN	28.00	5000	J
13.	198-55-0	PERYLENE	28.11	2900	NJ
14.		UNKNOWN	28.43	3000	J
15.		UNKNOWN	28.51	1200	J
16.		UNKNOWN	28.60	2700	J
17.		UNKNOWN	29.23	3200	J
18.		UNKNOWN	29.81	5800	J
19.		UNKNOWN	30.06	2600	J
20.		UNKNOWN	30.53	3700	J
21.	53-70-3	DIBENZ[A,H]ANTHRACENE	30.61	~~1300~~ ~~NJ~~ R	
22.		UNKNOWN	30.64	2200	J
23.		UNKNOWN	31.20	1600	J
24.		UNKNOWN	31.36	1600	J
25.		UNKNOWN	31.65	1200	J
26.		UNKNOWN	31.76	1400	J
27.		UNKNOWN	32.09	1500	J
28.	189-64-0	3,4:8,9-DIBENZOPYRENE	33.78	3800	NJ
29.		UNKNOWN	34.00	1400	J
30.		UNKNOWN	34.18	1600	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LB3

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3

Matrix: (soil/water) SOIL Lab Sample ID: 918312

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918312D2A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 29 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 7.6 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	7200	U
108-95-2	Phenol	7200	U
111-44-4	Bis(2-chloroethyl)ether	7200	U
95-57-8	2-Chlorophenol	7200	U
95-48-7	2-Methylphenol	7200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	7200	U
98-86-2	Acetophenone	7200	U
106-44-5	4-Methylphenol	7200	U
621-64-7	N-Nitroso-di-n-propylamine	7200	U
67-72-1	Hexachloroethane	7200	U
98-95-3	Nitrobenzene	7200	U
78-59-1	Isophorone	7200	U
88-75-5	2-Nitrophenol	7200	U
105-67-9	2,4-Dimethylphenol	7200	U
111-91-1	Bis(2-chloroethoxy)methane	7200	U
120-83-2	2,4-Dichlorophenol	7200	U
91-20-3	Naphthalene	7400	
106-47-8	4-Chloroaniline	7200	U
87-68-3	Hexachlorobutadiene	7200	U
105-60-2	Caprolactam	7200	U
59-50-7	4-Chloro-3-methylphenol	7200	U
91-57-6	2-Methylnaphthalene	1800	J
77-47-4	Hexachlorocyclopentadiene	7200	U
88-06-2	2,4,6-Trichlorophenol	7200	U
95-95-4	2,4,5-Trichlorophenol	7200	U
92-52-4	1,1'-Biphenyl	7200	U
91-58-7	2-Chloronaphthalene	7200	U
88-74-4	2-Nitroaniline	14000	U
131-11-3	Dimethylphthalate	7200	U
606-20-2	2,6-Dinitrotoluene	7200	U
208-96-8	Acenaphthylene	7200	U
99-09-2	3-Nitroaniline	14000	U
83-32-9	Acenaphthene	3600	J

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LB3

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918312

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918312D2A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 29 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 7.6 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	14000	U
100-02-7	4-Nitrophenol	14000	U
132-64-9	Dibenzofuran	3200	J
121-14-2	2,4-Dinitrotoluene	7200	U
84-66-2	Diethylphthalate	7200	U
86-73-7	Fluorene	3900	J
7005-72-3	4-Chlorophenyl-phenylether	7200	U
100-01-6	4-Nitroaniline	14000	U
534-52-1	4,6-Dinitro-2-methylphenol	14000	U
86-30-6	N-Nitrosodiphenylamine (1)	7200	U
95-94-3	1,2,4,5-Tetrachlorobenzene	7200	U
101-55-3	4-Bromophenyl-phenylether	7200	U
118-74-1	Hexachlorobenzene	7200	U
1912-24-9	Atrazine	7200	U
87-86-5	Pentachlorophenol	14000	U
85-01-8	Phenanthrene	30000	
120-12-7	Anthracene	7000	J
84-74-2	Di-n-butylphthalate	7200	U
206-44-0	Fluoranthene	35000	
129-00-0	Pyrene	23000	
85-68-7	Butylbenzylphthalate	7200	U
91-94-1	3,3'-Dichlorobenzidine	7200	U
56-55-3	Benzo(a)anthracene	14000	
218-01-9	Chrysene	15000	
117-81-7	Bis(2-ethylhexyl)phthalate	7200 ~~4800~~	~~JB~~ U
117-84-0	Di-n-octylphthalate	7200	U
205-99-2	Benzo(b)fluoranthene	12000	
207-08-9	Benzo(k)fluoranthene	13000	
50-32-8	Benzo(a)pyrene	10000	
193-39-5	Indeno(1,2,3-cd)pyrene	9100	
53-70-3	Dibenzo(a,h)anthracene	5000	J
191-24-2	Benzo(g,h,i)perylene	900	J
58-90-2	2,3,4,6-Tetrachlorophenol	7200	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LB3

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3LB2

Matrix: (soil/water) SOIL Lab Sample ID: 918312

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918312D2A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 29 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 7.6 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	5600	J

1G

EPA SAMPLE NO.

B3LB3

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918312

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 918312D2A66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: 29 Decanted: (Y/N) N Date Extracted:02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 7.6 Extraction: (Type) SONC

Number TICs found: 11 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	243-17-4	11H-BENZO[B]FLUORENE	23.78	3000	NJ
2.		UNKNOWN	25.10	3700	J
3.		UNKNOWN PAH	27.80	2900	J
4.		UNKNOWN	28.00	6700	J
5.	192-97-2	BENZO[E]PYRENE	28.10	6100	NJ
6.		UNKNOWN	28.43	4100	J
7.		UNKNOWN	28.59	3300	J
8.		UNKNOWN	29.79	4300	J
9.		UNKNOWN	30.05	3200	J
10.		UNKNOWN	30.52	4000	J
11.	192-65-4	1,2:4,5-DIBENZOPYRENE	33.75	3900	NJ
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
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21.					
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28.					
29.					
30.					

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC1

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B

Matrix: (soil/water) SOIL Lab Sample ID: 918316

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918316JA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 13 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	200	U
108-95-2	Phenol	200	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	200	U
95-48-7	2-Methylphenol	200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	200	U
621-64-7	N-Nitroso-di-n-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	200	U
105-67-9	2,4-Dimethylphenol	200	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	200	U
91-20-3	Naphthalene	48	J
106-47-8	4-Chloroaniline	200	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	200	U
91-57-6	2-Methylnaphthalene	20	J
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	200	U
95-95-4	2,4,5-Trichlorophenol	200	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	380	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	380	U
83-32-9	Acenaphthene	200	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC1

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918316

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918316JA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 13 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	380	U
100-02-7	4-Nitrophenol	380	U
132-64-9	Dibenzofuran	200	U
121-14-2	2,4-Dinitrotoluene	200	U
84-66-2	Diethylphthalate	200	U
86-73-7	Fluorene	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
100-01-6	4-Nitroaniline	380	U
534-52-1	4,6-Dinitro-2-methylphenol	380	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
95-94-3	1,2,4,5-Tetrachlorobenzene	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	380	U
85-01-8	Phenanthrene	120	J
120-12-7	Anthracene	26	J
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	160	~~J~~ J
129-00-0	Pyrene	93	J J
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
56-55-3	Benzo(a)anthracene	77	~~J~~ J
218-01-9	Chrysene	95	~~J~~ J
117-81-7	Bis(2-ethylhexyl)phthalate	200 ~~33~~	JB U
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	89	~~J~~ J
207-08-9	Benzo(k)fluoranthene	66	~~J~~ J
50-32-8	Benzo(a)pyrene	26	~~J~~ J
193-39-5	Indeno(1,2,3-cd)pyrene	34	~~J~~ J
53-70-3	Dibenzo(a,h)anthracene	200	U J
191-24-2	Benzo(g,h,i)perylene	200	U J
58-90-2	2,3,4,6-Tetrachlorophenol	200	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC1

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918316

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918316JA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 13 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	200	U

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3LC1

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918316

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 918316JA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 13 Decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500 (uL) Date Analyzed: 03/04/06

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Extraction: (Type) SONC

Number TICs found: 21 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	9.69	99	J
2.		UNKNOWN	9.95	130	J
3.		UNKNOWN	10.20	110	J
4.		UNKNOWN	10.48	94	J
5.		UNKNOWN	10.74	95	J
6.		UNKNOWN	11.22	77	J
7.		UNKNOWN	11.33	100	J
8.		UNKNOWN	11.52	86	J
9.		UNKNOWN	11.64	93	J
10.		UNKNOWN	12.04	220	J
11.		UNKNOWN	12.58	220	J
12.		UNKNOWN	13.53	150	J
13.		UNKNOWN	28.43	120	J
14.		UNKNOWN	29.22	170	J
15.		UNKNOWN	29.79	210	J
16.		UNKNOWN	30.52	140	J
17.		UNKNOWN	30.63	89	J
18.		UNKNOWN	31.17	98	J
19.		UNKNOWN	31.33	78	J
20.		UNKNOWN	31.37	110	J
21.		UNKNOWN	32.48	150	J
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC2

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3

Matrix: (soil/water) SOIL Lab Sample ID: 918317

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918317DJA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 13 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 3.0

GPC Cleanup: (Y/N) Y pH: 8.5 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	590	U
108-95-2	Phenol	590	U
111-44-4	Bis(2-chloroethyl)ether	590	U
95-57-8	2-Chlorophenol	590	U
95-48-7	2-Methylphenol	590	U
108-60-1	2,2'-Oxybis(1-chloropropane)	590	U
98-86-2	Acetophenone	590	U
106-44-5	4-Methylphenol	590	U
621-64-7	N-Nitroso-di-n-propylamine	590	U
67-72-1	Hexachloroethane	590	U
98-95-3	Nitrobenzene	590	U
78-59-1	Isophorone	590	U
88-75-5	2-Nitrophenol	590	U
105-67-9	2,4-Dimethylphenol	590	U
111-91-1	Bis(2-chloroethoxy)methane	590	U
120-83-2	2,4-Dichlorophenol	590	U
91-20-3	Naphthalene	280	J
106-47-8	4-Chloroaniline	590	U
87-68-3	Hexachlorobutadiene	590	U
105-60-2	Caprolactam	590	U
59-50-7	4-Chloro-3-methylphenol	590	U
91-57-6	2-Methylnaphthalene	110	J
77-47-4	Hexachlorocyclopentadiene	590	U
88-06-2	2,4,6-Trichlorophenol	590	U
95-95-4	2,4,5-Trichlorophenol	590	U
92-52-4	1,1'-Biphenyl	590	U
91-58-7	2-Chloronaphthalene	590	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	590	U
606-20-2	2,6-Dinitrotoluene	590	U
208-96-8	Acenaphthylene	130	J
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	590	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC2

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918317

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918317DJA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 13 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 3.0

GPC Cleanup: (Y/N) Y pH: 8.5 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	590	U
121-14-2	2,4-Dinitrotoluene	590	U
84-66-2	Diethylphthalate	590	U
86-73-7	Fluorene	89	J
7005-72-3	4-Chlorophenyl-phenylether	590	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamine (1)	590	U
95-94-3	1,2,4,5-Tetrachlorobenzene	590	U
101-55-3	4-Bromophenyl-phenylether	590	U
118-74-1	Hexachlorobenzene	590	U
1912-24-9	Atrazine	590	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	1100	
120-12-7	Anthracene	280	J
84-74-2	Di-n-butylphthalate	140	J
206-44-0	Fluoranthene	3100	
129-00-0	Pyrene	2300	
85-68-7	Butylbenzylphthalate	590	U
91-94-1	3,3'-Dichlorobenzidine	590	U
56-55-3	Benzo(a)anthracene	1500	
218-01-9	Chrysene	1900	
117-81-7	Bis(2-ethylhexyl)phthalate	590 ~~240~~	JB U
117-84-0	Di-n-octylphthalate	590	U
205-99-2	Benzo(b)fluoranthene	1900	
207-08-9	Benzo(k)fluoranthene	1600	
50-32-8	Benzo(a)pyrene	1700	
193-39-5	Indeno(1,2,3-cd)pyrene	1600	
53-70-3	Dibenzo(a,h)anthracene	710	
191-24-2	Benzo(g,h,i)perylene	520	J
58-90-2	2,3,4,6-Tetrachlorophenol	590	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC2

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918317

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918317DJA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 13 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 3.0

GPC Cleanup: (Y/N) Y pH: 8.5 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	120	J

1G

EPA SAMPLE NO.

B3LC2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918317

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 918317DJA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 13 Decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 3.0

GPC Cleanup: (Y/N) Y pH: 8.5 Extraction: (Type) SONC

Number TICs found: 30 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	637-50-3	BENZENE, 1-PROPENYL-	7.65	740	NJ
2.	95-13-6	INDENE	8.96	610	NJ
3.		UNKNOWN	10.90	680	J
4.	65051-83-4	BENZENE, (1-METHYL-2-CYCLOPR	11.54	440	NJ
5.		UNKNOWN	13.13	450	J
6.	149-30-4	2-MERCAPTOBENZOTHIAZOLE	21.87	310	NJ
7.	91-76-9	1,3,5-TRIAZINE-2,4-DIAMINE,	22.29	280	NJ
8.		UNKNOWN	23.34	490	J
9.		UNKNOWN	23.50	280	J
10.	243-17-4	11H-BENZO[B]FLUORENE	23.79	360	NJ
11.	123-95-5	OCTADECANOIC ACID, BUTYL EST	24.77	360	NJ
12.		UNKNOWN	24.84	410	J
13.		UNKNOWN	25.11	400	J
14.	82-05-3	7H-BENZ[DE]ANTHRACEN-7-ONE	25.26	290	NJ
15.		UNKNOWN	25.98	290	J
16.	1705-85-7	CHRYSENE, 6-METHYL-	26.38	390	NJ
17.		UNKNOWN	27.36	290	J
18.	198-55-0	PERYLENE	27.82	450	NJ
19.	207-08-9	BENZO[K]FLUORANTHENE	28.12	~~1200~~	~~NJ~~
20.	207-08-9	BENZO[K]FLUORANTHENE	28.35	~~450~~	NJ P
21.		UNKNOWN PAH	28.42	270	J
22.		UNKNOWN	28.84	260	J
23.		UNKNOWN	29.08	330	J
24.		UNKNOWN	29.93	390	J
25.		UNKNOWN	30.06	640	J
26.		UNKNOWN	30.53	720	J
27.	215-58-7	BENZO[B]TRIPHENYLENE	30.60	580	NJ
28.		UNKNOWN	30.74	370	J
29.	5385-75-1	DIBENZ(A,E)ACEANTHRYLENE	33.79	950	NJ
30.		UNKNOWN PAH	34.03	550	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC3

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]

Matrix: (soil/water) SOIL Lab Sample ID: 918318

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918318DJA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 38 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 10.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	8200	U
108-95-2	Phenol	8200	U
111-44-4	Bis(2-chloroethyl)ether	8200	U
95-57-8	2-Chlorophenol	8200	U
95-48-7	2-Methylphenol	8200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	8200	U
98-86-2	Acetophenone	8200	U
106-44-5	4-Methylphenol	8200	U
621-64-7	N-Nitroso-di-n-propylamine	8200	U
67-72-1	Hexachloroethane	8200	U
98-95-3	Nitrobenzene	8200	U
78-59-1	Isophorone	8200	U
88-75-5	2-Nitrophenol	8200	U
105-67-9	2,4-Dimethylphenol	8200	U
111-91-1	Bis(2-chloroethoxy)methane	8200	U
120-83-2	2,4-Dichlorophenol	8200	U
91-20-3	Naphthalene	8200	U
106-47-8	4-Chloroaniline	8200	U
87-68-3	Hexachlorobutadiene	8200	U
105-60-2	Caprolactam	8200	U
59-50-7	4-Chloro-3-methylphenol	8200	U
91-57-6	2-Methylnaphthalene	8200	U
77-47-4	Hexachlorocyclopentadiene	8200	U
88-06-2	2,4,6-Trichlorophenol	8200	U
95-95-4	2,4,5-Trichlorophenol	8200	U
92-52-4	1,1'-Biphenyl	8200	U
91-58-7	2-Chloronaphthalene	8200	U
88-74-4	2-Nitroaniline	16000	U
131-11-3	Dimethylphthalate	8200	U
606-20-2	2,6-Dinitrotoluene	8200	U
208-96-8	Acenaphthylene	8200	U
99-09-2	3-Nitroaniline	16000	U
83-32-9	Acenaphthene	8200	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC3

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918318

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918318DJA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 38 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 10.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	16000	U
100-02-7	4-Nitrophenol	16000	U
132-64-9	Dibenzofuran	8200	U
121-14-2	2,4-Dinitrotoluene	8200	U
84-66-2	Diethylphthalate	8200	U
86-73-7	Fluorene	8200	U
7005-72-3	4-Chlorophenyl-phenylether	8200	U
100-01-6	4-Nitroaniline	16000	U
534-52-1	4,6-Dinitro-2-methylphenol	16000	U
86-30-6	N-Nitrosodiphenylamine (1)	8200	U
95-94-3	1,2,4,5-Tetrachlorobenzene	8200	U
101-55-3	4-Bromophenyl-phenylether	8200	U
118-74-1	Hexachlorobenzene	8200	U
1912-24-9	Atrazine	8200	U
87-86-5	Pentachlorophenol	16000	U
85-01-8	Phenanthrene	8200	U
120-12-7	Anthracene	8200	U
84-74-2	Di-n-butylphthalate	8200	U
206-44-0	Fluoranthene	8200	U
129-00-0	Pyrene	8200	U
85-68-7	Butylbenzylphthalate	8200	U
91-94-1	3,3'-Dichlorobenzidine	8200	U
56-55-3	Benzo(a)anthracene	8200	U
218-01-9	Chrysene	8200	U
117-81-7	Bis(2-ethylhexyl)phthalate	9400	B
117-84-0	Di-n-octylphthalate	8200	U
205-99-2	Benzo(b)fluoranthene	8200	U
207-08-9	Benzo(k)fluoranthene	8200	U
50-32-8	Benzo(a)pyrene	8200	U
193-39-5	Indeno(1,2,3-cd)pyrene	8200	U
53-70-3	Dibenzo(a,h)anthracene	8200	U
191-24-2	Benzo(g,h,i)perylene	8200	U
58-90-2	2,3,4,6-Tetrachlorophenol	8200	U

(1) - Cannot be separated from Diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC3

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B[illegible]

Matrix: (soil/water) SOIL Lab Sample ID: 918318

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918318DJA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 38 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 10.8 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	8200	U

1G

EPA SAMPLE NO.

B3LC3

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918318

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 918318DJA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 38 Decanted: (Y/N) N Date Extracted:02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 10.8 Extraction: (Type) SONC

Number TICs found: 19

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	9.21	6300	J
2.		UNKNOWN	10.74	5500	J
3.		UNKNOWN	10.95	5300	J
4.		UNKNOWN	11.73	7100	J
5.		UNKNOWN	12.58	11000	J
6.	98-54-4	PHENOL, P-TERT-BUTYL-	14.51	190000	NJ
7.		UNKNOWN	22.48	4800	J
8.		UNKNOWN	23.40	5100	J
9.		UNKNOWN	24.83	6900	J
10.		UNKNOWN	24.88	3500	J
11.		UNKNOWN	25.87	4500	J
12.		UNKNOWN	26.17	10000	J
13.		UNKNOWN	26.37	3800	J
14.		UNKNOWN	27.18	11000	J
15.		UNKNOWN	29.71	7100	J
16.		UNKNOWN	29.78	9200	J
17.	32390-26-4	BINAPHTHYL SULPHONE	30.31	3700	NJ
18.		UNKNOWN	30.52	5800	J
19.		UNKNOWN	31.33	5900	J
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC4

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]

Matrix: (soil/water) SOIL Lab Sample ID: 918319

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918319DJA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 24 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 8.9 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	6700	U
108-95-2	Phenol	6700	U
111-44-4	Bis(2-chloroethyl)ether	6700	U
95-57-8	2-Chlorophenol	6700	U
95-48-7	2-Methylphenol	6700	U
108-60-1	2,2'-Oxybis(1-chloropropane)	6700	U
98-86-2	Acetophenone	6700	U
106-44-5	4-Methylphenol	6700	U
621-64-7	N-Nitroso-di-n-propylamine	6700	U
67-72-1	Hexachloroethane	6700	U
98-95-3	Nitrobenzene	6700	U
78-59-1	Isophorone	6700	U
88-75-5	2-Nitrophenol	6700	U
105-67-9	2,4-Dimethylphenol	6700	U
111-91-1	Bis(2-chloroethoxy)methane	6700	U
120-83-2	2,4-Dichlorophenol	6700	U
91-20-3	Naphthalene	6700	U
106-47-8	4-Chloroaniline	6700	U
87-68-3	Hexachlorobutadiene	6700	U
105-60-2	Caprolactam	6700	U
59-50-7	4-Chloro-3-methylphenol	6700	U
91-57-6	2-Methylnaphthalene	6700	U
77-47-4	Hexachlorocyclopentadiene	6700	U
88-06-2	2,4,6-Trichlorophenol	6700	U
95-95-4	2,4,5-Trichlorophenol	6700	U
92-52-4	1,1'-Biphenyl	6700	U
91-58-7	2-Chloronaphthalene	6700	U
88-74-4	2-Nitroaniline	13000	U
131-11-3	Dimethylphthalate	890	J
606-20-2	2,6-Dinitrotoluene	6700	U
208-96-8	Acenaphthylene	6700	U
99-09-2	3-Nitroaniline	13000	U
83-32-9	Acenaphthene	6700	U

1D

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B3LC4

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918319

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918319DJA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 24 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 8.9 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	13000	U
100-02-7	4-Nitrophenol	13000	U
132-64-9	Dibenzofuran	6700	U
121-14-2	2,4-Dinitrotoluene	6700	U
84-66-2	Diethylphthalate	6700	U
86-73-7	Fluorene	6700	U
7005-72-3	4-Chlorophenyl-phenylether	6700	U
100-01-6	4-Nitroaniline	13000	U
534-52-1	4,6-Dinitro-2-methylphenol	13000	U
86-30-6	N-Nitrosodiphenylamine (1)	6700	U
95-94-3	1,2,4,5-Tetrachlorobenzene	6700	U
101-55-3	4-Bromophenyl-phenylether	6700	U
118-74-1	Hexachlorobenzene	6700	U
1912-24-9	Atrazine	6700	U
87-86-5	Pentachlorophenol	13000	U
85-01-8	Phenanthrene	6700	U
120-12-7	Anthracene	6700	U
84-74-2	Di-n-butylphthalate	6700	U
206-44-0	Fluoranthene	6700	U
129-00-0	Pyrene	6700	U
85-68-7	Butylbenzylphthalate	680	J
91-94-1	3,3'-Dichlorobenzidine	6700	U
56-55-3	Benzo(a)anthracene	6700	U
218-01-9	Chrysene	6700	U
117-81-7	Bis(2-ethylhexyl)phthalate	63000	B
117-84-0	Di-n-octylphthalate	3100	J
205-99-2	Benzo(b)fluoranthene	6700	U
207-08-9	Benzo(k)fluoranthene	6700	U
50-32-8	Benzo(a)pyrene	6700	U
193-39-5	Indeno(1,2,3-cd)pyrene	6700	U
53-70-3	Dibenzo(a,h)anthracene	6700	U
191-24-2	Benzo(g,h,i)perylene	6700	U
58-90-2	2,3,4,6-Tetrachlorophenol	6700	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LC4

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B

Matrix: (soil/water) SOIL Lab Sample ID: 918319

Sample wt/vol: 30.0(g/mL) G Lab File ID: 918319DJA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 24 decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 8.9 Extraction: (Type) SONC

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-74-8	Carbazole	6700	U

1G

EPA SAMPLE NO.

B3LC4

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L92

Matrix: (soil/water) SOIL Lab Sample ID: 918319

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 918319DJA66

Level: (low/med) LOW Date Received: 02/27/06

% Moisture: 24 Decanted: (Y/N) N Date Extracted: 02/28/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/04/06

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 8.9 Extraction: (Type) SONC

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	10.74	14000	J
2.		UNKNOWN	10.94	11000	J
3.		UNKNOWN	11.55	18000	J
4.		UNKNOWN	11.64	10000	J
5.		UNKNOWN	24.63	7000	J
6.		UNKNOWN	25.08	6400	J
7.		UNKNOWN	25.26	6600	J
8.		UNKNOWN	25.42	4600	J
9.		UNKNOWN CARBOXYLIC ACID	25.88	6300	J
10.		UNKNOWN	26.09	5100	J
11.		UNKNOWN	26.54	6000	J
12.		UNKNOWN	26.57	7900	J
13.		UNKNOWN	26.62	5100	J
14.		UNKNOWN	26.72	4800	J
15.		UNKNOWN	27.72	4600	J
16.		UNKNOWN	27.85	4600	J
17.		UNKNOWN	27.95	5100	J
18.		UNKNOWN	28.43	8900	J
19.		UNKNOWN	29.71	6600	J
20.		UNKNOWN	29.80	14000	J
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L60

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3

Matrix: (soil/water) WATER Lab Sample ID: 917901

Sample wt/vol: 900 (g/mL) ML Lab File ID: 917901J2A66

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/24/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.6	U
108-95-2	Phenol	5.6	U
111-44-4	Bis(2-chloroethyl)ether	5.6	U
95-57-8	2-Chlorophenol	5.6	U
95-48-7	2-Methylphenol	5.6	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.6	U
98-86-2	Acetophenone	5.6	U
106-44-5	4-Methylphenol	5.6	U
621-64-7	N-Nitroso-di-n-propylamine	5.6	U
67-72-1	Hexachloroethane	5.6	U
98-95-3	Nitrobenzene	5.6	U
78-59-1	Isophorone	5.6	U
88-75-5	2-Nitrophenol	5.6	U
105-67-9	2,4-Dimethylphenol	5.6	U
111-91-1	Bis(2-chloroethoxy)methane	5.6	U
120-83-2	2,4-Dichlorophenol	5.6	U
91-20-3	Naphthalene	5.6	U
106-47-8	4-Chloroaniline	5.6	U
87-68-3	Hexachlorobutadiene	5.6	U
105-60-2	Caprolactam	5.6	U
59-50-7	4-Chloro-3-methylphenol	5.6	U
91-57-6	2-Methylnaphthalene	5.6	U
77-47-4	Hexachlorocyclopentadiene	5.6	U
88-06-2	2,4,6-Trichlorophenol	5.6	U
95-95-4	2,4,5-Trichlorophenol	5.6	U
92-52-4	1,1'-Biphenyl	5.6	U
91-58-7	2-Chloronaphthalene	5.6	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.6	U
606-20-2	2,6-Dinitrotoluene	5.6	U
208-96-8	Acenaphthylene	5.6	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.6	U

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B3L60

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L60

Matrix: (soil/water) WATER Lab Sample ID: 917901

Sample wt/vol: 900 (g/mL) ML Lab File ID: 917901J2A66

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/24/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
132-64-9	Dibenzofuran	5.6	U
121-14-2	2,4-Dinitrotoluene	5.6	U
84-66-2	Diethylphthalate	5.6	U
86-73-7	Fluorene	5.6	U
7005-72-3	4-Chlorophenyl-phenylether	5.6	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.6	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.6	U
101-55-3	4-Bromophenyl-phenylether	5.6	U
118-74-1	Hexachlorobenzene	5.6	U
1912-24-9	Atrazine	5.6	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.6	U
120-12-7	Anthracene	5.6	U
84-74-2	Di-n-butylphthalate	5.6	U
206-44-0	Fluoranthene	5.6	U
129-00-0	Pyrene	5.6	U
85-68-7	Butylbenzylphthalate	5.6	U
91-94-1	3,3'-Dichlorobenzidine	5.6	U
56-55-3	Benzo(a)anthracene	5.6	U
218-01-9	Chrysene	5.6	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.6	U
117-84-0	Di-n-octylphthalate	5.6	U
205-99-2	Benzo(b)fluoranthene	5.6	U J
207-08-9	Benzo(k)fluoranthene	5.6	U J
50-32-8	Benzo(a)pyrene	5.6	U J
193-39-5	Indeno(1,2,3-cd)pyrene	5.6	U J
53-70-3	Dibenzo(a,h)anthracene	5.6	U J
191-24-2	Benzo(g,h,i)perylene	5.6	U J
58-90-2	2,3,4,6-Tetrachlorophenol	5.6	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L60

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B[illegible]

Matrix: (soil/water) WATER Lab Sample ID: 917901

Sample wt/vol: 900 (g/mL) ML Lab File ID: 917901J2A66

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/24/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-74-8	Carbazole	5.6	U

1G

EPA SAMPLE NO.

B3L60

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L60

Matrix: (soil/water) WATER Lab Sample ID: 917901

Sample wt/vol: 900 (g/mL) ML Lab File ID: 917901J2A66

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:02/24/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Extraction: (Type) CONT

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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6.					
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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L61

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3

Matrix: (soil/water) WATER Lab Sample ID: 917902

Sample wt/vol: 900 (g/mL) ML Lab File ID: 917902J2A66

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/24/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.6	U
108-95-2	Phenol	5.6	U
111-44-4	Bis(2-chloroethyl)ether	5.6	U
95-57-8	2-Chlorophenol	5.6	U
95-48-7	2-Methylphenol	5.6	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.6	U
98-86-2	Acetophenone	5.6	U
106-44-5	4-Methylphenol	5.6	U
621-64-7	N-Nitroso-di-n-propylamine	5.6	U
67-72-1	Hexachloroethane	5.6	U
98-95-3	Nitrobenzene	5.6	U
78-59-1	Isophorone	5.6	U
88-75-5	2-Nitrophenol	5.6	U
105-67-9	2,4-Dimethylphenol	5.6	U
111-91-1	Bis(2-chloroethoxy)methane	5.6	U
120-83-2	2,4-Dichlorophenol	5.6	U
91-20-3	Naphthalene	5.6	U
106-47-8	4-Chloroaniline	5.6	U
87-68-3	Hexachlorobutadiene	5.6	U
105-60-2	Caprolactam	5.6	U
59-50-7	4-Chloro-3-methylphenol	5.6	U
91-57-6	2-Methylnaphthalene	5.6	U
77-47-4	Hexachlorocyclopentadiene	5.6	U
88-06-2	2,4,6-Trichlorophenol	5.6	U
95-95-4	2,4,5-Trichlorophenol	5.6	U
92-52-4	1,1'-Biphenyl	5.6	U
91-58-7	2-Chloronaphthalene	1.8	J
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.6	U
606-20-2	2,6-Dinitrotoluene	5.6	U
208-96-8	Acenaphthylene	5.6	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	2.2	J

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L61

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L60

Matrix: (soil/water) WATER Lab Sample ID: 917902

Sample wt/vol: 900 (g/mL) ML Lab File ID: 917902J2A66

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/24/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
132-64-9	Dibenzofuran	1.4	J
121-14-2	2,4-Dinitrotoluene	5.6	U
84-66-2	Diethylphthalate	5.6	U
86-73-7	Fluorene	2.6	J
7005-72-3	4-Chlorophenyl-phenylether	5.6	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.6	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.6	U
101-55-3	4-Bromophenyl-phenylether	5.6	U
118-74-1	Hexachlorobenzene	5.6	U
1912-24-9	Atrazine	5.6	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.6	U
120-12-7	Anthracene	5.6	U
84-74-2	Di-n-butylphthalate	5.6	U
206-44-0	Fluoranthene	5.6	U
129-00-0	Pyrene	5.6	U
85-68-7	Butylbenzylphthalate	5.6	U
91-94-1	3,3'-Dichlorobenzidine	5.6	U
56-55-3	Benzo(a)anthracene	5.6	U
218-01-9	Chrysene	5.6	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.6	U
117-84-0	Di-n-octylphthalate	5.6	U
205-99-2	Benzo(b)fluoranthene	5.6	U
207-08-9	Benzo(k)fluoranthene	5.6	U
50-32-8	Benzo(a)pyrene	5.6	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.6	U
53-70-3	Dibenzo(a,h)anthracene	5.6	U
191-24-2	Benzo(g,h,i)perylene	5.6	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.6	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L61

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B

Matrix: (soil/water) WATER Lab Sample ID: 917902

Sample wt/vol: 900 (g/mL) ML Lab File ID: 917902J2A66

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/24/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-74-8	Carbazole	5.6	U

1G

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B3L61

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L60

Matrix: (soil/water) WATER Lab Sample ID: 917902

Sample wt/vol: 900 (g/mL) ML Lab File ID: 917902J2A66

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:02/24/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Extraction: (Type) CONT

Number TICs found: 30 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	12.54	6.4	J
2.		UNKNOWN	13.12	12	J
3.		UNKNOWN	13.23	12	J
4.		UNKNOWN	13.25	6.3	J
5.		UNKNOWN	13.36	10	J
6.		UNKNOWN	13.43	5.6	J
7.	4175-53-5	1H-INDENE, 2,3-DIHYDRO-1,3-D	13.59	6.3	NJ
8.		UNKNOWN	14.00	9.0	J
9.		UNKNOWN	14.18	11	J
10.	16587-47-6	BENZO[B]THIOPHENE, 6-METHYL-	14.28	6.7	NJ
11.		UNKNOWN	14.66	7.0	J
12.		UNKNOWN	14.93	6.8	J
13.		UNKNOWN	15.31	8.0	J
14.		UNKNOWN	15.56	6.9	J
15.		UNKNOWN	15.65	6.7	J
16.		UNKNOWN	15.71	10	J
17.		UNKNOWN	16.22	14	J
18.	581-40-8	NAPHTHALENE, 2,3-DIMETHYL-	16.26	12	NJ
19.		UNKNOWN	16.37	10	J
20.	571-58-4	NAPHTHALENE, 1,4-DIMETHYL-	16.54	5.9	NJ
21.		UNKNOWN	16.90	21	J
22.		UNKNOWN	17.26	8.8	J
23.		UNKNOWN	17.41	7.5	J
24.	2131-42-2	NAPHTHALENE, 1,4,6-TRIMETHYL	17.65	6.6	NJ
25.		UNKNOWN	17.75	6.5	J
26.		UNKNOWN	18.04	8.0	J
27.		UNKNOWN	18.42	7.8	J
28.		UNKNOWN	18.48	6.3	J
29.		UNKNOWN	18.54	6.0	J
30.	10544-50-0	CYCLIC OCTAATOMIC SULFUR	22.50	10	NJ

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L62

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3

Matrix: (soil/water) WATER Lab Sample ID: 917903

Sample wt/vol: 950 (g/mL) ML Lab File ID: 917903J2A66

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/24/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.3	U
108-95-2	Phenol	5.3	U
111-44-4	Bis(2-chloroethyl)ether	5.3	U
95-57-8	2-Chlorophenol	5.3	U
95-48-7	2-Methylphenol	5.3	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.3	U
98-86-2	Acetophenone	5.3	U
106-44-5	4-Methylphenol	5.3	U
621-64-7	N-Nitroso-di-n-propylamine	5.3	U
67-72-1	Hexachloroethane	5.3	U
98-95-3	Nitrobenzene	5.3	U
78-59-1	Isophorone	5.3	U
88-75-5	2-Nitrophenol	5.3	U
105-67-9	2,4-Dimethylphenol	5.3	U
111-91-1	Bis(2-chloroethoxy)methane	5.3	U
120-83-2	2,4-Dichlorophenol	5.3	U
91-20-3	Naphthalene	5.3	U
106-47-8	4-Chloroaniline	5.3	U
87-68-3	Hexachlorobutadiene	5.3	U
105-60-2	Caprolactam	5.3	U
59-50-7	4-Chloro-3-methylphenol	5.3	U
91-57-6	2-Methylnaphthalene	5.3	U
77-47-4	Hexachlorocyclopentadiene	5.3	U
88-06-2	2,4,6-Trichlorophenol	5.3	U
95-95-4	2,4,5-Trichlorophenol	5.3	U
92-52-4	1,1'-Biphenyl	5.3	U
91-58-7	2-Chloronaphthalene	5.3	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.3	U
606-20-2	2,6-Dinitrotoluene	5.3	U
208-96-8	Acenaphthylene	5.3	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	1.7	J

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L62

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L60

Matrix: (soil/water) WATER Lab Sample ID: 917903

Sample wt/vol: 950 (g/mL) ML Lab File ID: 917903J2A66

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/24/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
132-64-9	Dibenzofuran	1.3	J
121-14-2	2,4-Dinitrotoluene	5.3	U
84-66-2	Diethylphthalate	5.3	U
86-73-7	Fluorene	2.1	J
7005-72-3	4-Chlorophenyl-phenylether	5.3	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.3	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.3	U
101-55-3	4-Bromophenyl-phenylether	5.3	U
118-74-1	Hexachlorobenzene	5.3	U
1912-24-9	Atrazine	5.3	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.3	U
120-12-7	Anthracene	5.3	U
84-74-2	Di-n-butylphthalate	5.3	U
206-44-0	Fluoranthene	5.3	U
129-00-0	Pyrene	0.56	J
85-68-7	Butylbenzylphthalate	5.3	U
91-94-1	3,3'-Dichlorobenzidine	5.3	U
56-55-3	Benzo(a)anthracene	5.3	U
218-01-9	Chrysene	5.3	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.3 ~~0.95~~	~~JB~~ U
117-84-0	Di-n-octylphthalate	5.3	U
205-99-2	Benzo(b)fluoranthene	5.3	U
207-08-9	Benzo(k)fluoranthene	5.3	U
50-32-8	Benzo(a)pyrene	5.3	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.3	U
53-70-3	Dibenzo(a,h)anthracene	5.3	U
191-24-2	Benzo(g,h,i)perylene	5.3	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.3	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L62

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B[illegible]

Matrix: (soil/water) WATER Lab Sample ID: 917903

Sample wt/vol: 950 (g/mL) ML Lab File ID: 917903J2A66

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/24/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-74-8	Carbazole	5.3	U

1G

EPA SAMPLE NO.

B3L62

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L60

Matrix: (soil/water) WATER Lab Sample ID: 917903

Sample wt/vol: 950 (g/mL) ML Lab File ID: 917903J2A66

Level: (low/med) LOW Date Received: 02/23/06

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:02/24/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/03/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Extraction: (Type) CONT

Number TICs found: 30 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	12.43	4.9	J
2.		UNKNOWN	13.18	7.3	J
3.		UNKNOWN	13.31	5.8	J
4.	53172-84-2	BENZENE, (1-METHYL-1-BUTENYL	13.59	4.0	NJ
5.		UNKNOWN	13.71	5.5	J
6.		UNKNOWN	13.77	3.5	J
7.		UNKNOWN	13.97	3.7	J
8.		UNKNOWN	14.17	8.2	J
9.	16587-47-6	BENZO[B]THIOPHENE, 6-METHYL-	14.29	7.4	NJ
10.		UNKNOWN	14.39	5.6	J
11.		UNKNOWN	14.67	4.8	J
12.		UNKNOWN	14.89	5.6	J
13.		UNKNOWN	14.98	4.4	J
14.		UNKNOWN	15.53	3.8	J
15.		UNKNOWN	15.66	4.8	J
16.		UNKNOWN	15.97	6.0	J
17.		UNKNOWN	16.08	3.9	J
18.		UNKNOWN	16.18	11	J
19.	575-41-7	NAPHTHALENE, 1,3-DIMETHYL-	16.26	4.5	NJ
20.		UNKNOWN	16.32	4.9	J
21.	581-40-8	NAPHTHALENE, 2,3-DIMETHYL-	16.53	6.3	NJ
22.		UNKNOWN	16.58	3.7	J
23.		UNKNOWN	16.86	5.7	J
24.		UNKNOWN	17.22	3.7	J
25.		UNKNOWN	17.40	4.3	J
26.	829-26-5	NAPHTHALENE, 2,3,6-TRIMETHYL	17.65	3.9	NJ
27.		UNKNOWN	18.06	5.9	J
28.	2489-86-3	NAPHTHALENE, 1-(2-PROPENYL)-	18.42	4.0	NJ
29.		UNKNOWN	18.48	3.9	J
30.	10544-50-0	CYCLIC OCTAATOMIC SULFUR	22.51	6.2	NJ

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L63

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3

Matrix: (soil/water) WATER Lab Sample ID: 917904

Sample wt/vol: 500 (g/mL) ML Lab File ID: 917904RA66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/14/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/17/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	UJ
108-95-2	Phenol	5.0	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	5.0	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	5.0	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	UJ

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L63

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L60

Matrix: (soil/water) WATER Lab Sample ID: 917904

Sample wt/vol: 500 (g/mL) ML Lab File ID: 917904RA66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/14/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/17/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U J
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	16	J
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U J

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3L63

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]0

Matrix: (soil/water) WATER Lab Sample ID: 917904

Sample wt/vol: 500 (g/mL) ML Lab File ID: 917904RA66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/14/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/17/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-74-8	Carbazole	5.0	UJ

1G

EPA SAMPLE NO.

B3L63

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L60

Matrix: (soil/water) WATER Lab Sample ID: 917904

Sample wt/vol: 500 (g/mL) ML Lab File ID: 917904RA66

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:03/14/06

Concentrated Extract Volume: 500(uL) Date Analyzed: 03/17/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Extraction: (Type) CONT

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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6.					
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30.					

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LA8
RINSE BLK

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]0

Matrix: (soil/water) WATER Lab Sample ID: 917905

Sample wt/vol: 1100 (g/mL) ML Lab File ID: 917905A60

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/27/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	4.5	U
108-95-2	Phenol	4.5	U
111-44-4	Bis(2-chloroethyl)ether	4.5	U
95-57-8	2-Chlorophenol	4.5	U
95-48-7	2-Methylphenol	4.5	U
108-60-1	2,2'-Oxybis(1-chloropropane)	4.5	U
98-86-2	Acetophenone	4.5	U
106-44-5	4-Methylphenol	4.5	U
621-64-7	N-Nitroso-di-n-propylamine	4.5	U
67-72-1	Hexachloroethane	4.5	U
98-95-3	Nitrobenzene	4.5	U
78-59-1	Isophorone	4.5	U
88-75-5	2-Nitrophenol	4.5	U
105-67-9	2,4-Dimethylphenol	4.5	U
111-91-1	Bis(2-chloroethoxy)methane	4.5	U
120-83-2	2,4-Dichlorophenol	4.5	U
91-20-3	Naphthalene	4.5	U
106-47-8	4-Chloroaniline	4.5	U
87-68-3	Hexachlorobutadiene	4.5	U
105-60-2	Caprolactam	4.5	U
59-50-7	4-Chloro-3-methylphenol	4.5	U
91-57-6	2-Methylnaphthalene	4.5	U
77-47-4	Hexachlorocyclopentadiene	4.5	U
88-06-2	2,4,6-Trichlorophenol	4.5	U
95-95-4	2,4,5-Trichlorophenol	4.5	U
92-52-4	1,1'-Biphenyl	4.5	U
91-58-7	2-Chloronaphthalene	4.5	U
88-74-4	2-Nitroaniline	9.1	U
131-11-3	Dimethylphthalate	4.5	U
606-20-2	2,6-Dinitrotoluene	4.5	U
208-96-8	Acenaphthylene	4.5	U
99-09-2	3-Nitroaniline	9.1	U
83-32-9	Acenaphthene	4.5	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LA8 RINSE BLANK

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L60

Matrix: (soil/water) WATER Lab Sample ID: 917905

Sample wt/vol: 1100 (g/mL) ML Lab File ID: 917905A60

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/27/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	9.1	U
100-02-7	4-Nitrophenol	9.1	U
132-64-9	Dibenzofuran	4.5	U
121-14-2	2,4-Dinitrotoluene	4.5	U
84-66-2	Diethylphthalate	4.5	U
86-73-7	Fluorene	4.5	U
7005-72-3	4-Chlorophenyl-phenylether	4.5	U
100-01-6	4-Nitroaniline	9.1	U
534-52-1	4,6-Dinitro-2-methylphenol	9.1	U
86-30-6	N-Nitrosodiphenylamine (1)	4.5	U
95-94-3	1,2,4,5-Tetrachlorobenzene	4.5	U
101-55-3	4-Bromophenyl-phenylether	4.5	U
118-74-1	Hexachlorobenzene	4.5	U
1912-24-9	Atrazine	4.5	U
87-86-5	Pentachlorophenol	9.1	U
85-01-8	Phenanthrene	4.5	U
120-12-7	Anthracene	4.5	U
84-74-2	Di-n-butylphthalate	4.5	U
206-44-0	Fluoranthene	4.5	U
129-00-0	Pyrene	4.5	U
85-68-7	Butylbenzylphthalate	4.5	U
91-94-1	3,3'-Dichlorobenzidine	4.5	U
56-55-3	Benzo(a)anthracene	4.5	U
218-01-9	Chrysene	4.5	U
117-81-7	Bis(2-ethylhexyl)phthalate	4.5	U
117-84-0	Di-n-octylphthalate	4.5	U
205-99-2	Benzo(b)fluoranthene	4.5	U
207-08-9	Benzo(k)fluoranthene	4.5	U
50-32-8	Benzo(a)pyrene	4.5	U
193-39-5	Indeno(1,2,3-cd)pyrene	4.5	U
53-70-3	Dibenzo(a,h)anthracene	4.5	U
191-24-2	Benzo(g,h,i)perylene	4.5	U
58-90-2	2,3,4,6-Tetrachlorophenol	4.5	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LA8
RINSE BL

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3LA0

Matrix: (soil/water) WATER Lab Sample ID: 917905

Sample wt/vol: 1100 (g/mL) ML Lab File ID: 917905A60

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/27/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-74-8	Carbazole	4.5	U

1G

EPA SAMPLE NO.

B3LA8

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L60

Matrix: (soil/water) WATER Lab Sample ID: 917905

Sample wt/vol: 1100 (g/mL) ML Lab File ID: 917905A60

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:02/27/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Extraction: (Type) CONT

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LA9
RINSE BLANK

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B

Matrix: (soil/water) WATER Lab Sample ID: 917906

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 917906A60

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/27/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	5.0	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	5.0	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	5.0	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

1D

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B3LA9
RINSE BLANK

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L60

Matrix: (soil/water) WATER Lab Sample ID: 917906

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 917906A60

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/27/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

(1) - Cannot be separated from Diphenylamine

SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B3LA9
RINSE BLA

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3[illegible]0

Matrix: (soil/water) WATER Lab Sample ID: 917906

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 917906A60

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 02/27/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Extraction: (Type) CONT

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-74-8	Carbazole	5.0	U

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B3LA9

Lab Name: COMPUCHEM Contract: EPW05028

Lab Code: LIBRTY Case No.: 35114 SAS No.: 1347.0 SDG No.: B3L60

Matrix: (soil/water) WATER Lab Sample ID: 917906

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 917906A60

Level: (low/med) LOW Date Received: 02/24/06

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:02/27/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/02/06

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Extraction: (Type) CONT

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

APPENDIX D

CONTRACT LABORATORY PROGRAM

CYANIDE DATA PACKAGE

Inorganic Data Review Narrative

Case# 35114 Site: HM Quackenbush Inc. Matrix: Soil 89

SDG# MB3L29, MB3L49, MB3L60, MB3L74, MB3L94 & MB3LB8 Lab: BONNER Water 6

Sampling Team: USEPA Reviewer: J. BULICH Other 0

A.2.1 **Data Validation Flags**:

The following flags may have been applied in red by the data validator and must be considered by the data user.

J - This flag indicates the result qualified as **estimated**

R and Red-Line - A red-line drawn through a sample result indicates **unusable** value. The red-lined data are known to contain significant errors based on documented information and must not be used by the data user.

U - This data validation qualifier is applied to sample results ≥ MDL when associated blank is contaminated

Fully Usable Data - The results that do not carry "J" or "red-line" are fully **usable**.

2 **Laboratory Qualifiers**:

The CLP laboratory applies a contractual qualifier on all Form I'S and the QC Form when a QC analysis is outside the control limits. These qualifiers are not applied on the Lotus or XLS spreadsheets. These qualifiers and their meanings are as follows:

N: This qualifier indicates the lack of accuracy in the reported result, and is applied when matrix spiked sample recovery is outside the control limits.

E: This qualifier indicates the presence of interference, and is applied when the ICP serial dilution is outside the control limits.

*: This qualifier indicate the lack of precision , and is applied on Form I'S and Form VI when the Lab Duplicate analysis is outside the control limits.

U: This is a concentration qualifier that laboratory applies to a non-detected result which is essentially less than the Method Detection Limit(MDL). A non-detected result of an analyte is indicated by the Contract Required Quantitation Limit (CRQL) of that analyte suffixed with "U".

J: This is also a concentration qualifier that laboratory applies to a positive result below the CRQL.

NOTE: The laboratory qualifiers are crossed out and replaced with the appropriate data validation qualifiers (J, R or U) by the data validator.

A.2.3.1 **Data Case Description:**

This case consists of six (6) aqueous and eighty-nine (89) soil samples collected at the HM Quackenbush Inc. site between 2/21/06 - 2/24/06 for CN analysis according to the USEPA CLP SOW No. ILM05.3. Samples MB3LA8 and MB3LA9 were identified as a field blanks. The field duplicate pairs for this sampling event were MB3L41/MB3L42, MB3L57/MB3L59, MB3L61/MB3L62, MB3L89/MB3L91, and MB3LB7/MB3LC0. Matrix spike and laboratory duplicate analyses were performed on samples MB3L46, MB3L61, MB3L67, MB3L86, MB3LB5 and MB3LB8.

As per EPA Technical Direction Form (TDF) only the following criteria were reviewed by the validator: Holding Time, CRQL Standard, Initial and Continuing Calibration Blanks, Preparation Blanks, Matrix Spike (soil), Laboratory Duplicate, Field Duplicate, ICP Serial Dilution and Field Blank. The qualifiers applied on Form Is and CADRE EXCEL spreadsheets were based on ESAT data review of the above-mentioned criteria. For all other criteria, see the attached CADRE Reports.

A.2.3.2 **CSF Audit:**

A.2.3.3 **Technical Review:**

SDG MB3L29 (SOIL)

LABORATORY DUPLICATE

The absolute difference between sample and duplicate results was greater than 2 X CRQL for CN when sample and/or duplicate results were less than 5 X CRQL. All associated sample results $\geq$ MDL but $\leq$ 5xCRQL have been considered estimated and flagged "J".

"J": CN —> MB3L29 —> MB3L33, MB3L36 —> MB3L38, MB3L46 —> MB3L48.

SDG MB3L49 (SOIL)

LABORATORY DUPLICATE

The absolute difference between sample and duplicate results was greater than 2 X CRQL for CN when sample and/or duplicate results were less than 5 X CRQL. All associated sample results $\geq$ MDL but $\leq$ 5xCRQL have been considered estimated and flagged "J".

"J": CN —> MB3L49, MB3L51, MB3L54 —> MB3L56, MB3L58, MB3L59, MB3L64, MB3L65, MB3L68, MB3L69 & MB3L71

SDG MB3L60 (WATER)

All QC criteria have been satisfied and the data are assessed to be acceptable and fully usable without qualifications.

SDG MB3L74 (SOIL)

MATRIX SPIKE

The matrix spike recovery was outside the control limits of 75 - 125% when sample concentration was less than 4 X spike concentration for CN (%R = 74). All associated results (detects & non-detects) with recoveries 10-74% have been considered estimated and flagged "J".

"J": CN —> MB3L74 —> MB3L93.

SDG MB3L94 (SOIL)

INITIAL & CONTINUING CALIBRATION BLANKS

The ICB was ≥ MDL but ≤ CRQL for CN when MDL was < CRQL. All sample results ≥ MDL but ≤ CRQL have been changed to the CRQL with a "U".

"U": CN —> MB3L99, MB3LA6, MB3LB1, MB3LB5 & MB3LB7.

SDG MB3LB8 (SOIL)

QC criteria have been satisfied and the data are assessed to be acceptable and fully usable without qualifications

A.2.3.4 **Contract-Problem/Non-Compliance:**

SDG MB3L49: The absolute difference between the sample and the laboratory duplicate is greater than 2 x CRQL, but the Lab Qualifier "*" is not on Form VI nor on all Form I's.

HWSS Reviewer: HS
Signature
Date: 4/20/06

Contractor Reviewer: John Bailey
Signature
Date: 4/19/06

Verified by: _____
Signature
Date: _____

Standard Operating Procedure
USEPA Region 2
Evaluation of Metals Data for the Contract Laboratory Program
Data Assessment and Contract Compliance Review
SOP: HW-2 Revision 13 Appendix A.7 Sept. 2005

CLP DATA ASSESSMENT SUMMARY FORM (INORGANICS)

Type of Review: _____ Date: 4/18/06 Case# 35114 SDG# MB3L29, MB3L49, MB3L60 MB3L74, MB3L94 & MB3LB8

Site: HM QUAKENBUSH INC. Lab Name: BONNER

Reviewer's Initials: JB Number of Samples: 89 SOIL / 6 WATER

Analytes Rejected (R) Due to Exceeding Review Criteria

	Holding Time	CRQL Std	Blanks	ICS	Spike Recovery	Dup. Lab.	Dup. Field	LCS	ICP Serial Dilution	% Solids	Internal Std. ICP-MS	Tuning ICP-MS	Total Analytes	Rejection %
ICP-AES														
ICP-MS														
Mercury														
Cyanide														
Total														

Analytes Flagged (J) as Estimated Due to Exceeding Review Criteria

	Holding Time	CRQL Std	Blanks	ICS	Spike Recovery	Dup. Lab.	Dup. Field	LCS	ICP Serial Dilution	% Solids	Internal Std. ICP-MS	Tuning ICP-MS	Total Analytes	Rejection %
ICP-AES														
ICP-MS														
Mercury														
Cyanide					20	40								
Total					20	40							60/95	63
													60/95	63

USEPA - CLP

1A-IN

000011

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L29

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32915

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 92.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	8.5		J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ents: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000012

EPA SAMPLE NO.

MB3L30

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32916

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 96.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	0.92	J	* J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000013

EPA SAMPLE NO.

MB3L31

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32917

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 90.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	5.6		J	AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

ents: ROCKS

USEPA - CLP

1A-IN

000014

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L32

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32918

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 83.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	6.9		J	AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

000015

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L33

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32919

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 90.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.2		J	AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

000016

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L34

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32920

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 80.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	16.4			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000017

EPA SAMPLE NO.

MB3L35

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32921

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 81.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	57.1		~~D~~	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ents: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000018

EPA SAMPLE NO.

MB3L36

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32922

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 92.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	10.9		J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000019

EPA SAMPLE NO.

MB3L37

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32923

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 89.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	5.3		J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ents: ROCKS

USEPA - CLP

1A-IN

000020

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L38

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32924

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 85.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	10.2		J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

000021

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L39

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32925

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 91.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	67.7		~~B~~	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

nents: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000022

EPA SAMPLE NO.

MB3L40

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32926

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 93.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	23.2			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000023

EPA SAMPLE NO.

MB3L41

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32927

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 93.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	24.5			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ients: ROCKS

USEPA - CLP

1A-IN

000024

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L42

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32928

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 93.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	27.9			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

000025

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L43

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32929

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 79.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	39.4			AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

nents: ROCKS, PLANT MATTER

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000026

EPA SAMPLE NO.

MB3L44

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32930

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 56.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	50.6			AS

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000027

EPA SAMPLE NO.

MB3L45

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32931

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 77.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	21.2			AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

nents: ROCKS, PLANT MATTER

USEPA - CLP

1A-IN

000028

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L46

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32932

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 95.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	8.0		J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

000029

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L47

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32933

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 92.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	7.1		J	AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000030

EPA SAMPLE NO.

MB3L48

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L29

Matrix (soil/water): SOIL Lab Sample ID: BT32934

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 89.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	9.0		J	AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: MB3L49
Case Number: 35114
Contract Number: 68W02067

Sample Receipt
On 2/25/06 we received 20 soil samples under UPS air bill numbers A5491379466 and A5491379608. Custody seals were present and intact. Cooler temps were determined to be 2.9°C and 2.7°C respectively. Samples were in good condition except for the following discrepancies:

1. Sample tags were not present.
Resolution 1: In accordance with previous direction from Region 2, the Laboratory shall note the issue in the SDG Narrative and proceed with the analysis of the samples. Region 2 does not require sample tags.

2. We were scheduled for a 21 day TAT. The TR/COC we received lists a 14 day TAT.
Resolution 2: Per Region 2, the Laboratory shall follow the scheduling notification, and note the issue in the SDG narrative.

Cyanide
The analytical run began 3/06/2006 @ 0925 hrs. MB3L67 was over the linear range; the sample was reanalyzed at an appropriate dilution. MB3L67D failed; the failure was flagged.

CSF
No Discrepancies

Sample Equation:

Lab ID BT32935 EPA Sample # MB3L49

Date & Time 3/06/2006@0939

CN: 2302 µg/L * (0.050 L) / (1.00 g) * 100 % / 98 % * 1000 g / 1 kg * 1 mg / 1000 µg = 1.4 mg/Kg

Authorized by _____
Daniel Antrim
Quality Assurance Officer

000011

Contract Laboratory Program

Sample Delivery Group (SDG) Cover Sheet

SDG Number MB3L49

• ICP-AES Analysis • ICP-MS Analysis

Laboratory Name Bonner Analytical Testing Co. Laboratory Code BONNER

Contract No. 68W02067 Case No. 35114

Analysis Price _____ SDG Turnaround 14 day

USEPA Sample Numbers in SDG (Listed in Numerical Order)

1) MB3L49	7) MB3L55	13) MB3L65	19) MB3L71
2) MB3L50	8) MB3L66	14) MB3L66	20) MB3L72
3) MB3L51	9) MB3L67	15) MB3L67	~~21)~~
4) MB3L52	10) MB3L68	16) MB3L68	22)
5) MB3L53	11) MB3L69	17) MB3L69	23)
6) MB3L54	12) MB3L64 ~~MB3L60~~	18) MB3L70	~~24)~~ 2:28:06

First Sample in SDG: MB3L49

Last Sample in SDG: MB3L72

First Sample Receipt Date: 2·25·06

Last Sample Receipt Date: 2·25·06

Note: *There are a maximum of 20 **field** samples (excluding PE samples) in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature _____ Date 2·28·06

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000012

EPA SAMPLE NO.

MB3L49

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32935

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 80.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	1.4	~~U~~	J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000013

EPA SAMPLE NO.

MB3L50

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32936

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 91.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.7	U		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

000014

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L51

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32937

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 90.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	0.53		J	AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

000015

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L52

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32938

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 88.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.8	U		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

000016

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L53

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32939

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 87.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	14.5			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000017

EPA SAMPLE NO.

MB3L54

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32940

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 92.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	0.19	~~U~~	J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000018

EPA SAMPLE NO.

MB3L55

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32941

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 93.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	0.11	J	J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000019

EPA SAMPLE NO.

MB3L56

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32942

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 87.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	0.87	J	J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

0000020

EPA SAMPLE NO.

MB3L57

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32943

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 95.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.6	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ıents: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000021

EPA SAMPLE NO.

MB3L58

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32944

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 93.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	1.4		J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

000022

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L59

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32945

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 95.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	0.13		J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000023

EPA SAMPLE NO.

MB3L64

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32946

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 84.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	1.7		J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000024

EPA SAMPLE NO.

MB3L65

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32947

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 90.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	0.52		J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000025

EPA SAMPLE NO.

MB3L66

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32948

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 93.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.7	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000025

EPA SAMPLE NO.

MB3L67

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32949

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 82.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	30.7		D	AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

ments: ROCKS

USEPA - CLP

1A-IN

000027

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L68

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32950

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 89.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	1.6	U	J	AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000028

EPA SAMPLE NO.

MB3L69

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32951

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 91.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	3.8		J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

000029

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L70

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32952

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 89.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.8	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000030

EPA SAMPLE NO.

MB3L71

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32953

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 92.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	5.2		J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

nents: ROCKS

USEPA - CLP

1A-IN

000071

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L72

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L49

Matrix (soil/water): SOIL Lab Sample ID: BT32954

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 86.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.9	U		AS

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

COVER PAGE

000001

I ume: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No: 35114 NRAS No.: SDG No: MB3L60

SOW No.: ILM05.3

EPA Sample No.	Lab Sample ID
MB3L60	BT32995
MB3L61	BT32996
MB3L61D	BT32996D
MB3L61S	BT32996S
MB3L62	BT32997
MB3L63	BT32998
MB3LA8	BT32999
MB3LA9	BT33000

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	NO
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	NO
If yes, were raw data generated before application of background corrections?	(Yes/No)	NO	NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: [signature] 3/8/6 Name: Christopher M. Bonner

Date: Title: Inorganic Laboratory Manager

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: MB3L60
Case Number: 35114
Contract Number: 68W02067

Sample Receipt
On 2/25/06 we received 6 water samples under UPS air bill numbers A5491379466 and A5491379608. Custody seals were present and intact. Cooler temps were determined to be 2.9°C and 2.7°C respectively. Samples were in good condition except for the following discrepancies:

1. Sample tags were not present.
Resolution 1: In accordance with previous direction from Region 2, the Laboratory shall note the issue in the SDG Narrative and proceed with the analysis of the samples. Region 2 does not require sample tags.

2. One of the water samples we received did not have any labeling. A station location was written on the top of the bottle. Based on this info and the fact that only two waters were listed on the TR/COC, we decided that the sample was MB3LA8. Please advise if this is acceptable.
Resolution 2: Per Region 2, the Laboratory shall use sample number MB3LA8 for the unlabelled water sample container/bottle. Please note the issue in the SDG Narrative.

3. We were scheduled for a 21 day TAT. The TR/COC we received lists a 14 day TAT.
Resolution 3: Per Region 2, the Laboratory shall follow the scheduling notification, and note the issue in the SDG narrative.

Cyanide
No Discrepancies

CSF
No Discrepancies

Sample Equation:

Lab ID BT 32998 EPA Sample # MB3L63

Date & Time 14 03

CN: 6.40 µg/L * 1 (Dilution Factor) = 6.4 µg/L

Authorized by Daniel Antrim
Daniel Antrim
Quality Assurance Officer

Contract Laboratory Program

Sample Delivery Group (SDG) Cover Sheet

SDG Number MB3L60

• ICP-AES Analysis • ICP-MS Analysis

Laboratory Name Bonner Analytical Testing Co. Laboratory Code BONNER

Contract No. 68W02067 Case No. 35114

Analysis Price _____ SDG Turnaround 14 day

USEPA Sample Numbers in SDG (Listed in Numerical Order)

1) MB3L60	~~7)~~	~~13)~~	~~19)~~
2) MB3L61	8)	14)	20)
3) MB3L62	9)	15)	21)
4) MB3L63	10)	16)	22)
5) MB3LA8	11)	17)	23)
6) MB3LA9	~~12)~~	18)	24)

2·28·06

First Sample in SDG: MB3L60

Last Sample in SDG: MB3LA9

First Sample Receipt Date: 2·25·06

Last Sample Receipt Date: 2·25·06

Note: *There are a maximum of 20 **field** samples (excluding PE samples) in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature Shannon Crowley Date 2·28·06

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000010

EPA SAMPLE NO.

MB3L60

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L60

Matrix (soil/water): WATER Lab Sample ID: BT32995

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	10.0	U		AS

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000011

EPA SAMPLE NO.

MB3L61

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L60

Matrix (soil/water): WATER Lab Sample ID: BT32996

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000012

EPA SAMPLE NO.

MB3L62

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L60

Matrix (soil/water): WATER Lab Sample ID: BT32997

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000013

EPA SAMPLE NO.

MB3L63

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L60

Matrix (soil/water): WATER Lab Sample ID: BT32998

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	6.4	J		AS

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000014
EPA SAMPLE NO.

MB3LA8
FIELD BLANK

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L60

Matrix (soil/water): WATER Lab Sample ID: BT32999

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000015

EPA SAMPLE NO.

MB3LA9
FIELD BLANK

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L60

Matrix (soil/water): WATER Lab Sample ID: BT33000

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

ents:

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: MB3L74
Case Number: 35114
Contract Number: 68W02067

Sample Receipt
On 2/25/06 we received 20 soil samples under UPS air bill number A5491379466. Custody seals were present and intact. Cooler temp was determined to be 2.9°C. Samples were in good condition except for the following discrepancies:

1. Sample tags were not present.
Resolution 1: In accordance with previous direction from Region 2, the Laboratory shall note the issue in the SDG Narrative and proceed with the analysis of the samples. Region 2 does not require sample tags.

Cyanide
The analytical run began 3/07/2006 @ 0853 hrs. MB3L86S failed; a post spike was analyzed at twice the CRQL.

CSF
No Discrepancies

Sample Equation:

Lab ID BT32955 EPA Sample # MB3L74

Date & Time 3/07/2006@0908

CN: ~2.03 µg/L * (0.050 L)/(1.00 g) * 100 %/89.0% * 1000 g/1 kg * 1 mg/1000 µg = ~0.11 ug/L (CRQL rep)

Authorized by _____
Daniel Antrim
Quality Assurance Officer

Contract Laboratory Program

Sample Delivery Group (SDG) Cover Sheet

SDG Number MB3L74

• ICP-AES Analysis • ICP-MS Analysis

Laboratory Name Bonner Analytical Testing Co. Laboratory Code BONNER

Contract No. 68W02067 Case No. 35114

Analysis Price T SDG Turnaround 14 day

USEPA Sample Numbers in SDG (Listed in Numerical Order)

1) MB3L74	7) MB3L80	13) MB3L86	19) MB3L92
2) MB3L75	8) MB3L81	14) MB3L87	20) MB3L93
3) MB3L76	9) MB3L82	15) MB3L88	~~21)~~
4) MB3L77	10) MB3L83	16) MB3L89	22)
5) MB3L78	11) MB3L84	17) MB3L90	23)
6) MB3L79	12) MB3L85	18) MB3L91	24) 228006

First Sample in SDG: MB3L74

Last Sample in SDG: MB3L93

First Sample Receipt Date: 2·25·06

Last Sample Receipt Date: 2·25·06

Note: *There are a maximum of 20 **field** samples (excluding PE samples) in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature Shannon Gonzales Date 2·28·06

USEPA - CLP

1A-IN

0012

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L74

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32955

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 89.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.8	U	~~N~~ J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

0013

EPA SAMPLE NO.

MB3L75

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32956

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 83.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	3.0	U	~~N~~ J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ients: ROCKS

USEPA - CLP

1A-IN

0014

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L76

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32957

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 95.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.6	U	N J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

0015

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L77

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32958

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 89.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.8	U	~~N~~ J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

0016

EPA SAMPLE NO.

MB3L78

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32959

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 95.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	0.30		N J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

0017

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L79

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32960

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 92.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.7	U	~~N~~ J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ments: ROCKS, PLANT MATTER

USEPA - CLP

1A-IN

0018

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L80

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32961

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 94.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.6	U	~~N~~ J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS, PLANT MATTER

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L81

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32962

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 92.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.7	U	~~N~~ J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ents: ROCKS

USEPA - CLP

1A-IN

0020

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L82

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32963

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 88.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.8	U	N J	AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

0021

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L83

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32964

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 93.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.7	U	~~N~~ J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ıents: ROCKS

USEPA - CLP

1A-IN

0022

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L84

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32965

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 94.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.6	U	N, J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

0023

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L85

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32966

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 86.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.9	U	~~N~~ J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ıents: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L86

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32967

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 89.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.8	U	~~N~~ J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L87

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32968

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 91.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.7	U	~~N~~ J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L88

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32969

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 94.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.7	U	N J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

0027

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L89

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32970

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 86.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.9	U	N J	AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

ıents: ROCKS

USEPA - CLP

1A-IN

0028

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L90

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32971

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 93.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.7	U	~~N~~ J	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

0029

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L91

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32972

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 86.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.9	U	~~N~~ J	AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

ıents: ROCKS

1A-IN

0030

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L92

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32973

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 82.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	3.0	U	~~N~~ T	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

1A-IN

0031

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L93

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L74

Matrix (soil/water): SOIL Lab Sample ID: BT32974

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 95.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.6	U	NJ	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ments: ROCKS

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: MB3L94
Case Number: 35114
Contract Number: 68W02067

Sample Receipt
On 2/25/06 we received 20 soil samples under UPS air bill number A5491379466. Custody seals were present and intact. Cooler temp was determined to be 2.9°C. Samples were in good condition except for the following discrepancies:

1. Sample tags were not present.
Resolution 1: In accordance with previous direction from Region 2, the Laboratory shall note the issue in the SDG Narrative and proceed with the analysis of the samples. Region 2 does not require sample tags.

2. We had a sample labeled B3LR8. According to the other info and the jar we decided that the sample was MB3L98. Please advise if
this is acceptable.
Resolution 2: Per Region 2, the Laboratory can use sample number MB3L98, instead of MB3LR8. Please note the issue in the SDG Narrative.

3. Samples MB3L97, B2, B3, C3, and C6 all had about 2 mls or less of
standing water. Please advise on whether to decant or homogenize.
Resolution 3: Per Region 2, the Laboratory shall decant the standing water. Please note the issue in the SDG Narrative.

Cyanide
No Discrepancies

CSF
No Discrepancies

Sample Equation:

Lab ID BT 32976 EPA Sample # MB3296

Date & Time 3/8/2006@1641

CN: 312.96 µg/L * (0.050 L) / (1.00 g) * 100 % / 66.5 % * 1000 g / 1 kg * 1 mg / 1000 µg = 23.5 mg/Kg

Authorized by Daniel Antrim

Daniel Antrim
Quality Assurance Officer

Contract Laboratory Program

Sample Delivery Group (SDG) Cover Sheet

SDG Number MB3L94

(• ICP-AES Analysis) • ICP-MS Analysis

Laboratory Name Bonner Analytical Testing Co. Laboratory Code BONNER

Contract No. 68ND02067 Case No. 35114

Analysis Price _____ SDG Turnaround 14 day

USEPA Sample Numbers in SDG (Listed in Numerical Order)

1) MB3L94	7) MB3LA1	13) MB3LA7	19) MB3LB5
2) MB3L96	8) MB3LA2	14) MB3LB0	20) MB3LB7
3) MB3L97	9) MB3LA3	15) MB3LB1	~~21)~~
4) MB3L98	10) MB3LA4	16) MB3LB2	22)
5) MB3L99	11) MB3LA5	17) MB3LB3	23)
6) MB3LA0	12) MB3LA6	18) MB3LB4	~~24)~~ 2/28/06

First Sample in SDG: MB3L94

Last Sample in SDG: MB3LB7

First Sample Receipt Date: 2·25·06

Last Sample Receipt Date: 2·25·06

Note: *There are a maximum of 20 **field** samples (excluding PE samples) in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature Shannon Granlee Date 2·28·06

USEPA - CLP

1A-IN

0014

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L94

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32975

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 95.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.6	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

0015

EPA SAMPLE NO.

MB3L96

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32976

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 66.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	23.5			AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS, PAINT CHIPS

USEPA - CLP

1A-IN

0016

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L97

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32977

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 68.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	28.5			AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS, PLANT MATTER

USEPA - CLP

1A-IN

0317

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3L98

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32978

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 50.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	43.5			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS, PLANT MATTER

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

0018

EPA SAMPLE NO.

MB3L99

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32979

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 86.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.9 ~~0.24~~	~~U~~		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

ents: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

0019

EPA SAMPLE NO.

MB3LA0

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32980

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 91.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.7	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

0020

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LA1

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32981

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 92.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.7	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ents: ROCKS

USEPA - CLP

1A-IN

0021

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LA2

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32982

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 90.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.8	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

0022

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LA3

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32983

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 92.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.7	U		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

aents: ROCKS

USEPA - CLP

1A-IN

0023

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LA4

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32984

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 92.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.7	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

0024

EPA SAMPLE NO.

MB3LA5

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32985

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 91.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.7	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ments: ROCKS

USEPA - CLP

1A-IN

0025

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LA6

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32986

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 87.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.9 ~~0.14~~	~~J~~U		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS, PLANT MATTER

USEPA - CLP

1A-IN

0026

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LA7

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32987

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 93.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.7	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

0027

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LB0

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32988

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 88.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.8	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

0028

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LB1

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32989

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 88.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.8 ~~0.20~~	~~U~~		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LB2

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32990

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 75.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	6.7			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS, METAL

USEPA - CLP

1A-IN

0030

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LB3

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32991

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 71.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	4.9			AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS, METAL

USEPA - CLP

1A-IN

0031

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LB4

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32992

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 85.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	5.3			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS, PLANT MATTER

USEPA - CLP

1A-IN

0032

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LB5

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32993

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 86.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.2 ~~0.37~~	~~U~~		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

nents: ROCKS

USEPA - CLP

1A-IN

0033

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LB7

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3L94

Matrix (soil/water): SOIL Lab Sample ID: BT32994

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 85.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.9 ~~0.67~~	~~U~~		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: MB3LB8
Case Number: 35114
Contract Number: 68W02067

Sample Receipt
On 2/25/06 we received 9 soil samples under UPS air bill number A5491379466. Custody seals were present and intact. Cooler temp was determined to be 2.9°C. Samples were in good condition except for the following discrepancies:

1. Sample tags were not present.
Resolution 1: In accordance with previous direction from Region 2, the Laboratory shall note the issue in the SDG Narrative and proceed with the analysis of the samples. Region 2 does not require sample tags.

2. We had a sample labeled B3LR8. According to the other info and the jar we decided that the sample was MB3L98. Please advise if this is acceptable.
Resolution 2: Per Region 2, the Laboratory can use sample number MB3L98, instead of MB3LR8. Please note the issue in the SDG Narrative.

3. Samples MB3L97, B2, B3, C3, and C6 all had about 2 mls or less of standing water. Please advise on whether to decant or homogenize.
Resolution 3: Per Region 2, the Laboratory shall decant the standing water. Please note the issue in the SDG Narrative.

4. There was no QC listed for SDG MB3LB8. We would like to use sample MB3LB8 for QC.'
Resolution 4: In accordance with previous direction from Region 2, for Inorganic samples, the Laboratory will select a sample for MS/MSD as long as the sample is not a PE, blank, or rinsate sample. The Laboratory will note the issue in the SDG Narrative, notify the SMO coordinator of the sample selected for MS/MSD, and proceed with the analysis of the samples.

Cyanide
The analytical run began 3/01/2006 @ 1548 hrs. MB3LB9, C4, C5 and C6 were beyond the linear range; the samples were reanalyzed at appropriate dilutions.

CSF
No Discrepancies

Sample Equation:

Lab ID BT33001 EPA Sample # MB3LB8

Date & Time 3/01/2006@1602

CN: 178.49 µg/L * (0.050 L) / (1.00 g) * 100 % / 93.4 % * 1000 g / 1 kg * 1 mg / 1000 µg = 9.6 mg/Kg

Authorized by _____
Daniel Antrim
Quality Assurance Officer

Contract Laboratory Program

Sample Delivery Group (SDG) Cover Sheet

SDG Number MB3LB8

(• ICP-AES Analysis) • ICP-MS Analysis

Laboratory Name Bonner Analytical Testing Co. Laboratory Code BONNER

Contract No. 68W02067 Case No. 35114

Analysis Price: _____ SDG Turnaround 14 day

USEPA Sample Numbers in SDG (Listed in Numerical Order)

1) MB3LB8	7) MB3LC4	~~13)~~	19)
2) MB3LB9	8) MB3LC5	14)	20)
3) MB3LC0	9) MB3LC6	15)	21)
4) MB3LC1	~~10)~~	16)	22)
5) MB3LC2	11)	17)	23)
6) MB3LC3	~~12)~~ 2·28·06	18)	24) 2·28·06

First Sample in SDG: MB3LB8

Last Sample in SDG: MB3LC6

First Sample Receipt Date: 2·25·06

Last Sample Receipt Date: 2·25·06

Note: *There are a maximum of 20 **field** samples (excluding PE samples) in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature Shannon Graves Date 2·28·06

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000010

EPA SAMPLE NO.

MB3LB8

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3LB8

Matrix (soil/water): SOIL Lab Sample ID: BT33001

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 93.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	9.6			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000011

EPA SAMPLE NO.

MB3LB9

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3LB8

Matrix (soil/water): SOIL Lab Sample ID: BT33002

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 94.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	29.5		D	AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

nents: ROCKS

USEPA - CLP

1A-IN

000012

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LC0

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3LB8

Matrix (soil/water): SOIL Lab Sample ID: BT33003

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 85.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	1.5	J		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS

USEPA - CLP

1A-IN

000013

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LC1

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3LB8

Matrix (soil/water): SOIL Lab Sample ID: BT33004

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 89.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.8	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ients: ROCKS, PLANT MATTER

USEPA - CLP

1A-IN

000014

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LC2

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3LB8

Matrix (soil/water): SOIL Lab Sample ID: BT33005

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 88.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	2.8	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS, PLANT MATTER

USEPA - CLP

1A-IN

000015

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LC3

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3LB8

Matrix (soil/water): SOIL Lab Sample ID: BT33006

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 57.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	6.6			AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

ıents: ROCKS, PLANT MATTER

USEPA - CLP

1A-IN

000016

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LC4

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3LB8

Matrix (soil/water): SOIL Lab Sample ID: BT33007

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 77.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	78.9		D	AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS, PLANT MATTER

USEPA - CLP

1A-IN

000017

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LC5

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3LB8

Matrix (soil/water): SOIL Lab Sample ID: BT33008

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 78.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	596		D	AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

ıents: ROCKS, PLANT MATTER

USEPA - CLP

1A-IN

000018

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB3LC6

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35114 NRAS No.: SDG NO.: MB3LB8

Matrix (soil/water): SOIL Lab Sample ID: BT33009

Level (low/med): LOW Date Received: 02/25/2006

% Solids: 57.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	95.5		D	AS

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts: YES

Comments: ROCKS, PLANT MATTER

APPENDIX E

U.S. EPA MOBILE ANALYTICAL LABORATORY INORGANIC DATA PACKAGE

INORGANIC ANALYSIS DATA SHEET

Site: H[illegible]ckenbush	Date Received: 02/24/06	Conc. [illegible]ow/med.): Low	Program: CERCLA
: Herkimer, New York	Date Analyzed: 03/07/06	Percent % Solids: 93.0	
	Lab Sample ID #:B-1A	Dilution Factor: 10	Sample Location Identifier:B-1A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	Matrix (soil / water): Soil	Depth (ft):	
Case No.: QUACS1	(SDG) No.:B-1A	EPA Method: SOP MAL-3.0 (Mod. SW-846 6020A)	

ANALYTE	CAS NO.	Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)			USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Data	
		USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)			Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4[illegible]30.00		
Antimony	7440-36-0	31	4[illegible]	SB	60	0.31	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.30	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	36.60	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	67.90		
Calcium	7440-70-2	NA	NA	SB	5000	102000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	286.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	6.00	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	119.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	15600.00		
Lead*	7439-92-1	400	750	SB	3	29.8		
Magnesium	7439-95-4	NA	NA	SB	5000	25800.00		
Manganese	7439-96-5	NA	NA	SB	15	844.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	99.20		
Potassium	7440-09-7	NA	NA	SB	5000	2110.00	B	
Selenium	7782-49-2	390	5,700	1 OR SB	5	0.89	U	
Silver	7440-22-4	390	5,700	SB	10	0.63	B	
Sodium	7440-23-5	NA	NA	SB	5000	285.00	B	
Thallium	7440-28-0	6	91	SB	10	0.22	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	23.20	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	1140.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 95.8	
	Lab Sample ID #:B-1B	***Dilution Factor***: 10	***Sample Location Identifier***:B-1B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-1A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

ANALYTE	CAS NO.	Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs): USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Data: Concentration Qualifier	Data: Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2450.00		
Antimony	7440-36-0	31	450	SB	60	1.29	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.22	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	16.60	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.10	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	29.10		
Calcium	7440-70-2	NA	NA	SB	5000	64200.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	78.80		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	2.78	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	15.20	B	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	8070.00		
Lead*	7439-92-1	400	750	SB	3	3.6		
Magnesium	7439-95-4	NA	NA	SB	5000	5390.00		
Manganese	7439-96-5	NA	NA	SB	15	275.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	25.90		
Potassium	7440-09-7	NA	NA	SB	5000	794.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.84	U	
Silver	7440-22-4	390	5,700	SB	10	0.25	U	
Sodium	7440-23-5	NA	NA	SB	5000	349.00	B	
Thallium	7440-28-0	6	91	SB	10	0.09	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	9.27	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	336.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Envi[illegible]ntal Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Su[illegible]d Sites - Peer Review Draft* March 2001. [illegible]n 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDep[illegible] of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, [illegible]ination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanu[illegible]ives.1994*
(3) U.S. EPA (Envi[illegible]mental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with [illegible]ntract Required [illegible]tion Limits (CRDLs)* Office of Solid Waste a[illegible] Analyti[illegible]s/Data Quality Center, Washington, DC

INORGANIC ANALYSIS DATA SHEET

Site Name: .uackenbush	**Date Received**: 02/24/06	**Conc (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/07/06	**Percent % Solids**: 90.6	
	Lab Sample ID #:B-1C	**Dilution Factor**: 10	**Sample Location Identifier**:B-1C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-1A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2890.00		
Antimony	7440-36-0	31	470	SB	60	0.31	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.30	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	18.60	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	68.50		
Calcium	7440-70-2	NA	NA	SB	5000	76000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	201.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.70	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	174.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	10400.00		
Lead*	7439-92-1	400	750	SB	3	34.0		
Magnesium	7439-95-4	NA	NA	SB	5000	13600.00		
Manganese	7439-96-5	NA	NA	SB	15	333.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	884.00		
Potassium	7440-09-7	NA	NA	SB	5000	937.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.89	U	
Silver	7440-22-4	390	5,700	SB	10	1.44	B	
Sodium	7440-23-5	NA	NA	SB	5000	202.00	B	
Thallium	7440-28-0	6	91	SB	10	0.12	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	11.70	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	1120.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 84.5	
	Lab Sample ID #:B-2A	***Dilution Factor***: 10	***Sample Location Identifier***:B-2A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-1A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	N	NA	SB	200	840.00		
Antimony	7440-36-0	31	450	SB	60	1.37	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	8.88	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	24.90	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.13	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	195.00		
Calcium	7440-70-2	NA	NA	SB	5000	22300.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	2170.00		
Cobalt	7440-48-4	NA	N	30 OR SB	50	4.85	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	573.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	31500.00		
Lead*	7439-92-1	400	750	SB	3	194.0		
Magnesium	7439-95-4	NA	NA	SB	5000	6900.00		
Manganese	7439-96-5	NA	NA	SB	15	617.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	1700.00		
Potassium	7440-09-7	NA	NA	SB	5000	1150.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.05	U	
Silver	7440-22-4	390	5,700	SB	10	1.71	B	
Sodium	7440-23-5	NA	NA	SB	5000	234.00	B	
Thallium	7440-28-0	6	91	SB	10	0.22	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	10.50	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	758.00		
Cyanide	57-12-5	1,600	22,000	N	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Envir tal Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Su Sites - Peer Review Draft* March 2001. P 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepa Environmental Concervation Technical and Administrative Guidance Memorandum #4046, nation of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup* ves.1994
(3) U.S. EPA (Enviro tal Protection Agency) January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte* alytical Operat Data Qu tion DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: Quackenbush	***Date Received***: 02/24/06	***Conc (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 89.8	
	Lab Sample ID #:B-2B	***Dilution Factor***: 10	***Sample Location Identifier***:B-2B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-1A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	**CAS NO.**	**USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)**	**USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)**	**New York Recommended Soil Cleanup Objectives [2] (mg/Kg)**	**USEPA Contract Required Detection Limits [3] (ug/L)**	**Analytical Result (mg/Kg)**	**Concentration Qualifier**	**Usability Qualifier**
Aluminum	7429-90-5	N	NA	SB	200	4550.00		
Antimony	7440-36-0	31	470	SB	60	1.33	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.38	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	23.40	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	134.00		
Calcium	7440-70-2	NA	NA	SB	5000	150000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	485.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	4.35	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	378.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	20400.00		
Lead*	7439-92-1	400	750	SB	3	122.0		
Magnesium	7439-95-4	NA	NA	SB	5000	42800.00		
Manganese	7439-96-5	NA	NA	SB	15	360.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	1250.00		
Potassium	7440-09-7	NA	NA	SB	5000	1280.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.94	U	
Silver	7440-22-4	390	5,700	SB	10	0.28	B	
Sodium	7440-23-5	NA	NA	SB	5000	223.00		
Thallium	7440-28-0	6	91	SB	10	0.17	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	23.10	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	822.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*
(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 81.7	
	Lab Sample ID #:B-3A	***Dilution Factor***: 10	***Sample Location Identifier***:B-3A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-1A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	1180.00		
Antimony	7440-36-0	31	450	SB	60	1.02	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.42	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	6.48	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	34.80		
Calcium	7440-70-2	NA	NA	SB	5000	1840.00	B	
Chromium	7440-47-3	230	3,400	10 OR SB	10	335.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	0.41	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	1650.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	6430.00		
Lead*	7439-92-1	400	750	SB	3	1350.0		
Magnesium	7439-95-4	NA	NA	SB	5000	218.00	B	
Manganese	7439-96-5	NA	NA	SB	15	14.50	B	
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	9.12	B	
Potassium	7440-09-7	NA	NA	SB	5000	985.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.97	U	
Silver	7440-22-4	390	5,700	SB	10	1.43	B	
Sodium	7440-23-5	NA	NA	SB	5000	407.00	B	
Thallium	7440-28-0	6	91	SB	10	0.09	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	2.85	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	607.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environ[illegible]al Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Sup[illegible]Sites - Peer Review Draft*
March 2001. Pu[illegible] 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepa[illegible] Environmental Concervation Technical and Administrative Guidance Memorandum #4046, D[illegible]ation of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup* [illegible]es.1994
(3) U.S. EPA (Environ[illegible]tal Protection Agency) January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte*
[illegible] Off[illegible] [illegible]erations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H[illegible]Jackenbush	***Date Received***: 02/24/06	***Conc[illegible] (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 84.3	
	Lab Sample ID #:B-3B	***Dilution Factor***: 10	***Sample Location Identifier***:B-3B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-1A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	N[illegible]	NA	SB	200	3020.00		
Antimony	7440-36-0	31	4[illegible]	SB	60	1.28	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.59	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	25.50	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.13	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	67.30		
Calcium	7440-70-2	NA	NA	SB	5000	35200.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	705.00		
Cobalt	7440-48-4	NA	N[illegible]	30 OR SB	50	1.81	B	
Copper	7440-50-8	NA	N[illegible]	25 OR SB	25	1770.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	19800.00		
Lead*	7439-92-1	400	750	SB	3	2370.0		
Magnesium	7439-95-4	NA	NA	SB	5000	12700.00		
Manganese	7439-96-5	NA	NA	SB	15	174.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	166.00		
Potassium	7440-09-7	NA	NA	SB	5000	1630.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.09	U	
Silver	7440-22-4	390	5,700	SB	10	1.06	B	
Sodium	7440-23-5	NA	NA	SB	5000	445.00	B	
Thallium	7440-28-0	6	91	SB	10	0.12	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	10.90	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	1380.00		
Cyanide	57-12-5	1,600	2[illegible],000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 91.4	
	Lab Sample ID #:B-4A	***Dilution Factor***: 10	***Sample Location Identifier***:B-4A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-1A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2600.00		
Antimony	7440-36-0	31	450	SB	60	1.31	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.27	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	29.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	405.00		
Calcium	7440-70-2	NA	NA	SB	5000	127000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	153.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	35.30	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	431.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	11200.00		
Lead*	7439-92-1	400	750	SB	3	35.2		
Magnesium	7439-95-4	NA	NA	SB	5000	28200.00		
Manganese	7439-96-5	NA	NA	SB	15	641.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	9830.00		
Potassium	7440-09-7	NA	NA	SB	5000	1980.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.87	U	
Silver	7440-22-4	390	5,700	SB	10	2.10	B	
Sodium	7440-23-5	NA	NA	SB	5000	600.00	B	
Thallium	7440-28-0	6	91	SB	10	0.13	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	11.60	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	843.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE OR DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepartment of Environmental Conservation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*
(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1) *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDL)*. Office of Solid Wastes and Emergency Response, Analytical Operations Center, Washington, DC

INORGANIC ANALYSIS DATA SHEET

Site Name: H[illegible]uackenbush	**Date Received**: 02/24/06	**Conc.** (low/med.): Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/07/06	**Percent % Solids**: 89.5	
	Lab Sample ID #:B-4B	**Dilution Factor**: 10	**Sample Location Identifier**:B-4B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-1A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	**CAS NO.**	**USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)**	**USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)**	**New York Recommended Soil Cleanup Objectives [2] (mg/Kg)**	**USEPA Contract Required Detection Limits [3] (ug/L)**	**Analytical Result (mg/Kg)**	**Concentration Qualifier**	**Usability Qualifier**
Aluminum	7429-90-5	N[illegible]	NA	SB	200	7750.00		
Antimony	7440-36-0	31	4[illegible]	SB	60	1.34	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.44	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	25.60	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	78.40		
Calcium	7440-70-2	NA	NA	SB	5000	83900.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	259.00		
Cobalt	7440-48-4	NA	N[illegible]	30 OR SB	50	22.80	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	208.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	10500.00		
Lead*	7439-92-1	400	750	SB	3	32.6		
Magnesium	7439-95-4	NA	NA	SB	5000	19000.00		
Manganese	7439-96-5	NA	NA	SB	15	422.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	9700.00		
Potassium	7440-09-7	NA	NA	SB	5000	1900.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.98	U	
Silver	7440-22-4	390	5,700	SB	10	2.22	B	
Sodium	7440-23-5	NA	NA	SB	5000	756.00	B	
Thallium	7440-28-0	6	91	SB	10	0.22	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	8.64	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	889.00		
Cyanide	57-12-5	1,600	2[illegible]	NA	10	NR		

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*
(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response. Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 85.6	
	Lab Sample ID #:B-4C	***Dilution Factor***: 10	***Sample Location Identifier***:B-4C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-1A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	3920.00		
Antimony	7440-36-0	31	450	SB	60	0.66	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.57	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	44.40	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.13	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	68.90		
Calcium	7440-70-2	NA	NA	SB	5000	125000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	760.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	20.90	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	1890.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	23500.00		
Lead*	7439-92-1	400	750	SB	3	822.0		
Magnesium	7439-95-4	NA	NA	SB	5000	41000.00		
Manganese	7439-96-5	NA	NA	SB	15	496.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	11000.00		
Potassium	7440-09-7	NA	NA	SB	5000	2260.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.08	U	
Silver	7440-22-4	390	5,700	SB	10	1.24	B	
Sodium	7440-23-5	NA	NA	SB	5000	268.00	B	
Thallium	7440-28-0	6	91	SB	10	0.21	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	14.50	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	4690.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
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Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
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NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
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SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environ[illegible]al Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Super[illegible]Sites - Peer Review Draft* March 2001. Pu[illegible]9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepar[illegible]Environmental Concervation Technical and Administrative Guidance Memorandum #4046, D[illegible]tion of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup* [illegible]s.1994
(3) U.S. EPA (Enviro[illegible]al Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List* (TAL) with [illegible] Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H[illegible]ackenbush	***Date Received***: 02/24/06	***Conc.*** [illegible] ***(low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 78.6	
	Lab Sample ID #:B-5A	***Dilution Factor***: 10	***Sample Location Identifier***:B-5A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-5A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	[illegible]	SB	200	4570.00		
Antimony	7440-36-0	31	45	SB	60	0.51	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	18.80		
Barium	7440-39-3	5,500	79,000	300 OR SB	200	183.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	72.40		
Calcium	7440-70-2	NA	NA	SB	5000	52100.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	130.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.71	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	3540.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	41500.00		
Lead*	7439-92-1	400	750	SB	3	932.0		
Magnesium	7439-95-4	NA	NA	SB	5000	2350.00	B	
Manganese	7439-96-5	NA	NA	SB	15	153.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	602.00		
Potassium	7440-09-7	NA	NA	SB	5000	3880.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.00	U	
Silver	7440-22-4	390	5,700	SB	10	5.19	B	
Sodium	7440-23-5	NA	NA	SB	5000	2070.00	B	
Thallium	7440-28-0	6	91	SB	10	0.24	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	6.77	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	4610.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
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Data Concentration Qualifier Definitions:
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B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
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INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 61.6	
	Lab Sample ID #:B-5B	***Dilution Factor***: 10	***Sample Location Identifier***:B-5B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-5A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2480.00		
Antimony	7440-36-0	31	470	SB	60	4.20	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	2.5		
Barium	7440-39-3	5,500	79,000	300 OR SB	200	98.40	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.18	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	1960.00		
Calcium	7440-70-2	NA	NA	SB	5000	39300.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	4800.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	181.00		
Copper	7440-50-8	NA	NA	25 OR SB	25	12500.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	129000.00		
Lead*	7439-92-1	400	750	SB	3	2200.00		
Magnesium	7439-95-4	NA	NA	SB	5000	4860.00		
Manganese	7439-96-5	NA	NA	SB	15	1170.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	45900.00		
Potassium	7440-09-7	NA	NA	SB	5000	1260.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.50	U	
Silver	7440-22-4	390	5,700	SB	10	118.00		
Sodium	7440-23-5	NA	NA	SB	5000	476.00	B	
Thallium	7440-28-0	6	91	SB	10	0.22	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	15.00	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	32100.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
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Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
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INORGANIC ANALYSIS DATA SHEET

Site Name: H uackenbush	**Date Received**: 02/24/06	**Conc (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/07/06	**Percent % Solids**: 90.7	
	Lab Sample ID #:B-6A	**Dilution Factor**: 10	**Sample Location Identifier**:B-6A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-5A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	N	NA	SB	200	2410.00		
Antimony	7440-36-0	31	450	SB	60	0.27	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	3.31	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	20.60	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.10	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	106.00		
Calcium	7440-70-2	NA	NA	SB	5000	114000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	54.50		
Cobalt	7440-48-4	NA	N	30 OR SB	50	9.04	B	
Copper	7440-50-8	NA	N	25 OR SB	25	877.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	12000.00		
Lead*	7439-92-1	400	750	SB	3	33.20		
Magnesium	7439-95-4	NA	NA	SB	5000	31600.00		
Manganese	7439-96-5	NA	NA	SB	15	668.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	4120.00		
Potassium	7440-09-7	NA	NA	SB	5000	606.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.77	U	
Silver	7440-22-4	390	5,700	SB	10	0.24	U	
Sodium	7440-23-5	NA	NA	SB	5000	1180.00	B	
Thallium	7440-28-0	6	91	SB	10	0.07	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	9.09	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	843.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*
(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 93.5	
	Lab Sample ID #:B-6B	***Dilution Factor***: 10	***Sample Location Identifier***:B-6B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-5A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	N	NA	SB	200	7180.00		
Antimony	7440-36-0	31	470	SB	60	1.31	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.29	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	30.90	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	99.20		
Calcium	7440-70-2	NA	NA	SB	5000	145000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	44.80		
Cobalt	7440-48-4	NA	N	30 OR SB	50	7.32	B	
Copper	7440-50-8	NA	N	25 OR SB	25	938.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	12500.00		
Lead*	7439-92-1	400	750	SB	3	398.00		
Magnesium	7439-95-4	NA	NA	SB	5000	47800.00		
Manganese	7439-96-5	NA	NA	SB	15	1030.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	632.00		
Potassium	7440-09-7	NA	NA	SB	5000	910.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.89	U	
Silver	7440-22-4	390	5,700	SB	10	0.53	B	
Sodium	7440-23-5	NA	NA	SB	5000	1200.00	B	
Thallium	7440-28-0	6	91	SB	10	0.08	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	9.37	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	1840.00		
Cyanide	57-12-5	1,600	23,000	N	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Sup[illegible]' Sites - Peer Review Draft* March 2001. Pu[illegible] 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepa[illegible] Environmental Concervation Technical and Administrative Guidance Memorandum #4046, [illegible]ation of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup[illegible]es.1994*
(3) U.S. EPA (Envi[illegible]tal Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Cont[illegible] Detection [illegible] CRDL*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: Quackenbush	**Date Received**: 02/24/06	**Conc / (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/07/06	**Percent % Solids**: 93.1	
	Lab Sample ID #:B-6C	**Dilution Factor**: 10	**Sample Location Identifier**:B-6C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-5A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	N	[illegible]	SB	200	2800.00		
Antimony	7440-36-0	31	4[illegible]	SB	60	0.29	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.21	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	25.90	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.10	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	197.00		
Calcium	7440-70-2	NA	NA	SB	5000	150000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	43.00		
Cobalt	7440-48-4	NA	N[illegible]	30 OR SB	50	5.98	B	
Copper	7440-50-8	NA	N[illegible]	25 OR SB	25	645.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	11700.00		
Lead*	7439-92-1	400	750	SB	3	104.00		
Magnesium	7439-95-4	NA	NA	SB	5000	26000.00		
Manganese	7439-96-5	NA	NA	SB	15	581.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	1600.00		
Potassium	7440-09-7	NA	NA	SB	5000	995.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.83	U	
Silver	7440-22-4	390	5,700	SB	10	2.24	B	
Sodium	7440-23-5	NA	NA	SB	5000	821.00	B	
Thallium	7440-28-0	6	91	SB	10	0.08	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	9.04	B	
Cyanide	57-12-5	1,600	2[illegible]	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*
(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 92.8	
	Lab Sample ID #:B-6D	***Dilution Factor***: 10	***Sample Location Identifier***:B-6D
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-5A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2150.00		
Antimony	7440-36-0	31	450	SB	60	0.30	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.25	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	24.10	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	215.00		
Calcium	7440-70-2	NA	NA	SB	5000	138000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	40.40		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	5.64	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	596.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	10200.00		
Lead*	7439-92-1	400	750	SB	3	97.80		
Magnesium	7439-95-4	NA	NA	SB	5000	23400.00		
Manganese	7439-96-5	NA	NA	SB	15	497.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	1380.00		
Potassium	7440-09-7	NA	NA	SB	5000	920.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.86	U	
Silver	7440-22-4	390	5,700	SB	10	1.98	B	
Sodium	7440-23-5	NA	NA	SB	5000	726.00	B	
Thallium	7440-28-0	6	91	SB	10	0.08	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	8.62	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	942.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Sites - Peer Review Draft* March 2001. P 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepa Environmental Concervation Technical and Administrative Guidance Memorandum #4046, nation of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup* ves.1994
(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Re tion Limits (CRDLs)* Office of Solid W e an y Response, Analytical Oper Data Quality Ce Washington DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H[illegible]Jackenbush	***Date Received***: 02/24/06	***Conc[illegible] (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 94.8	
	Lab Sample ID #:B-7A	***Dilution Factor***: 10	***Sample Location Identifier***:B-7A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-5A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	SB	200	3220.00		
Antimony	7440-36-0	31	45	SB	60	0.33	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.36	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	20.10	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	68.40		
Calcium	7440-70-2	NA	NA	SB	5000	95300.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	61.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.86	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	35.20		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	11800.00		
Lead*	7439-92-1	400	750	SB	3	11.00		
Magnesium	7439-95-4	NA	NA	SB	5000	20000.00		
Manganese	7439-96-5	NA	NA	SB	15	538.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	49.90		
Potassium	7440-09-7	NA	NA	SB	5000	799.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.93	U	
Silver	7440-22-4	390	5,700	SB	10	2.53	B	
Sodium	7440-23-5	NA	NA	SB	5000	764.00	B	
Thallium	7440-28-0	6	91	SB	10	0.09	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	12.30	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	107.00		
Cyanide	57-12-5	1,600	22,00[illegible]	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
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Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*
(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 92.1	
	Lab Sample ID #:B-7B	***Dilution Factor***: 10	***Sample Location Identifier***:B-7B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-5A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	12730.00		
Antimony	7440-36-0	31	450	SB	60	0.36	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.37	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	19.70	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	115.00		
Calcium	7440-70-2	NA	NA	SB	5000	103000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	92.20		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	2.51	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	978.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	12800.00		
Lead*	7439-92-1	400	750	SB	3	1140.00		
Magnesium	7439-95-4	NA	NA	SB	5000	12400.00		
Manganese	7439-96-5	NA	NA	SB	15	250.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	34.70	B	
Potassium	7440-09-7	NA	NA	SB	5000	795.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.94	U	
Silver	7440-22-4	390	5,700	SB	10	0.28	U	
Sodium	7440-23-5	NA	NA	SB	5000	27.20	B	
Thallium	7440-28-0	6	91	SB	10	0.14	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	9.42	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	1330.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
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DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
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NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
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SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environm... Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superf... s - Peer Review Draft* March 2001. Publi... 55.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepartm... vironmental Concervation Technical and Administrative Guldance Memorandum #4046, Det... on of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Ob...* ,1994
(3) U.S. EPA (Environm... Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract R... ed Detect... Limit...* ...l Solid Waste ... Response, Analytical Operations/Data Quality Center, Washington, DC

INORGANIC ANALYSIS DATA SHEET

Site Name: H[illegible]Jackenbush	**Date Received**: 02/24/06	**Conc.(low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed**: 03/07/06	**Percent % Solids**: 88.9	
	Lab Sample ID #:B-7C	**Dilution Factor**: 10	**Sample Location Identifier**:B-7C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-5A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2660.00		
Antimony	7440-36-0	31	470	SB	60	0.29	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.19	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	17.70	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.10	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	298.00		
Calcium	7440-70-2	NA	NA	SB	5000	128000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	34.80		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.97	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	592.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	11600.00		
Lead*	7439-92-1	400	750	SB	3	8.46		
Magnesium	7439-95-4	NA	NA	SB	5000	17200.00		
Manganese	7439-96-5	NA	NA	SB	15	399.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	210.00		
Potassium	7440-09-7	NA	NA	SB	5000	831.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.82	U	
Silver	7440-22-4	390	5,700	SB	10	0.31	B	
Sodium	7440-23-5	NA	NA	SB	5000	51.30	B	
Thallium	7440-28-0	6	91	SB	10	0.15	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	10.20	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	926.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*
(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 85.8	
	Lab Sample ID #:B-9A	***Dilution Factor***: 10	***Sample Location Identifier***:B-9A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-9A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	8190.00		
Antimony	7440-36-0	31	450	SB	60	0.35	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.44	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	76.20	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	1.98	B	
Calcium	7440-70-2	NA	NA	SB	5000	27800.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	30.40		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	4.54	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	21.70	B	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	15200.00		
Lead*	7439-92-1	400	750	SB	3	116.0		
Magnesium	7439-95-4	NA	NA	SB	5000	2140.00	B	
Manganese	7439-96-5	NA	NA	SB	15	705.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	34.60	B	
Potassium	7440-09-7	NA	NA	SB	5000	792.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.99	U	
Silver	7440-22-4	390	5,700	SB	10	0.59	B	
Sodium	7440-23-5	NA	NA	SB	5000	13200.00		
Thallium	7440-28-0	6	91	SB	10	0.09	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	16.40	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	100.00		
Cyanide	57-12-5	1,600	22,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives*, 1994
(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganics Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC

INORGANIC ANALYSIS DATA SHEET

Site Name: H[illegible]uackenbush	**Date Received**: 02/24/06	**Conc[illegible] (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/07/06	**Percent % Solids**: 91.2	
	Lab Sample ID #:B-9B	**Dilution Factor**: 10	**Sample Location Identifier**:B-9B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-9A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	N[illegible]	[illegible]A	[illegible]SB	[illegible]200	6[illegible]60.00		
Antimony	7440-36-0	31	45[illegible]	[illegible]SB	[illegible]60	0.30	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.25	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	24.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	7.81		
Calcium	7440-70-2	NA	NA	SB	5000	92000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	70.80		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	8.36	B	
Copper	7440-50-8	NA	N[illegible]	25 OR SB	25	691.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	8710.00		
Lead*	7439-92-1	400	750	SB	3	13.1		
Magnesium	7439-95-4	NA	NA	SB	5000	28900.00		
Manganese	7439-96-5	NA	NA	SB	15	462.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	292.00		
Potassium	7440-09-7	NA	NA	SB	5000	654.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.86	U	
Silver	7440-22-4	390	5,700	SB	10	0.61	B	
Sodium	7440-23-5	NA	NA	SB	5000	4070.00	B	
Thallium	7440-28-0	6	91	SB	10	0.16	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	12.20	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	198.00		
Cyanide	57-12-5	1,600	23,00[illegible]	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
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NA: None Applicable
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mg/Kg: milligrams per Kilogram = parts per million (ppm)
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INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 91.1	
	Lab Sample ID #:B-9C	***Dilution Factor***: 10	***Sample Location Identifier***:B-9C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-9A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	8660.00		
Antimony	7440-36-0	31	470	SB	60	6.31	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.30	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	55.60	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	5.72		
Calcium	7440-70-2	NA	NA	SB	5000	79800.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	94.50		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	10.30	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	292.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	14600.00		
Lead*	7439-92-1	400	750	SB	3	39.0		
Magnesium	7439-95-4	NA	NA	SB	5000	16900.00		
Manganese	7439-96-5	NA	NA	SB	15	512.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	214.00		
Potassium	7440-09-7	NA	NA	SB	5000	1850.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.89	U	
Silver	7440-22-4	390	5,700	SB	10	0.54	B	
Sodium	7440-23-5	NA	NA	SB	5000	5380.00		
Thallium	7440-28-0	6	91	SB	10	0.16	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	25.30	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	200.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
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NA: None Applicable
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mg/Kg: milligrams per Kilogram = parts per million (ppm)
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(1) U.S.EPA (Enviro[illegible]al Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Sup[illegible]Sites - Peer Review Draft* March 2001. Pu[illegible]9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepa[illegible]Environmental Concervation Technical and Administrative Guidance Memorandum #4046, [illegible]ation of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup* [illegible]es.1994
(3) U.S. EPA (Environ[illegible]ental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Con[illegible]ired Detection [illegible]*. Office of S[illegible]e and Emergency Respons[illegible]alytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: Quackenbush	***Date Received***: 02/24/06	***Concentration (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 91.4	
	Lab Sample ID #:B-9D	***Dilution Factor***: 10	***Sample Location Identifier***:B-9D
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-9A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4010.00		
Antimony	7440-36-0	31	470	SB	60	1.31	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.28	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	24.80	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	9.21		
Calcium	7440-70-2	NA	NA	SB	5000	114000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	37.10		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	6.00	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	209.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	8400.00		
Lead*	7439-92-1	400	750	SB	3	6.9		
Magnesium	7439-95-4	NA	NA	SB	5000	32100.00		
Manganese	7439-96-5	NA	NA	SB	15	417.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	414.00		
Potassium	7440-09-7	NA	NA	SB	5000	570.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.87	U	
Silver	7440-22-4	390	5,700	SB	10	0.33	B	
Sodium	7440-23-5	NA	NA	SB	5000	264.00	B	
Thallium	7440-28-0	6	91	SB	10	0.10	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	10.90	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	245.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

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NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

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(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 87.0	
	Lab Sample ID #:B-10A	***Dilution Factor***: 10	***Sample Location Identifier***:B-10A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-9A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	7530.00		
Antimony	7440-36-0	31	450	SB	60	0.53	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	21.40		
Barium	7440-39-3	5,500	79,000	300 OR SB	200	83.70	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	3.29	B	
Calcium	7440-70-2	NA	NA	SB	5000	30700.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	409.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	7.51	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	218.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	27900.00		
Lead*	7439-92-1	400	750	SB	3	260.0		
Magnesium	7439-95-4	NA	NA	SB	5000	2050.00	B	
Manganese	7439-96-5	NA	NA	SB	15	569.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	108.00		
Potassium	7440-09-7	NA	NA	SB	5000	814.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.99	U	
Silver	7440-22-4	390	5,700	SB	10	0.89	B	
Sodium	7440-23-5	NA	NA	SB	5000	425.00	B	
Thallium	7440-28-0	6	91	SB	10	0.33	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	20.30	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	193.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Sup... Sites - Peer Review Draft*
March 2001. ...n 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDep... of Environmental Concervation Technical and Administrative Guidance Memorandum #4046... ...nation of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanu... ...ves.1994*
(3) U.S. EPA (Envi... ...ental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Cont... Required Detection Limits (CRDLs)*. Office ... Solid Waste and Emergency Response, Analy... Operations/Data Quality C... Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: Quackenbush	**Date Received**: 02/24/06	**Concentration (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/07/06	**Percent % Solids**: 94.1	
	Lab Sample ID #:B-10B	**Dilution Factor**: 10	**Sample Location Identifier**:B-10B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-9A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	950.00		
Antimony	7440-36-0	31	450	SB	60	0.46	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.37	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	51.10	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	3.24	B	
Calcium	7440-70-2	NA	NA	SB	5000	122000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	246.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	5.65	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	354.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	11500.00		
Lead*	7439-92-1	400	750	SB	3	58.0		
Magnesium	7439-95-4	NA	NA	SB	5000	20000.00		
Manganese	7439-96-5	NA	NA	SB	15	466.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	327.00		
Potassium	7440-09-7	NA	NA	SB	5000	664.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.94	U	
Silver	7440-22-4	390	5,700	SB	10	0.28	U	
Sodium	7440-23-5	NA	NA	SB	5000	315.00	B	
Thallium	7440-28-0	6	91	SB	10	0.11	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	9.48	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	145.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 93.9	
	Lab Sample ID #:B-10C	***Dilution Factor***: 10	***Sample Location Identifier***:B-10C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-9A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	3080.00		
Antimony	7440-36-0	31	450	SB	60	4.31	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.29	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	45.60	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	9.11		
Calcium	7440-70-2	NA	NA	SB	5000	192000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	86.20		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	4.89	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	180.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	9570.00		
Lead*	7439-92-1	400	750	SB	3	41.4		
Magnesium	7439-95-4	NA	NA	SB	5000	26700.00		
Manganese	7439-96-5	NA	NA	SB	15	497.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	157.00		
Potassium	7440-09-7	NA	NA	SB	5000	641.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.88	U	
Silver	7440-22-4	390	5,700	SB	10	0.68	B	
Sodium	7440-23-5	NA	NA	SB	5000	336.00	B	
Thallium	7440-28-0	6	91	SB	10	0.08	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	10.60	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	88.50		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*
(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDL)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC

INORGANIC ANALYSIS DATA SHEET

Site Name: Quackenbush	**Date Received**: 02/24/06	**Conc. / (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/07/06	**Percent % Solids**: 89.0	
	Lab Sample ID #:B-11A	**Dilution Factor**: 10	**Sample Location Identifier**:B-11A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-9A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	N	NA	SB	200	5940.00		
Antimony	7440-36-0	31	450	SB	60	1.34	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	2.18	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	37.90	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	1.12	B	
Calcium	7440-70-2	NA	NA	SB	5000	15300.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	33.90		
Cobalt	7440-48-4	NA	N	30 OR SB	50	4.35	B	
Copper	7440-50-8	NA	N	25 OR SB	25	72.30		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	16100.00		
Lead*	7439-92-1	400	750	SB	3	12.5		
Magnesium	7439-95-4	NA	NA	SB	5000	3080.00	B	
Manganese	7439-96-5	NA	NA	SB	15	559.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	16.70	B	
Potassium	7440-09-7	NA	NA	SB	5000	1040.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.97	U	
Silver	7440-22-4	390	5,700	SB	10	0.30	U	
Sodium	7440-23-5	NA	NA	SB	5000	515.00	B	
Thallium	7440-28-0	6	91	SB	10	0.01	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	44.60	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	90.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 90.3	
	Lab Sample ID #:B-11B	***Dilution Factor***: 10	***Sample Location Identifier***:B-11B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-9A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	5050.00		
Antimony	7440-36-0	31	450	SB	60	1.34	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.43	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	27.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	1.11	B	
Calcium	7440-70-2	NA	NA	SB	5000	99100.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	34.30		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	4.12	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	96.80		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	9950.00		
Lead*	7439-92-1	400	750	SB	3	5.2		
Magnesium	7439-95-4	NA	NA	SB	5000	15500.00		
Manganese	7439-96-5	NA	NA	SB	15	447.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	14.90	B	
Potassium	7440-09-7	NA	NA	SB	5000	903.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.98	U	
Silver	7440-22-4	390	5,700	SB	10	0.30	U	
Sodium	7440-23-5	NA	NA	SB	5000	197.00	B	
Thallium	7440-28-0	6	91	SB	10	0.19	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	16.00	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	112.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Sup... Sites - Peer Review Draft* March 2001. Pu... 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepa... Environmental Concervation Technical and Administrative Guidance Memorandum #4046, ...ation of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup* ...es.1994
(3) U.S. EPA (Envir... al Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical ...ns/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: uackenbush	**Date Received**: 02/24/06	**Conc. (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/07/06	**Percent % Solids**: 94.2	
	Lab Sample ID #:B-11C	**Dilution Factor**: 10	**Sample Location Identifier**:B-11C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-9A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4170.00		
Antimony	7440-36-0	31	470	SB	60	0.33	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.26	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	40.10	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	2.52	B	
Calcium	7440-70-2	NA	NA	SB	5000	118000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	106.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.43	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	618.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	9880.00		
Lead*	7439-92-1	400	750	SB	3	53.3		
Magnesium	7439-95-4	NA	NA	SB	5000	14800.00		
Manganese	7439-96-5	NA	NA	SB	15	416.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	28.40	B	
Potassium	7440-09-7	NA	NA	SB	5000	722.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.86	U	
Silver	7440-22-4	390	5,700	SB	10	0.26	U	
Sodium	7440-23-5	NA	NA	SB	5000	486.00		
Thallium	7440-28-0	6	91	SB	10	0.10	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	12.90	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	633.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*
(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/07/06	***Percent % Solids***: 90.0	
	Lab Sample ID #:B-11D	***Dilution Factor***: 10	***Sample Location Identifier***:B-11D
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-9A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4240.00		
Antimony	7440-36-0	31	450	SB	60	0.32	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.35	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	25.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.96	B	
Calcium	7440-70-2	NA	NA	SB	5000	95200.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	27.90		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.69	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	40.60		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	8990.00		
Lead*	7439-92-1	400	750	SB	3	3.5		
Magnesium	7439-95-4	NA	NA	SB	5000	9220.00		
Manganese	7439-96-5	NA	NA	SB	15	406.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	13.40	B	
Potassium	7440-09-7	NA	NA	SB	5000	702.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.92	U	
Silver	7440-22-4	390	5,700	SB	10	0.28	U	
Sodium	7440-23-5	NA	NA	SB	5000	168.00	B	
Thallium	7440-28-0	6	91	SB	10	0.12	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	11.40	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	108.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepartment of Environmental Conservation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*
(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. ckenbush	***Date Received***: 02/24/06	***Conc. L ow/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/10/06	***Percent % Solids***: 88.6	
	Lab Sample ID #:B-12A	***Dilution Factor***: 10	***Sample Location Identifier***:B-12A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-9A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)						
		USEPA Residential Soil Screening Levels [a] [1]	USEPA Commercial/Industrial Soil Screening Levels [a] [1]	New York Recommended Soil Cleanup Objectives [2]	USEPA Contract Required Detection Limits [3]	Analytical Result	Data	
ANALYTE	CAS NO.	(mg/Kg)	(mg/Kg)	(mg/Kg)	(ug/L)	(mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	5140.00		
Antimony	7440-36-0	31	450	SB	60	0.33	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.58	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	75.10	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.30	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	5.83		
Calcium	7440-70-2	NA	NA	SB	5000	18700.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	18.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	4.42	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	42.20		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	16500.00		
Lead*	7439-92-1	400	750	SB	3	81.30		
Magnesium	7439-95-4	NA	NA	SB	5000	3650.00	B	
Manganese	7439-96-5	NA	NA	SB	15	678.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	160.00		
Potassium	7440-09-7	NA	NA	SB	5000	510.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.95	U	
Silver	7440-22-4	390	5,700	SB	10	4.56	B	
Sodium	7440-23-5	NA	NA	SB	5000	209.00	B	
Thallium	7440-28-0	6	91	SB	10	0.40	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	12.10	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	92.40		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*
(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/10/06	***Percent % Solids***: 91.1	
	Lab Sample ID #:B-12B	***Dilution Factor***: 10	***Sample Location Identifier***:B-12B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-9A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	3010.00		
Antimony	7440-36-0	31	470	SB	60	0.34	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.44	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	24.90	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.43	B	
Calcium	7440-70-2	NA	NA	SB	5000	92200.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	11.30	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.18	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	15.50	B	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	9580.00		
Lead*	7439-92-1	400	750	SB	3	54.10		
Magnesium	7439-95-4	NA	NA	SB	5000	29300.00		
Manganese	7439-96-5	NA	NA	SB	15	529.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	21.70	B	
Potassium	7440-09-7	NA	NA	SB	5000	1310.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.98	U	
Silver	7440-22-4	390	5,700	SB	10	0.30	U	
Sodium	7440-23-5	NA	NA	SB	5000	328.00	B	
Thallium	7440-28-0	6	91	SB	10	0.12	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	17.40	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	46.20		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Pub 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepar Environmental Concervation Technical and Administrative Guidance Memorandum #4046, D tion of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup* s.1994
(3) U.S. EPA (Enviro l Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inor nalysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with C Required Detection Limits (CRDLs)*. Office of Solid W ste and Emergency Respons cal Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. ackenbush	**Date Received**: 02/24/06	**Conc. (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/10/06	**Percent % Solids**: 93.6	
	Lab Sample ID #:B-12C	**Dilution Factor**: 10	**Sample Location Identifier**:B-12C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-9A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2310.00		
Antimony	7440-36-0	31	450	SB	60	0.30	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.25	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	17.40	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.22	B	
Calcium	7440-70-2	NA	NA	SB	5000	90200.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	6.33	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	2.85	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	9.45	B	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	7670.00		
Lead*	7439-92-1	400	750	SB	3	4.58		
Magnesium	7439-95-4	NA	NA	SB	5000	12600.00		
Manganese	7439-96-5	NA	NA	SB	15	298.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	9.24	B	
Potassium	7440-09-7	NA	NA	SB	5000	679.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.85	U	
Silver	7440-22-4	390	5,700	SB	10	0.26	U	
Sodium	7440-23-5	NA	NA	SB	5000	226.00	B	
Thallium	7440-28-0	6	91	SB	10	0.09	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	10.90	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	34.20		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/10/06	***Percent % Solids***: 91.0	
	Lab Sample ID #:B-13A	***Dilution Factor***: 10	***Sample Location Identifier***:B-13A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-9A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	1840.00		
Antimony	7440-36-0	31	450	SB	60	0.32	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	8.64	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	148.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.62	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	32.60		
Calcium	7440-70-2	NA	NA	SB	5000	13100.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	94.10		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	5.12	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	119.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	18100.00		
Lead*	7439-92-1	400	750	SB	3	210.00		
Magnesium	7439-95-4	NA	NA	SB	5000	1690.00	B	
Manganese	7439-96-5	NA	NA	SB	15	702.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	188.00		
Potassium	7440-09-7	NA	NA	SB	5000	596.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.92	U	
Silver	7440-22-4	390	5,700	SB	10	3.96	B	
Sodium	7440-23-5	NA	NA	SB	5000	402.00	B	
Thallium	7440-28-0	6	91	SB	10	0.65	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	15.10	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	264.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
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mg/Kg: milligrams per Kilogram = parts per million (ppm)
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Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

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(2) New YorkDepa[illegible] Environmental Concervation Technical and Administrative Guidance Memorandum #4046, [illegible]ation of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup*[illegible]gs.1994
(3) U.S. EPA (Envi[illegible]al Protection Agency). January 2000. Contract Laboratory Program Statement of Work for In[illegible] Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H ackenbush	**Date Received**: 02/24/06	**Conc. (low/med.)**: Low
Address: Herkimer, New York	**Date Analyzed:** 03/10/06	**Percent % Solids**: 87.4
	Lab Sample ID #:B-13B	**Dilution Factor**: 10
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:
Case No.: QUACS1	**(SDG) No.**:B-9A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)

Program: CERCLA

Sample Location Identifier:B-13B

ANALYTE	CAS NO.	Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)				Data	
		USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	N	NA	SB	200	4880.00		
Antimony	7440-36-0	31	45	SB	60	0.32	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.33	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	52.10	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	5.16	B	
Calcium	7440-70-2	NA	NA	SB	5000	68100.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	59.20		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	7.41	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	31.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	11300.00		
Lead*	7439-92-1	400	750	SB	3	70.30		
Magnesium	7439-95-4	NA	NA	SB	5000	19300.00		
Manganese	7439-96-5	NA	NA	SB	15	959.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	71.30		
Potassium	7440-09-7	NA	NA	SB	5000	1560.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.91	U	
Silver	7440-22-4	390	5,700	SB	10	1.06	B	
Sodium	7440-23-5	NA	NA	SB	5000	370.00	B	
Thallium	7440-28-0	6	91	SB	10	0.17	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	21.50	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	91.50		
Cyanide	57-12-5	1,600	2,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/10/06	***Percent % Solids***: 88.6	
	Lab Sample ID #:B-13C	***Dilution Factor***: 10	***Sample Location Identifier***:B-13C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-9A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					
		USEPA Residential Soil Screening Levels [a] [1]	USEPA Commercial/Industrial Soil Screening Levels [a] [1]	New York Recommended Soil Cleanup Objectives [2]	USEPA Contract Required Detection Limits [3]	Analytical Result	Data
ANALYTE	CAS NO.	(mg/Kg)	(mg/Kg)	(mg/Kg)	(ug/L)	(mg/Kg)	Concentration Qualifier / Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	3380.00	
Antimony	7440-36-0	31	450	SB	60	6.32	U
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.32	U
Barium	7440-39-3	5,500	79,000	300 OR SB	200	42.20	B
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U
Cadmium	7440-43-9	70	900	1 OR SB	5	12.80	
Calcium	7440-70-2	NA	NA	SB	5000	92100.00	
Chromium	7440-47-3	230	3,400	10 OR SB	10	54.40	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.18	B
Copper	7440-50-8	NA	NA	25 OR SB	25	37.30	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	11200.00	
Lead*	7439-92-1	400	750	SB	3	39.20	
Magnesium	7439-95-4	NA	NA	SB	5000	25600.00	
Manganese	7439-96-5	NA	NA	SB	15	766.00	
Mercury	7439-97-6	23	340	0.1	0.2	NR	
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	63.70	
Potassium	7440-09-7	NA	NA	SB	5000	975.00	B
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.90	U
Silver	7440-22-4	390	5,700	SB	10	0.86	B
Sodium	7440-23-5	NA	NA	SB	5000	259.00	
Thallium	7440-28-0	6	91	SB	10	0.11	B
Vanadium	7440-62-2	550	7,900	150 SB	50	14.90	B
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	321.00	
Cyanide	57-12-5	1,600	23,000	NA	10	NR	

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001 ...on 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDe... of Environmental Concervation Technical and Administrative Guidance Memorandum #404... ...ination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Clean...* ...tives.1994

(3) U.S. EPA (En... ...ental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for I... ...nic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: Quackenbush	**Date Received**: 02/24/06	**Concentration (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/10/06	**Percent % Solids**: 89.4	
	Lab Sample ID #:B-14A	**Dilution Factor**: 10	**Sample Location Identifier**:B-14A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-9A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4530.00		
Antimony	7440-36-0	31	450	SB	60	0.38	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	3.71	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	109.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.26	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.33	B	
Calcium	7440-70-2	NA	NA	SB	5000	51400.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	6.68	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	4.46	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	20.50		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	12000.00		
Lead*	7439-92-1	400	750	SB	3	233.00		
Magnesium	7439-95-4	NA	NA	SB	5000	8710.00		
Manganese	7439-96-5	NA	NA	SB	15	516.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	12.60	B	
Potassium	7440-09-7	NA	NA	SB	5000	648.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.91	U	
Silver	7440-22-4	390	5,700	SB	10	0.28	U	
Sodium	7440-23-5	NA	NA	SB	5000	301.00	B	
Thallium	7440-28-0	6	91	SB	10	0.16	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	17.10	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	169.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/10/06	***Percent % Solids***: 92.7	
	Lab Sample ID #:B-14C	***Dilution Factor***: 10	***Sample Location Identifier***:B-14C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-9A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	3460.00		
Antimony	7440-36-0	31	450	SB	60	4.38	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.28	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	90.90	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.02	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.24	B	
Calcium	7440-70-2	NA	NA	SB	5000	99100.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	11.40		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.50	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	28.50		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	10040.00		
Lead*	7439-92-1	400	750	SB	3	178.00		
Magnesium	7439-95-4	NA	NA	SB	5000	12800.00		
Manganese	7439-96-5	NA	NA	SB	15	518.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	12.30	B	
Potassium	7440-09-7	NA	NA	SB	5000	645.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.88	U	
Silver	7440-22-4	390	5,700	SB	10	0.99	B	
Sodium	7440-23-5	NA	NA	SB	5000	277.00	B	
Thallium	7440-28-0	6	91	SB	10	0.10	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	12.80	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	112.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Pu... 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepa... Environmental Concervation Technical and Administrative Guidance Memorandum #4046, ...tion of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup* ...es.1994
(3) U.S. EPA (Envi... al Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inc... Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H[illegible]ackenbush	**Date Received**: 02/24/06	**Conc. (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/10/06	**Percent % Solids**: 92.5	
	Lab Sample ID #:B-14D	**Dilution Factor**: 10	**Sample Location Identifier**:B-14D
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-9A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	[illegible]	N[illegible]	S[illegible]	200	3510.00		
Antimony	7440-36-0	1	450	S[illegible]	60	0.[illegible]4	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.31	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	59.30	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.25	B	
Calcium	7440-70-2	NA	NA	SB	5000	109000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	9.12	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.63	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	27.20		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	10700.00		
Lead*	7439-92-1	400	750	SB	3	121.00		
Magnesium	7439-95-4	NA	NA	SB	5000	13600.00		
Manganese	7439-96-5	NA	NA	SB	15	594.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	10.30	B	
Potassium	7440-09-7	NA	NA	SB	5000	644.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.90	U	
Silver	7440-22-4	390	5,700	SB	10	0.27	U	
Sodium	7440-23-5	NA	NA	SB	5000	273.00	B	
Thallium	7440-28-0	6	91	SB	10	0.10	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	14.30	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	98.80		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

PRELIMINARY DATA
DO NOT CITE
OR
DISTRIBUTE

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/11/06	***Percent % Solids***: 89.5	
	Lab Sample ID #:B-15A	***Dilution Factor***: 10	***Sample Location Identifier***:B-15A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-15A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	5600.00		
Antimony	7440-36-0	31	450	SB	60	0.36	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	2.07	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	95.80	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.13	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.10	B	
Calcium	7440-70-2	NA	NA	SB	5000	30500.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	7.85	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	4.22	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	22.20	B	
Iron	7439-89-6	NA	NA	2000 OR SB	100	11900.00		
Lead*	7439-92-1	400	750	SB	3	208.00		
Magnesium	7439-95-4	NA	NA	SB	5000	4460.00	B	
Manganese	7439-96-5	NA	NA	SB	15	811.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	27.80	B	
Potassium	7440-09-7	NA	NA	SB	5000	621.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.15	B	
Silver	7440-22-4	390	5,700	SB	10	0.31	U	
Sodium	7440-23-5	NA	NA	SB	5000	231.00	B	
Thallium	7440-28-0	6	91	SB	10	0.10	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	16.80	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	116.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For S[illegible]nd Sites - Peer Review Draft* March 2001 [illegible]ion 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC
(2) New YorkD[illegible] of Environmental Concervation Technical and Administrative Guidance Memorandum #404[illegible]nination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Clean[illegible]ctives.1994*
(3) U.S. EPA (E[illegible]ental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Requir[illegible] Detection [illegible] (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC

INORGANIC ANALYSIS DATA SHEET

Site Name: Quackenbush	**Date Received**: 02/24/06	**Concentration (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/11/06	**Percent % Solids**: 80.1	
	Lab Sample ID #:B-15B	**Dilution Factor**: 10	**Sample Location Identifier**:B-15B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-15A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)						
		USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Data	
ANALYTE	CAS NO.						Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4710.00		
Antimony	7440-36-0	31	450	SB	60	0.36	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.48	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	34.90	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.03	U	
Calcium	7440-70-2	NA	NA	SB	5000	46500.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	9.51	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	4.16	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	12.80	B	
Iron	7439-89-6	NA	NA	2000 OR SB	100	13500.00		
Lead*	7439-92-1	400	750	SB	3	8.70		
Magnesium	7439-95-4	NA	NA	SB	5000	9860.00		
Manganese	7439-96-5	NA	NA	SB	15	511.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	11.40	B	
Potassium	7440-09-7	NA	NA	SB	5000	1910.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.01	U	
Silver	7440-22-4	390	5,700	SB	10	0.31	U	
Sodium	7440-23-5	NA	NA	SB	5000	200.00	B	
Thallium	7440-28-0	6	91	SB	10	0.10	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	22.30	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	86.70		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/11/06	***Percent % Solids***: 95.5	
	Lab Sample ID #:B-15C	***Dilution Factor***: 10	***Sample Location Identifier***:B-15C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-15A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	3250.00		
Antimony	7440-36-0	31	450	SB	60	0.31	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	7.92	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	32.10	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.02	U	
Calcium	7440-70-2	NA	NA	SB	5000	117000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	7.94	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.66	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	13.60	B	
Iron	7439-89-6	NA	NA	2000 OR SB	100	9910.00		
Lead*	7439-92-1	400	750	SB	3	8.93		
Magnesium	7439-95-4	NA	NA	SB	5000	17500.00		
Manganese	7439-96-5	NA	NA	SB	15	481.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	9.03	B	
Potassium	7440-09-7	NA	NA	SB	5000	889.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.88	U	
Silver	7440-22-4	390	5,700	SB	10	0.27	U	
Sodium	7440-23-5	NA	NA	SB	5000	182.00	B	
Thallium	7440-28-0	6	91	SB	10	0.08	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	12.20	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	41.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Sites - Peer Review Draft* March 2001. ...on 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDe... of Environmental Concervation Technical and Administrative Guidance Memorandum #4046 ...ination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup ...tives.* 1994

(3) U.S. EPA (En... ental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Det... Limits (CRDL)*. Office of Solid Waste an... ...ency Response ... Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: Quackenbush	**Date Received**: 02/24/06	**Concentration (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed**: 03/11/06	**Percent % Solids**: 89.9	
	Lab Sample ID #:B-16A	**Dilution Factor**: 10	**Sample Location Identifier**:B-16A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-15A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4410.00		
Antimony	7440-36-0	31	450	SB	60	0.31	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.27	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	48.10	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.10	B	
Calcium	7440-70-2	NA	NA	SB	5000	41500.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	6.38	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	5.50	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	20.40	B	
Iron	7439-89-6	NA	NA	2000 OR	100	13700.00		
Lead*	7439-92-1	400	750	SB	3	125.00		
Magnesium	7439-95-4	NA	NA	SB	5000	5940.00		
Manganese	7439-96-5	NA	NA	SB	15	720.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	16.60	B	
Potassium	7440-09-7	NA	NA	SB	5000	599.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.87	U	
Silver	7440-22-4	390	5,700	SB	10	0.27	U	
Sodium	7440-23-5	NA	NA	SB	5000	252.00	B	
Thallium	7440-28-0	6	91	SB	10	0.08	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	12.10	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	132.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/11/06	***Percent % Solids***: 88.6	
	Lab Sample ID #:B-17A	***Dilution Factor***: 10	***Sample Location Identifier***:B-17A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-15A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	8050.00		
Antimony	7440-36-0	31	450	SB	60	0.33	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.37	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	74.80	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.50	B	
Calcium	7440-70-2	NA	NA	SB	5000	12700.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	10.80	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	4.30	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	17.60	B	
Iron	7439-89-6	NA	NA	2000 OR SB	100	14800.00		
Lead*	7439-92-1	400	750	SB	3	215.00		
Magnesium	7439-95-4	NA	NA	SB	5000	2930.00	B	
Manganese	7439-96-5	NA	NA	SB	15	745.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	18.20	B	
Potassium	7440-09-7	NA	NA	SB	5000	530.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.96	U	
Silver	7440-22-4	390	5,700	SB	10	0.28	U	
Sodium	7440-23-5	NA	NA	SB	5000	246.00	B	
Thallium	7440-28-0	6	91	SB	10	0.09	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	17.50	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	165.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Envi[illegible]mental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For S[illegible]nd Sites - Peer Review Draft* March 2001 [illegible]ion 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC

(2) New YorkDe[illegible], of Environmental Concervation Technical and Administrative Guidance Memorandum #404[illegible]mination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Clean[illegible]ctives. 1994*

(3) U.S. EPA (En[illegible]mental Protection Agency). January 2000 Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDL's)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC

INORGANIC ANALYSIS DATA SHEET

Site Name: Quackenbush	**Date Received**: 02/24/06	**Co[illegible]el (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/11/06	**Percent % Solids**: 94.1	
	Lab Sample ID #:B-17B	**Dilution Factor**: 10	**Sample Location Identifier**:B-17B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-15A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

ANALYTE	CAS NO.	Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)			USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Data	
		USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)			Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	7340.00		
Antimony	7440-36-0	31	450	SB	60	0.30	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.24	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	72.60	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.10	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.30	B	
Calcium	7440-70-2	NA	NA	SB	5000	15000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	8.43	B	
Cobalt	7440-48-4	NA	[illegible]	[illegible]0 OR SB	50	4.15	B	
Copper	7440-50-8	NA	[illegible]	[illegible]5 OR SB	25	12.10	B	
Iron	7439-89-6	NA	[illegible]	[illegible]000 OR SB	100	13500.00		
Lead*	7439-92-1	400	750	SB	3	228.00		
Magnesium	7439-95-4	NA	NA	SB	5000	2630.00	B	
Manganese	7439-96-5	NA	NA	SB	15	668.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	12.60	B	
Potassium	7440-09-7	NA	NA	SB	5000	461.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.85	U	
Silver	7440-22-4	390	5,700	SB	10	0.26	U	
Sodium	7440-23-5	NA	NA	SB	5000	215.00	B	
Thallium	7440-28-0	6	91	SB	10	0.08	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	14.20	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	153.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/11/06	***Percent % Solids***: 94.8	
	Lab Sample ID #:B-17C	***Dilution Factor***: 10	***Sample Location Identifier***:B-17C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-15A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2367.00		
Antimony	7440-36-0	31	450	SB	60	0.32	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.35	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	21.30	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.02	U	
Calcium	7440-70-2	NA	NA	SB	5000	147000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	5.91	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	2.21	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	10.10	B	
Iron	7439-89-6	NA	NA	2000 OR	100	7570.00		
Lead*	7439-92-1	400	750	SB	3	8.85		
Magnesium	7439-95-4	NA	NA	SB	5000	51900.00		
Manganese	7439-96-5	NA	NA	SB	15	729.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	12.80	B	
Potassium	7440-09-7	NA	NA	SB	5000	486.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.92	U	
Silver	7440-22-4	390	5,700	SB	10	0.28	U	
Sodium	7440-23-5	NA	NA	SB	5000	263.00	B	
Thallium	7440-28-0	6	91	SB	10	0.09	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	9.75	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	37.50		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Envir[illegible]ental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For S[illegible] Sites - Peer Review Draft* March 2001. [illegible]n 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDe[illegible] of Environmental Concervation Technical and Administrative Guidance Memorandum #4046 [illegible]ination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanu[illegible]tives. 1994*

(3) U.S. EPA (Envi[illegible]ental Protection Agency). January 2000 Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Cont[illegible] Required Detection Limi[illegible]*; Office of Solid Waste and Emergency Respons[illegible] Analyti[illegible] Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: Quackenbush	**Date Received**: 02/24/06	**Concentration Level (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/11/06	**Percent % Solids**: 87.0	
	Lab Sample ID #:B-18A	**Dilution Factor**: 10	**Sample Location Identifier**:B-18A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-15A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	6540.00		
Antimony	7440-36-0	31	450	SB	60	0.32	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	3.73	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	128.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.12	B	
Calcium	7440-70-2	NA	NA	SB	5000	18800.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	7.84	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	4.04	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	20.30	B	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	11000.00		
Lead*	7439-92-1	400	750	SB	3	244.00		
Magnesium	7439-95-4	NA	NA	SB	5000	3110.00	B	
Manganese	7439-96-5	NA	NA	SB	15	896.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	10.10	B	
Potassium	7440-09-7	NA	NA	SB	5000	647.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.92	U	
Silver	7440-22-4	390	5,700	SB	10	0.28	U	
Sodium	7440-23-5	NA	NA	SB	5000	520.00	B	
Thallium	7440-28-0	6	91	SB	10	0.09	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	15.40	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	126.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/11/06	***Percent % Solids***: 87.9	
	Lab Sample ID #:B-18B	***Dilution Factor***: 10	***Sample Location Identifier***:B-18B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-15A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	5300.00		
Antimony	7440-36-0	31	450	SB	60	0.33	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.38	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	46.50	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.02	U	
Calcium	7440-70-2	NA	NA	SB	5000	33300.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	8.52	B	
Cobalt	7440-48-4	NA	N	30 OR SB	50	3.14	B	
Copper	7440-50-8	NA	N	25 OR SB	25	10.20	B	
Iron	7439-89-6	NA	N	2,000 OR SB	100	10700.00		
Lead*	7439-92-1	400	750	SB	3	40.30		
Magnesium	7439-95-4	NA	NA	SB	5000	4430.00	B	
Manganese	7439-96-5	NA	NA	SB	15	826.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	7.94	B	
Potassium	7440-09-7	NA	NA	SB	5000	558.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.94	U	
Silver	7440-22-4	390	5,700	SB	10	0.29	U	
Sodium	7440-23-5	NA	NA	SB	5000	520.00	B	
Thallium	7440-28-0	6	91	SB	10	0.09	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	13.00	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	48.30		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Si[illegible]nd Sites - Peer Review Draft* March 2001. [illegible]on 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDe[illegible] of Environmental Concervation Technical and Administrative Guidance Memorandum #404[illegible]ination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Clean[illegible]tives.1994*

(3) U.S. EPA (En[illegible]ental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for In[illegible]anic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: Quackenbush	**Date Received**: 02/24/06	**Concentration (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed**: 03/11/06	**Percent % Solids**: 91.6	
	Lab Sample ID #:B-18C	**Dilution Factor**: 10	**Sample Location Identifier**:B-18C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-15A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	3270.00		
Antimony	7440-36-0	31	450	SB	60	0.29	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.22	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	26.40	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.10	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.02	U	
Calcium	7440-70-2	NA	NA	SB	5000	92200.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	6.42	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.33	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	13.10	B	
Iron	7439-89-6	NA	NA	2000 OR	100	9170.00		
Lead*	7439-92-1	400	750	SB	3	21.70		
Magnesium	7439-95-4	NA	NA	SB	5000	26100.00		
Manganese	7439-96-5	NA	NA	SB	15	519.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	21.20	B	
Potassium	7440-09-7	NA	NA	SB	5000	529.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.18	B	
Silver	7440-22-4	390	5,700	SB	10	0.26	U	
Sodium	7440-23-5	NA	NA	SB	5000	510.00	B	
Thallium	7440-28-0	6	91	SB	10	0.08	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	11.20	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	47.20		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/12/06	***Percent % Solids***: 89.5	
	Lab Sample ID #:B-19A	***Dilution Factor***: 10	***Sample Location Identifier***:B-19A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-19A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	5670.00		
Antimony	7440-36-0	31	450	SB	60	0.30	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.24	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	57.70	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.10	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.02	U	
Calcium	7440-70-2	NA	NA	SB	5000	127000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	11.20		
Cobalt	7440-48-4	NA	N	0 OR SB	50	5.51	B	
Copper	7440-50-8	NA	N	5 OR SB	25	13.90	B	
Iron	7439-89-6	NA	N	2,000 OR	100	12900.00		
Lead*	7439-92-1	400	750	SB	3	7.10		
Magnesium	7439-95-4	NA	NA	SB	5000	38200.00		
Manganese	7439-96-5	NA	NA	SB	15	364.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	19.20	B	
Potassium	7440-09-7	NA	NA	SB	5000	641.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.85	U	
Silver	7440-22-4	390	5,700	SB	10	0.26	U	
Sodium	7440-23-5	NA	NA	SB	5000	211.00	B	
Thallium	7440-28-0	6	91	SB	10	0.08	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	10.10	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	45.80		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Enviro[illegible]ental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Su[illegible] Sites - Peer Review Draft* March 2001. P[illegible]n 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDep[illegible]f Environmental Concervation Technical and Administrative Guidance Memorandum #4046[illegible]nation of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup[illegible]ives.1994*

(3) U.S. EPA (Env[illegible]ntal Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANA[illegible]S DATA SHEET

Site Name: [illegible]uackenbush	**Date Received**: 02/24/06	**Cond[illegible]l (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/12/06	**Percent % Solids**: 86.5	
	Lab Sample ID #:B-19B	**Dilution Factor**: 10	**Sample Location Identifier**:B-19B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-19A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)						
		USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Data	
ANALYTE	CAS NO.						Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	5360.00		
Antimony	7440-36-0	31	450	SB	60	0.33	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.37	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	39.30	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.02	U	
Calcium	7440-70-2	NA	NA	SB	5000	34400.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	8.01	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	4.26	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	18.40	B	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	16700.00		
Lead*	7439-92-1	400	750	SB	3	11.90		
Magnesium	7439-95-4	NA	NA	SB	5000	13100.00		
Manganese	7439-96-5	NA	NA	SB	15	970.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	24.80	B	
Potassium	7440-09-7	NA	NA	SB	5000	830.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.94	U	
Silver	7440-22-4	390	5,700	SB	10	0.29	U	
Sodium	7440-23-5	NA	NA	SB	5000	337.00	B	
Thallium	7440-28-0	6	91	SB	10	0.09	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	14.80	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	45.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/12/06	***Percent % Solids***: 94.3	
	Lab Sample ID #:B-19C	***Dilution Factor***: 10	***Sample Location Identifier***:B-19C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-19A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

ANALYTE	CAS NO.	Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs): USEPA Residential Soil Screening Levels [(a) (1)] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [(a) (1)] (mg/Kg)	New York Recommended Soil Cleanup Objectives [(2)] (mg/Kg)	USEPA Contract Required Detection Limits [(3)] (ug/L)	Analytical Result (mg/Kg)	Data: Concentration Qualifier	Data: Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	3840.00		
Antimony	7440-36-0	31	450	SB	60	0.30	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.26	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	31.70	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.02	U	
Calcium	7440-70-2	NA	NA	SB	5000	141000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	12.30	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.16	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	20.00	B	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	10600.00		
Lead*	7439-92-1	400	750	SB	3	17.20		
Magnesium	7439-95-4	NA	NA	SB	5000	25200.00		
Manganese	7439-96-5	NA	NA	SB	15	523.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	209.00		
Potassium	7440-09-7	NA	NA	SB	5000	1180.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.88	U	
Silver	7440-22-4	390	5,700	SB	10	0.26	U	
Sodium	7440-23-5	NA	NA	SB	5000	265.00	B	
Thallium	7440-28-0	6	91	SB	10	0.08	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	10.40	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	163.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Envi[illegible]ental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For S[illegible]d Sites - Peer Review Draft* March 2001. [illegible]on 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDe[illegible] of Environmental Concervation Technical and Administrative Guidance Memorandum #404[illegible]ination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Clean[illegible]tives.1994*

(3) U.S. EPA (Env[illegible]ental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte* [illegible] Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: uackenbush	***Date Received***: 02/24/06	***Cond (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/12/06	***Percent % Solids***: 85.5	
	Lab Sample ID #:B-19D	***Dilution Factor***: 10	***Sample Location Identifier***:B-19D
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-19A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)						
		USEPA Residential Soil Screening Levels [(a) (1)] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [(a) (1)] (mg/Kg)	New York Recommended Soil Cleanup Objectives [(2)] (mg/Kg)	USEPA Contract Required Detection Limits [(3)] (ug/L)	Analytical Result (mg/Kg)	Data	
ANALYTE	CAS NO.						Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	5100.00		
Antimony	7440-36-0	31	450	SB	60	0.35	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.47	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	37.80	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.12	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.03	U	
Calcium	7440-70-2	NA	NA	SB	5000	31300.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	7.88	B	
Cobalt	7440-48-4	NA	N	30 OR SB	50	4.07	B	
Copper	7440-50-8	NA		25 OR SB	25	16.20	B	
Iron	7439-89-6	NA	N	2 00 OR	100	15800.00		
Lead*	7439-92-1	400	750	SB	3	8.87		
Magnesium	7439-95-4	NA	NA	SB	5000	13080.00		
Manganese	7439-96-5	NA	NA	SB	15	878.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	24.70	B	
Potassium	7440-09-7	NA	NA	SB	5000	846.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.01	U	
Silver	7440-22-4	390	5,700	SB	10	0.31	U	
Sodium	7440-23-5	NA	NA	SB	5000	325.00	B	
Thallium	7440-28-0	6	91	SB	10	0.10	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	14.70	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	45.01		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/12/06	***Percent % Solids***: 83.4	
	Lab Sample ID #:B-20A	***Dilution Factor***: 10	***Sample Location Identifier***:B-20A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-19A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	5790.00		
Antimony	7440-36-0	31	450	SB	60	0.38	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	9.51	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	86.20	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.13	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.03	U	
Calcium	7440-70-2	NA	NA	SB	5000	11900.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	8.58	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	2.67	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	33.70	B	
Iron	7439-89-6	NA	NA	2000 OR SB	100	9430.00		
Lead*	7439-92-1	400	750	SB	3	809.00		
Magnesium	7439-95-4	NA	NA	SB	5000	3809.00	B	
Manganese	7439-96-5	NA	NA	SB	15	364.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	7.53	B	
Potassium	7440-09-7	NA	NA	SB	5000	873.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.08	U	
Silver	7440-22-4	390	5,700	SB	10	0.33	U	
Sodium	7440-23-5	NA	NA	SB	5000	293.00	B	
Thallium	7440-28-0	6	91	SB	10	0.10	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	9.60	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	87.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typica**y

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Su[illegible]nd Sites - Peer Review Draft* March 2001. [illegible]on 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDe[illegible] of Environmental Concervation Technical and Administrative Guidance Memorandum #404[illegible]ination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanu[illegible]tives.1994*

(3) U.S. EPA (En[illegible]ntal Protection Agency). January 2000. Contract Laboratory Program Statement of Work for I[illegible]anic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: Quackenbush	***Date Received***: 02/24/06	***Conc (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/12/06	***Percent % Solids***: 95.4	
	Lab Sample ID #:B-20B	***Dilution Factor***: 10	***Sample Location Identifier***:B-20B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-19A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					
		USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Data
ANALYTE	CAS NO.						Concentration Qualifier / Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	806.00	
Antimony	7440-36-0	31	450	SB	60	0.32	U
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.31	U
Barium	7440-39-3	5,500	79,000	300 OR SB	200	8.41	B
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U
Cadmium	7440-43-9	70	900	1 OR SB	5	0.02	U
Calcium	7440-70-2	NA	NA	SB	5000	69100.00	
Chromium	7440-47-3	230	3,400	10 OR SB	10	1.88	B
Cobalt	7440-48-4	NA	NA	30 OR SB	50	0.58	B
Copper	7440-50-8	NA	NA	25 OR SB	25	3.37	B
Iron	7439-89-6	NA	NA	2,000 OR SB	100	3230.00	
Lead*	7439-92-1	400	750	SB	3	5.66	
Magnesium	7439-95-4	NA	NA	SB	5000	27900.00	
Manganese	7439-96-5	NA	NA	SB	15	238.00	
Mercury	7439-97-6	23	340	0.1	0.2	NR	
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	1.85	B
Potassium	7440-09-7	NA	NA	SB	5000	218.00	B
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.90	U
Silver	7440-22-4	390	5,700	SB	10	0.27	U
Sodium	7440-23-5	NA	NA	SB	5000	113.00	B
Thallium	7440-28-0	6	91	SB	10	0.08	U
Vanadium	7440-62-2	550	7,900	150 SB	50	5.11	B
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	19.80	B
Cyanide	57-12-5	1,600	23,000	NA	10	NR	

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/12/06	***Percent % Solids***: 95.5	
	Lab Sample ID #:B-20C	***Dilution Factor***: 10	***Sample Location Identifier***:B-20C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-19A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2500.00		
Antimony	7440-36-0	31	450	SB	60	0.32	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.35	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	27.70	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.02	U	
Calcium	7440-70-2	NA	NA	SB	5000	119000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	5.10	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	2.31	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	8.14	B	
Iron	7439-89-6	NA	NA	2000 OR SB	100	7530.00		
Lead*	7439-92-1	400	750	SB	3	17.00		
Magnesium	7439-95-4	NA	NA	SB	5000	34100.00		
Manganese	7439-96-5	NA	NA	SB	15	443.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	5.50	B	
Potassium	7440-09-7	NA	NA	SB	5000	516.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.92	U	
Silver	7440-22-4	390	5,700	SB	10	0.28	U	
Sodium	7440-23-5	NA	NA	SB	5000	198.00	B	
Thallium	7440-28-0	6	91	SB	10	0.09	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	8.54	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	40.40		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001, Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDept. of Environmental Concervation Technical and Administrative Guidance Memorandum #4046. Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: Quackenbush	**Date Received**: 02/24/06	**Concentration (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/12/06	**Percent % Solids**: 96.5	
	Lab Sample ID #:B-21A	**Dilution Factor**: 10	**Sample Location Identifier**:B-21A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-19A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	5300.00		
Antimony	7440-36-0	31	450	SB	60	0.32	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.35	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	209.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.11	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.02	U	
Calcium	7440-70-2	NA	NA	SB	5000	22500.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	6.95	B	
Cobalt	7440-48-4	NA	N	30 OR SB	50	4.92	B	
Copper	7440-50-8	NA	4	25 OR SB	25	28.00		
Iron	7439-89-6	NA	2	2,00 OR SB	100	12100.00		
Lead*	7439-92-1	400	750	SB	3	208.00		
Magnesium	7439-95-4	NA	NA	SB	5000	3430.00	B	
Manganese	7439-96-5	NA	NA	SB	15	670.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	19.80		
Potassium	7440-09-7	NA	NA	SB	5000	656.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.92	U	
Silver	7440-22-4	390	5,700	SB	10	0.45	B	
Sodium	7440-23-5	NA	NA	SB	5000	230.00	B	
Thallium	7440-28-0	6	91	SB	10	0.09	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	11.80	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	75.10		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/12/06	***Percent % Solids***: 91.6	
	Lab Sample ID #:B-21B	***Dilution Factor***: 10	***Sample Location Identifier***:B-21B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-19A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	5010.00		
Antimony	7440-36-0	31	450	SB	60	0.38	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.58	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	33.80	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.13	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.03	U	
Calcium	7440-70-2	NA	NA	SB	5000	75000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	8.00	B	
Cobalt	7440-48-4	NA	N	30 OR SB	50	5.19	B	
Copper	7440-50-8	NA	N	25 OR SB	25	26.90	B	
Iron	7439-89-6	NA	N	2,000 OR SB	100	12300.00		
Lead*	7439-92-1	400	750	SB	3	29.20		
Magnesium	7439-95-4	NA	NA	SB	5000	17400.00	B	
Manganese	7439-96-5	NA	NA	SB	15	583.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	11.10	B	
Potassium	7440-09-7	NA	NA	SB	5000	601.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.08	U	
Silver	7440-22-4	390	5,700	SB	10	0.33	U	
Sodium	7440-23-5	NA	NA	SB	5000	227.00	B	
Thallium	7440-28-0	6	91	SB	10	0.10	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	16.10	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	45.50		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Sup[illegible]nd Sites - Peer Review Draft* March 2001. P[illegible]on 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDe[illegible]of Environmental Concervation Technical and Administrative Guidance Memorandum #4046[illegible]ination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanu[illegible]ives.1994*

(3) U.S. EPA (En[illegible]ntal Protection Agency). January 2000. Contract Laboratory Program Statement of Work for In[illegible]ic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response. Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H[illegible]ackenbush	**Date Received**: 02/24/06	**Conc. (low/med.)**: Low	**Program**: CERCLA
Address: Herkimer, New York	**Date Analyzed:** 03/16/06	**Percent % Solids**: 79.8	
	Lab Sample ID #:B-22A	**Dilution Factor**: 10	**Sample Location Identifier**:B-22A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	**Matrix (soil / water)**: Soil	**Depth (ft)**:	
Case No.: QUACS1	**(SDG) No.**:B-22A	**EPA Method**: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	6460.00		
Antimony	7440-36-0	31	450	SB	60	0.38	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	6.43	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	105.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.43	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.27	B	
Calcium	7440-70-2	NA	NA	SB	5000	106000.00		
Chromium	7440-47-3	230	[illegible],400	10 OR SB	10	12.00	B	
Cobalt	7440-48-4	NA	[illegible]	[illegible]0 OR SB	50	6.46	B	
Copper	7440-50-8	NA	[illegible]	[illegible] OR SB	25	23.10	B	
Iron	7439-89-6	NA	[illegible]	2,0[illegible]0 OR SB	100	17000.00		
Lead*	7439-92-1	400	750	SB	3	208.00		
Magnesium	7439-95-4	NA	NA	SB	5000	32800.00		
Manganese	7439-96-5	NA	NA	SB	15	551.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	16.30	B	
Potassium	7440-09-7	NA	NA	SB	5000	1110.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.08	U	
Silver	7440-22-4	390	5,700	SB	10	0.33	U	
Sodium	7440-23-5	NA	NA	SB	5000	328.00	B	
Thallium	7440-28-0	6	91	SB	10	0.23	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	11.20	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	98.60		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed***: 03/16/06	***Percent % Solids***: 91.0	
	Lab Sample ID #:B-22B	***Dilution Factor***: 10	***Sample Location Identifier***:B-22B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-22A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4831.00		
Antimony	7440-36-0	31	450	SB	60	0.31	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	2.94	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	73.60	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.43	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.31	B	
Calcium	7440-70-2	NA	NA	SB	5000	67100.00		
Chromium	7440-47-3	230	1400	10 OR SB	10	10.10	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.37	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	18.30	B	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	13300.00		
Lead*	7439-92-1	400	750	SB	3	185.00		
Magnesium	7439-95-4	NA	NA	SB	5000	11800.00		
Manganese	7439-96-5	NA	NA	SB	15	500.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	13.90	B	
Potassium	7440-09-7	NA	NA	SB	5000	829.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.87	U	
Silver	7440-22-4	390	5,700	SB	10	0.33	B	
Sodium	7440-23-5	NA	NA	SB	5000	234.00	B	
Thallium	7440-28-0	6	91	SB	10	0.12	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	9.69	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	61.90		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Sup... Sites - Peer Review Draft* March 2001. Pu... 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepa... Environmental Concervation Technical and Administrative Guidance Memorandum #4046, ... ation of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup* ...s.1994

(3) U.S. EPA (Envir... al Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contra... quired Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. Lackenbush	***Date Received***: 02/24/06	***Conc. (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/16/06	***Percent % Solids***: 92.9	
	Lab Sample ID #:B-23A	***Dilution Factor***: 10	***Sample Location Identifier***:B-23A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-22A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)						
		USEPA Residential Soil Screening Levels [a] [1]	USEPA Commercial/Industrial Soil Screening Levels [a] [1]	New York Recommended Soil Cleanup Objectives [2]	USEPA Contract Required Detection Limits [3]	Analytical Result	Data	
ANALYTE	CAS NO.	(mg/Kg)	(mg/Kg)	(mg/Kg)	(ug/L)	(mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	5940.00		
Antimony	7440-36-0	31	450	SB	60	0.35	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	9.45	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	101.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.53	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	1.12	B	
Calcium	7440-70-2	NA	NA	SB	5000	105000.00		
Chromium	7440-47-3	230	1,400	10 OR SB	10	40.70		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	6.35	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	36.60		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	16500.00		
Lead*	7439-92-1	400	750	SB	3	137.00		
Magnesium	7439-95-4	NA	NA	SB	5000	26800.00		
Manganese	7439-96-5	NA	NA	SB	15	368.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	21.90	B	
Potassium	7440-09-7	NA	NA	SB	5000	1008.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.01	U	
Silver	7440-22-4	390	5,700	SB	10	0.31	U	
Sodium	7440-23-5	NA	NA	SB	5000	263.00	B	
Thallium	7440-28-0	6	91	SB	10	0.16	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	10.60	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	174.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/16/06	***Percent % Solids***: 92.5	
	Lab Sample ID #:B-23B	***Dilution Factor***: 10	***Sample Location Identifier***:B-23B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-22A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	3020.00		
Antimony	7440-36-0	31	450	SB	60	0.35	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	3.14	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	34.90	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.33	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.35	B	
Calcium	7440-70-2	NA	NA	SB	5000	91600.00		
Chromium	7440-47-3	230	3400	10 OR SB	10	6.12	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.46	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	14.80	B	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	11700.00		
Lead*	7439-92-1	400	750	SB	3	50.50		
Magnesium	7439-95-4	NA	NA	SB	5000	16100.00		
Manganese	7439-96-5	NA	NA	SB	15	615.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	12.50	B	
Potassium	7440-09-7	NA	NA	SB	5000	683.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.99	U	
Silver	7440-22-4	390	5,700	SB	10	0.30	U	
Sodium	7440-23-5	NA	NA	SB	5000	306.00	B	
Thallium	7440-28-0	6	91	SB	10	0.14	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	9.94	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	57.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Sup[illegible] Sites - Peer Review Draft* March 2001. P[illegible]n 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDep[illegible]f Environmental Concervation Technical and Administrative Guidance Memorandum #4046[illegible]nation of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup[illegible]ves.1994*

(3) U.S. EPA (Env[illegible]ntal Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of S[illegible]d Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC

INORGANIC ANALYSIS DATA SHEET

Site Name: H Jackenbush	***Date Received***: 02/24/06	***Conc. (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/16/06	***Percent % Solids***: 77.8	
	Lab Sample ID #:B-24A	***Dilution Factor***: 10	***Sample Location Identifier***:B-24A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-22A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4770.00		
Antimony	7440-36-0	31	450	SB	60	0.38	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	16.30		
Barium	7440-39-3	5,500	79,000	300 OR SB	200	46.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.81	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	1.19	B	
Calcium	7440-70-2	NA	NA	SB	5000	66000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	10.20	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	9.37	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	29.40	B	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	23100.00		
Lead*	7439-92-1	400	750	SB	3	45.40		
Magnesium	7439-95-4	NA	NA	SB	5000	5310.00	B	
Manganese	7439-96-5	NA	NA	SB	15	539.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	25.90	B	
Potassium	7440-09-7	NA	NA	SB	5000	604.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.07	U	
Silver	7440-22-4	390	5,700	SB	10	0.84	B	
Sodium	7440-23-5	NA	NA	SB	5000	219.00	B	
Thallium	7440-28-0	6	91	SB	10	0.20	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	10.70	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	264.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/16/06	***Percent % Solids***: 83.8	
	Lab Sample ID #:B-24B	***Dilution Factor***: 10	***Sample Location Identifier***:B-24B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-22A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	7800.00		
Antimony	7440-36-0	31	450	SB	60	0.32	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	3.73	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	44.20	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	1.77	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	2.32	B	
Calcium	7440-70-2	NA	NA	SB	5000	9820.00		
Chromium	7440-47-3	230	400	10 OR SB	10	12.80		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	10.60	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	23.30	B	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	29600.00		
Lead*	7439-92-1	400	750	SB	3	15.60		
Magnesium	7439-95-4	NA	NA	SB	5000	2280.00	B	
Manganese	7439-96-5	NA	NA	SB	15	2080.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	48.00		
Potassium	7440-09-7	NA	NA	SB	5000	768.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.92	U	
Silver	7440-22-4	390	5,700	SB	10	0.28	U	
Sodium	7440-23-5	NA	NA	SB	5000	195.00	B	
Thallium	7440-28-0	6	91	SB	10	0.19	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	18.60	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	418.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Sup... Sites - Peer Review Draft* March 2001. Pu... 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepa... Environmental Concervation Technical and Administrative Guidance Memorandum #4046, ...ation of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup ...ves.1994*

(3) U.S. EPA (Envi... al Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limit... CRDLs)*. Office of Solid Waste and Emergen... Response, Analytical Operations/Data Quality Cente... Washington, DC

INORGANIC ANALYSIS DATA SHEET

Site Name: H. ackenbush	***Date Received***: 02/24/06	***Conc. (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/16/06	***Percent % Solids***: 95.4	
	Lab Sample ID #:B-24C	***Dilution Factor***: 10	***Sample Location Identifier***:B-24C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-22A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					
		USEPA Residential Soil Screening Levels [a] [1]	USEPA Commercial/Industrial Soil Screening Levels [a] [1]	New York Recommended Soil Cleanup Objectives [2]	USEPA Contract Required Detection Limits [3]	Analytical Result	Data
ANALYTE	CAS NO.	(mg/Kg)	(mg/Kg)	(mg/Kg)	(ug/L)	(mg/Kg)	Concentration Qualifier / Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2860.00	
Antimony	7440-36-0	31	450	SB	60	0.34	U
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	2.01	B
Barium	7440-39-3	5,500	79,000	300 OR SB	200	24.90	B
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.37	B
Cadmium	7440-43-9	70	900	1 OR SB	5	1.00	B
Calcium	7440-70-2	NA	NA	SB	5000	89200.00	
Chromium	7440-47-3	230	400	10 OR SB	10	6.54	B
Cobalt	7440-48-4	NA	NA	30 OR SB	50	7.43	B
Copper	7440-50-8	NA	NA	25 OR SB	25	41.80	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	12700.00	
Lead*	7439-92-1	400	750	SB	3	4.90	
Magnesium	7439-95-4	NA	NA	SB	5000	24500.00	
Manganese	7439-96-5	NA	NA	SB	15	646.00	
Mercury	7439-97-6	23	340	0.1	0.2	NR	
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	40.20	B
Potassium	7440-09-7	NA	NA	SB	5000	644.00	B
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.97	U
Silver	7440-22-4	390	5,700	SB	10	0.30	U
Sodium	7440-23-5	NA	NA	SB	5000	290.00	B
Thallium	7440-28-0	6	91	SB	10	0.10	B
Vanadium	7440-62-2	550	7,900	150 SB	50	9.78	U
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	103.00	
Cyanide	57-12-5	1,600	23,000	NA	10	NR	

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/16/06	***Percent % Solids***: 88.4	
	Lab Sample ID #:B-25A	***Dilution Factor***: 10	***Sample Location Identifier***:B-25A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-22A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4150.00		
Antimony	7440-36-0	31	450	SB	60	0.36	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	6.77	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	120.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.43	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.24	B	
Calcium	7440-70-2	NA	NA	SB	5000	31600.00		
Chromium	7440-47-3	230	400	10 OR SB	10	5.15	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.47	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	48.20		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	11000.00		
Lead*	7439-92-1	400	750	SB	3	283.00		
Magnesium	7439-95-4	NA	NA	SB	5000	2790.00	B	
Manganese	7439-96-5	NA	NA	SB	15	587.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	12.20	B	
Potassium	7440-09-7	NA	NA	SB	5000	636.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.03	U	
Silver	7440-22-4	390	5,700	SB	10	0.37	B	
Sodium	7440-23-5	NA	NA	SB	5000	233.00	B	
Thallium	7440-28-0	6	91	SB	10	0.14	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	10.30	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	93.90		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Sup[illegible] Sites - Peer Review Draft* March 2001. P[illegible] 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepa[illegible] Environmental Concervation Technical and Administrative Guidance Memorandum #4046, [illegible]ation of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup [illegible]ves.1994*

(3) U.S. EPA (Envi[illegible]tal Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and En[illegible]ency Response. Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. [illegible]ackenbush	***Date Received***: 02/24/06	***Conc. [illegible]ow/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/16/06	***Percent % Solids***: 88.7	
	Lab Sample ID #:B-25B	***Dilution Factor***: 10	***Sample Location Identifier***:B-25B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-22A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)						
		USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Data	
ANALYTE	CAS NO.						Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	5860.00		
Antimony	7440-36-0	31	450	SB	60	0.32	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	4.32	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	104.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.67	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.30	B	
Calcium	7440-70-2	NA	NA	SB	5000	46200.00		
Chromium	7440-47-3	230	1400	10 OR S	10	13.00		
Cobalt	7440-48-4	NA	[illegible]	[illegible] OR SB	50	4.20	B	
Copper	7440-50-8	NA	[illegible]	2[illegible] OR SB	25	27.10	B	
Iron	7439-89-6	NA	[illegible]	[illegible],00[illegible] OR S	100	14600.00		
Lead*	7439-92-1	400	750	SB	3	510.00		
Magnesium	7439-95-4	NA	NA	SB	5000	4560.00	B	
Manganese	7439-96-5	NA	NA	SB	15	622.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	10.80	B	
Potassium	7440-09-7	NA	NA	SB	5000	788.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.91	U	
Silver	7440-22-4	390	5,700	SB	10	0.64	B	
Sodium	7440-23-5	NA	NA	SB	5000	320.00	B	
Thallium	7440-28-0	6	91	SB	10	0.52	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	11.00	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	86.90		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/17/06	***Percent % Solids***: 86.3	
	Lab Sample ID #:B-26A	***Dilution Factor***: 10	***Sample Location Identifier***:B-26A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-26A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	6310.00		
Antimony	7440-36-0	31	450	SB	60	0.40	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	9.03	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	132.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	1.00	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	22.10		
Calcium	7440-70-2	NA	NA	SB	5000	48600.00		
Chromium	7440-47-3	230	1400	10 OR SB	10	69.20		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	4.12	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	62.50		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	17000.00		
Lead*	7439-92-1	400	750	SB	3	443.00		
Magnesium	7439-95-4	NA	NA	SB	5000	2470.00	B	
Manganese	7439-96-5	NA	NA	SB	15	760.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	138.00		
Potassium	7440-09-7	NA	NA	SB	5000	1130.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.15	U	
Silver	7440-22-4	390	5,700	SB	10	10.20	B	
Sodium	7440-23-5	NA	NA	SB	5000	449.00	B	
Thallium	7440-28-0	6	91	SB	10	0.18	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	14.80	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	210.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:
U - Undetected value reported at the Instrument Detection Limit (IDL)
B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**
(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.
(b) Denotes only the criteria established for the hexavalent chromium constituent.
NA: None Applicable
NR: Not Reported
mg/Kg: milligrams per Kilogram = parts per million (ppm)
ug/Kg: micrograms per Kilogram = parts per billion (ppb)
ug/L: micrograms per Liter = parts per billion (ppb)
SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):
(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Super[illegible]Sites - Peer Review Draft* March 2001. Pub[illegible]9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.
(2) New YorkDepar[illegible]Environmental Concervation Technical and Administrative Guidance Memorandum #4046, D[illegible]tion of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup O[illegible]s.1994*
(3) U.S. EPA (Enviro[illegible]l Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H[illegible]ackenbush	***Date Received***: 02/24/06	***Conc. (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/17/06	***Percent % Solids***: 87.9	
	Lab Sample ID #:B-26B	***Dilution Factor***: 10	***Sample Location Identifier***:B-26B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-26A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	6930.00		
Antimony	7440-36-0	31	450	SB	60	0.37	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	4.57	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	86.60	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.97	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	2.45	B	
Calcium	7440-70-2	NA	NA	SB	5000	58300.00		
Chromium	7440-47-3	230	[illegible],400	10 OR SB	10	13.10		
Cobalt	7440-48-4	NA	[illegible]	[illegible] OR SB	50	4.59	B	
Copper	7440-50-8	NA	[illegible]	[illegible] OR SB	25	24.30	B	
Iron	7439-89-6	NA	[illegible]	2,0[illegible] OR SB	100	21200.00		
Lead*	7439-92-1	400	750	SB	3	45.60		
Magnesium	7439-95-4	NA	NA	SB	5000	13700.00		
Manganese	7439-96-5	NA	NA	SB	15	1200.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	22.70	B	
Potassium	7440-09-7	NA	NA	SB	5000	1010.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.05	U	
Silver	7440-22-4	390	5,700	SB	10	0.87	B	
Sodium	7440-23-5	NA	NA	SB	5000	320.00	B	
Thallium	7440-28-0	6	91	SB	10	0.17	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	19.00	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	78.20		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/17/06	***Percent % Solids***: 86.4	
	Lab Sample ID #:B-27A	***Dilution Factor***: 10	***Sample Location Identifier***:B-27A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-26A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	5600.00		
Antimony	7440-36-0	31	450	SB	60	0.32	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	29.30		
Barium	7440-39-3	5,500	79,000	300 OR SB	200	79.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.80	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	1.27	B	
Calcium	7440-70-2	NA	NA	SB	5000	28500.00		
Chromium	7440-47-3	230	400	10 OR SB	10	8.22	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	5.64	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	56.70		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	31300.00		
Lead*	7439-92-1	400	750	SB	3	231.00		
Magnesium	7439-95-4	NA	NA	SB	5000	2480.00	B	
Manganese	7439-96-5	NA	NA	SB	15	767.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	27.10	B	
Potassium	7440-09-7	NA	NA	SB	5000	972.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.92	U	
Silver	7440-22-4	390	5,700	SB	10	1.13	B	
Sodium	7440-23-5	NA	NA	SB	5000	327.00	B	
Thallium	7440-28-0	6	91	SB	10	0.16	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	13.80	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	88.10		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Sup... Sites - Peer Review Draft* March 2001. Pu... 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepa... Environmental Concervation Technical and Administrative Guidance Memorandum #4046, ...ation of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup ...ves.1994*

(3) U.S. EPA (Envi... al Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDL)*. Office of Solid Waste and Emergency ... se, Analyt... rations/Data Quality Center, Wa... n, DC

INORGANIC ANALYSIS DATA SHEET

Site Name: H. [illegible]ckenbush	***Date Received***: 02/24/06	***Conc. L[illegible]ow/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/17/06	***Percent % Solids***: 92.6	
	Lab Sample ID #:B-27B	***Dilution Factor***: 10	***Sample Location Identifier***:B-27B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-26A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2550.00		
Antimony	7440-36-0	31	450	SB	60	1.24	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	3.21	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	27.30	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.52	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	27.20		
Calcium	7440-70-2	NA	NA	SB	5000	146000.00		
Chromium	7440-47-3	230	400	10 OR S[illegible]	10	29.80		
Cobalt	7440-48-4	NA	[illegible]	[illegible] OR SB	50	2.73	B	
Copper	7440-50-8	NA	[illegible]	2[illegible] OR SB	25	93.40		
Iron	7439-89-6	NA	[illegible]	[illegible],00[illegible] OR S[illegible]	100	9050.00		
Lead*	7439-92-1	400	750	SB	3	12.80		
Magnesium	7439-95-4	NA	NA	SB	5000	42300.00		
Manganese	7439-96-5	NA	NA	SB	15	725.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	41.30	B	
Potassium	7440-09-7	NA	NA	SB	5000	652.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.99	U	
Silver	7440-22-4	390	5,700	SB	10	2.01	B	
Sodium	7440-23-5	NA	NA	SB	5000	325.00	B	
Thallium	7440-28-0	6	91	SB	10	0.11	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	15.60	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	177.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/17/06	***Percent % Solids***: 99.3	
	Lab Sample ID #:B-27C	***Dilution Factor***: 10	***Sample Location Identifier***:B-27C
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-26A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2220.00		
Antimony	7440-36-0	31	450	SB	60	1.54	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.92	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	19.10	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.38	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	38.60		
Calcium	7440-70-2	NA	NA	SB	5000	12800.00		
Chromium	7440-47-3	230	3400	10 OR SB	10	75.50		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	2.18	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	95.60		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	7120.00		
Lead*	7439-92-1	400	750	SB	3	7.12		
Magnesium	7439-95-4	NA	NA	SB	5000	26000.00		
Manganese	7439-96-5	NA	NA	SB	15	419.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	49.10		
Potassium	7440-09-7	NA	NA	SB	5000	587.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.84	U	
Silver	7440-22-4	390	5,700	SB	10	1.36	B	
Sodium	7440-23-5	NA	NA	SB	5000	237.00	B	
Thallium	7440-28-0	6	91	SB	10	0.08	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	8.39	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	249.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives* 1994

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganics Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. [illegible]uckenbush	***Date Received***: 02/24/06	***Conc. [illegible]ow/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/17/06	***Percent % Solids***: 85.5	
	Lab Sample ID #:B-27D	***Dilution Factor***: 10	***Sample Location Identifier***:B-27D
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-26A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4810.00		
Antimony	7440-36-0	31	450	SB	60	0.33	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	25.40		
Barium	7440-39-3	5,500	79,000	300 OR SB	200	77.50	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.65	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	1.31	B	
Calcium	7440-70-2	NA	NA	SB	5000	21600.00		
Chromium	7440-47-3	230	3400	10 OR S	10	9.51	B	
Cobalt	7440-48-4	NA	[illegible]	[illegible] OR SB	50	4.46	B	
Copper	7440-50-8	NA	[illegible]	25 OR SB	25	48.00		
Iron	7439-89-6	NA	[illegible]	[illegible],00[illegible] OR S	100	26700.00		
Lead*	7439-92-1	400	750	SB	3	258.00		
Magnesium	7439-95-4	NA	NA	SB	5000	3080.00	B	
Manganese	7439-96-5	NA	NA	SB	15	701.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	21.70	B	
Potassium	7440-09-7	NA	NA	SB	5000	831.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.93	U	
Silver	7440-22-4	390	5,700	SB	10	1.39	B	
Sodium	7440-23-5	NA	NA	SB	5000	287.00	B	
Thallium	7440-28-0	6	91	SB	10	0.12	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	13.00	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	78.30		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/17/06	***Percent % Solids***: 67.1	
	Lab Sample ID #:S-3A	***Dilution Factor***: 10	***Sample Location Identifier***:S-3A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-26A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2920.00		
Antimony	7440-36-0	31	450	SB	60	1.98	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	2.15	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	29.30	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.40	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	29.20		
Calcium	7440-70-2	NA	NA	SB	5000	788.00	B	
Chromium	7440-47-3	230	2400	10 OR SB	10	665.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	1760.00		
Copper	7440-50-8	NA	NA	25 OR SB	25	2450.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	40800.00		
Lead*	7439-92-1	400	750	SB	3	282.00		
Magnesium	7439-95-4	NA	NA	SB	5000	1030.00	B	
Manganese	7439-96-5	NA	NA	SB	15	275.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	765.00		
Potassium	7440-09-7	NA	NA	SB	5000	2590.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.47	U	
Silver	7440-22-4	390	5,700	SB	10	74.00		
Sodium	7440-23-5	NA	NA	SB	5000	23700.00		
Thallium	7440-28-0	6	91	SB	10	0.14	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	14.70	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	84800.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Super[illegible]Sites - Peer Review Draft* March 2001. Pub[illegible]9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepar[illegible]Environmental Concervation Technical and Administrative Guidance Memorandum #4046, D[illegible]tion of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup C[illegible]s.1994*

(3) U.S. EPA (Enviro[illegible]l Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. ackenbush	***Date Received***: 02/24/06	***Conc. /low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/17/06	***Percent % Solids***: 59.4	
	Lab Sample ID #:S-3B	***Dilution Factor***: 10	***Sample Location Identifier***:S-3B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-26A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					
		USEPA Residential Soil Screening Levels [a] [1]	USEPA Commercial/Industrial Soil Screening Levels [a] [1]	New York Recommended Soil Cleanup Objectives [2]	USEPA Contract Required Detection Limits [3]	Analytical Result	Data
ANALYTE	CAS NO.	(mg/Kg)	(mg/Kg)	(mg/Kg)	(ug/L)	(mg/Kg)	Concentration Qualifier / Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	1920.00	
Antimony	7440-36-0	31	450	SB	60	0.53	U
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	2.19	U
Barium	7440-39-3	5,500	79,000	300 OR SB	200	31.20	B
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.55	B
Cadmium	7440-43-9	70	900	1 OR SB	5	6.62	B
Calcium	7440-70-2	NA	NA	SB	5000	22300.00	
Chromium	7440-47-3	230	3400	10 OR S	10	355.00	
Cobalt	7440-48-4	NA	NA	OR S	50	362.00	
Copper	7440-50-8	NA	NA	OR SB	25	1370.00	
Iron	7439-89-6	NA	NA	,00 OR S	100	11600.00	
Lead*	7439-92-1	400	750	SB	3	318.00	
Magnesium	7439-95-4	NA	NA	SB	5000	896.00	B
Manganese	7439-96-5	NA	NA	SB	15	124.00	
Mercury	7439-97-6	23	340	0.1	0.2	NR	
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	230.00	
Potassium	7440-09-7	NA	NA	SB	5000	2730.00	B
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.50	U
Silver	7440-22-4	390	5,700	SB	10	54.90	
Sodium	7440-23-5	NA	NA	SB	5000	21100.00	
Thallium	7440-28-0	6	91	SB	10	0.14	U
Vanadium	7440-62-2	550	7,900	150 SB	50	15.00	U
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	69900.00	
Cyanide	57-12-5	1,600	23,000	NA	10	NR	

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/17/06	***Percent % Solids***: 74.0	
	Lab Sample ID #:S-4A	***Dilution Factor***: 10	***Sample Location Identifier***:S-4A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-26A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2270.00		
Antimony	7440-36-0	31	450	SB	60	1.33	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	2.08	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	8.53	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.46	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	4.21	B	
Calcium	7440-70-2	NA	NA	SB	5000	1020.00	B	
Chromium	7440-47-3	230	1,400	10 OR SB	10	302.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	1460.00		
Copper	7440-50-8	NA	NA	25 OR SB	25	1990.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	24600.00		
Lead*	7439-92-1	400	750	SB	3	93.10		
Magnesium	7439-95-4	NA	NA	SB	5000	994.00	B	
Manganese	7439-96-5	NA	NA	SB	15	110.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	405.00		
Potassium	7440-09-7	NA	NA	SB	5000	5000.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.39	U	
Silver	7440-22-4	390	5,700	SB	10	82.30		
Sodium	7440-23-5	NA	NA	SB	5000	6550.00	B	
Thallium	7440-28-0	6	91	SB	10	0.67	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	13.90	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	16100.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives*, 1994

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)* Office of Solid Waste and Emergency Response Analytical Operations/Data Quality Center Washington, DC

INORGANIC ANALYSIS DATA SHEET

Site Name: H ackenbush	***Date Received***: 02/24/06	***Conc. (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/17/06	***Percent % Solids***: 76.7	
	Lab Sample ID #:S-4B	***Dilution Factor***: 10	***Sample Location Identifier***:S-4B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:B-26A	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	1520.00		
Antimony	7440-36-0	31	450	SB	60	0.61	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.53	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	11.60	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.28	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	6.76		
Calcium	7440-70-2	NA	NA	SB	5000	1730.00	B	
Chromium	7440-47-3	230	400	10 OR SB	10	312.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	1540.00		
Copper	7440-50-8	NA	NA	25 OR SB	25	3180.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	16200.00		
Lead*	7439-92-1	400	750	SB	3	299.00		
Magnesium	7439-95-4	NA	NA	SB	5000	575.00	B	
Manganese	7439-96-5	NA	NA	SB	15	70.10		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	577.00		
Potassium	7440-09-7	NA	NA	SB	5000	5970.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.05	U	
Silver	7440-22-4	390	5,700	SB	10	118.00		
Sodium	7440-23-5	NA	NA	SB	5000	7780.00		
Thallium	7440-28-0	6	91	SB	10	0.27	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	10.50	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	43800.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/24/06	***Percent % Solids***: 61.8	
	Lab Sample ID #:DB-1	***Dilution Factor***: 10	***Sample Location Identifier***:DB-1
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:DB-1	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4236.00		
Antimony	7440-36-0	31	450	SB	60	4.07	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	3.34	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	92.50	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.38	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	2210.00		
Calcium	7440-70-2	NA	NA	SB	5000	239000.00		
Chromium	7440-47-3	230	3,00	10 OR SB	10	4840.00		
Cobalt	7440-48-4	NA	[illegible]	[illegible] OR SB	50	9.90	B	
Copper	7440-50-8	NA	[illegible]	25 OR SB	25	3370.00		
Iron	7439-89-6	NA	[illegible]	2000 OR SB	100	43200.00		
Lead*	7439-92-1	400	750	SB	3	822.00		
Magnesium	7439-95-4	NA	NA	SB	5000	31000.00		
Manganese	7439-96-5	NA	NA	SB	15	566.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	6440.00		
Potassium	7440-09-7	NA	NA	SB	5000	382.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.39	U	
Silver	7440-22-4	390	5,700	SB	10	32.90		
Sodium	7440-23-5	NA	NA	SB	5000	977.00	B	
Thallium	7440-28-0	6	91	SB	10	0.13	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	13.90	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	10800.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives* 1994

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations Data Quality Center, Washington, DC

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M[illegible]kenbush	***Date Received***: 02/24/06	***Conc. Le[illegible]n/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/24/06	***Percent % Solids***: 78.0	
	Lab Sample ID #:DB-2A	***Dilution Factor***: 10	***Sample Location Identifier***:DB-2A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:DB-1	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	3450.00		
Antimony	7440-36-0	31	450	SB	60	5.20	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	5.81	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	47.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.60	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	1780.00		
Calcium	7440-70-2	NA	NA	SB	5000	109000.00		
Chromium	7440-47-3	230	3[illegible]00	10 OR SB	10	358.00		
Cobalt	7440-48-4	NA	N[illegible]	30 OR SB	50	22.50	B	
Copper	7440-50-8	NA	N[illegible]	25 OR SB	25	705.00		
Iron	7439-89-6	NA	N[illegible]	2000 OR SB	100	24700.00		
Lead*	7439-92-1	400	750	SB	3	768.00		
Magnesium	7439-95-4	NA	NA	SB	5000	21200.00		
Manganese	7439-96-5	NA	NA	SB	15	460.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	1170.00		
Potassium	7440-09-7	NA	NA	SB	5000	530.00		
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.14	U	
Silver	7440-22-4	390	5,700	SB	10	9.63	B	
Sodium	7440-23-5	NA	NA	SB	5000	704.00	B	
Thallium	7440-28-0	6	91	SB	10	0.11	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	92.50		
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	1420.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/24/06	***Percent % Solids***: 74.5	
	Lab Sample ID #:DB-2B	***Dilution Factor***: 10	***Sample Location Identifier***:DB-2B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:DB-1	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	6260.00		
Antimony	7440-36-0	31	450	SB	60	4.42	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	11.70	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	92.50	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	1.13	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	1.27	B	
Calcium	7440-70-2	NA	NA	SB	5000	53000.00		
Chromium	7440-47-3	230	3,000	10 OR SB	10	1270.00		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	12.50	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	799.00		
Iron	7439-89-6	NA	NA	2000 OR SB	100	34600.00		
Lead*	7439-92-1	400	750	SB	3	727.00		
Magnesium	7439-95-4	NA	NA	SB	5000	17900.00		
Manganese	7439-96-5	NA	NA	SB	15	271.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	631.00		
Potassium	7440-09-7	NA	NA	SB	5000	603.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.07	U	
Silver	7440-22-4	390	5,700	SB	10	7.82	B	
Sodium	7440-23-5	NA	NA	SB	5000	499.00	B	
Thallium	7440-28-0	6	91	SB	10	0.11	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	56.50	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	992.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Super...es - Peer Review Draft* March 2001. Publ...355 4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepart...nvironmental Concervation Technical and Administrative Guidance Memorandum #4046, De...ion of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Ob...s.1994*

(3) U.S. EPA (Environ...Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract...uired Detection Limits (CRDL)*, Office of Solid Waste and Emer...Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M[illegible]kenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/24/06	***Percent % Solids***: 75.9	
	Lab Sample ID #:DB-3A	***Dilution Factor***: 10	***Sample Location Identifier***:DB-3A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:DB-1	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4880.00		
Antimony	7440-36-0	31	450	SB	60	3.43	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	11.10	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	54.70	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.88	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	205.00		
Calcium	7440-70-2	NA	NA	SB	5000	49000.00		
Chromium	7440-47-3	230	3,[illegible]00	10 OR SB	10	951.00		
Cobalt	7440-48-4	NA	[illegible]	[illegible] OR SB	50	10.50	B	
Copper	7440-50-8	NA	[illegible]	[illegible]25 OR SB	25	795.00		
Iron	7439-89-6	NA	[illegible]	[illegible]2000 OR SB	100	33700.00		
Lead*	7439-92-1	400	750	SB	3	502.00		
Magnesium	7439-95-4	NA	NA	SB	5000	1210.00		
Manganese	7439-96-5	NA	NA	SB	15	276.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	571.00		
Potassium	7440-09-7	NA	NA	SB	5000	516.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.11	U	
Silver	7440-22-4	390	5,700	SB	10	8.87	B	
Sodium	7440-23-5	NA	NA	SB	5000	484.00	B	
Thallium	7440-28-0	6	91	SB	10	0.10	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	56.10	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	1130.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/24/06	***Percent % Solids***: 63.9	
	Lab Sample ID #:DB-3B	***Dilution Factor***: 10	***Sample Location Identifier***:DB-3B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:DB-1	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	5500.00		
Antimony	7440-36-0	31	450	SB	60	7.77	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	8.98	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	113.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.72	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	791.00		
Calcium	7440-70-2	NA	NA	SB	5000	175000.00		
Chromium	7440-47-3	230	3,[illegible]00	10 OR SB	10	1320.00		
Cobalt	7440-48-4	NA	[illegible]	[illegible] OR SB	50	8.28	B	
Copper	7440-50-8	NA	[illegible]	25 OR SB	25	2850.00		
Iron	7439-89-6	NA	[illegible]	[illegible]000 OR SB	[illegible]00	41200.00		
Lead*	7439-92-1	400	750	SB	3	636.00		
Magnesium	7439-95-4	NA	NA	SB	5000	30500.00		
Manganese	7439-96-5	NA	NA	SB	15	928.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	1710.00		
Potassium	7440-09-7	NA	NA	SB	5000	678.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.36	U	
Silver	7440-22-4	390	5,700	SB	10	56.00		
Sodium	7440-23-5	NA	NA	SB	5000	822.00	B	
Thallium	7440-28-0	6	91	SB	10	0.13	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	13.60	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	5100.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfu[illegible]s - Peer Review Draft* March 2001. Publi[illegible]55.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartm[illegible]vironmental Concervation Technical and Administrative Guidance Memorandum #4046, Det[illegible]n of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Ob[illegible]* 1994

(3) U.S. EPA (Environm[illegible]Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M[illegible]kenbush	***Date Received***: 02/24/06	***Conc. Le[illegible]n/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/24/06	***Percent % Solids***: 91.1	
	Lab Sample ID #:BG-1A	***Dilution Factor***: 10	***Sample Location Identifier***:BG-1A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:DB-1	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4100.00		
Antimony	7440-36-0	31	450	SB	60	0.34	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	6.01	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	86.80	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.47	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	1.65	B	
Calcium	7440-70-2	NA	NA	SB	5000	34600.00		
Chromium	7440-47-3	230	3[illegible]00	10 OR SB	10	12.10		
Cobalt	7440-48-4	NA	[illegible]	30 OR SB	50	5.69	B	
Copper	7440-50-8	NA	[illegible]	25 OR SB	25	28.20	B	
Iron	7439-89-6	NA	[illegible]	2000 OR SB	100	11900.00		
Lead*	7439-92-1	400	750	SB	3	413.00		
Magnesium	7439-95-4	NA	NA	SB	5000	4570.00	B	
Manganese	7439-96-5	NA	NA	SB	15	729.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	22.00	B	
Potassium	7440-09-7	NA	NA	SB	5000	534.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.97	U	
Silver	7440-22-4	390	5,700	SB	10	1.47	B	
Sodium	7440-23-5	NA	NA	SB	5000	347.00	B	
Thallium	7440-28-0	6	91	SB	10	0.11	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	13.30	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	245.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/24/06	***Percent % Solids***: 84.8	
	Lab Sample ID #:BG-1B	***Dilution Factor***: 10	***Sample Location Identifier***:BG-1B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:DB-1	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [(a) (1)] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [(a) (1)] (mg/Kg)	New York Recommended Soil Cleanup Objectives [(2)] (mg/Kg)	USEPA Contract Required Detection Limits [(3)] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	4080.00		
Antimony	7440-36-0	31	450	SB	60	0.37	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	6.94	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	119.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.58	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	1.86	B	
Calcium	7440-70-2	NA	NA	SB	5000	52400.00	B	
Chromium	7440-47-3	230	3,400	10 OR SB	10	23.40		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	4.84	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	41.60		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	12800.00		
Lead*	7439-92-1	400	750	SB	3	759.00		
Magnesium	7439-95-4	NA	NA	SB	5000	5400.00	B	
Manganese	7439-96-5	NA	NA	SB	15	991.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	27.90	B	
Potassium	7440-09-7	NA	NA	SB	5000	539.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.04	U	
Silver	7440-22-4	390	5,700	SB	10	1.56	B	
Sodium	7440-23-5	NA	NA	SB	5000	360.00	B	
Thallium	7440-28-0	6	91	SB	10	0.13	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	16.00	B	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	256.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environm[illegible] Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superf[illegible]s - Peer Review Draft* March 2001. Publi[illegible] 55.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartm[illegible]vironmental Concervation Technical and Administrative Guidance Memorandum #4046, Det[illegible]on of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Obj[illegible]* [illegible].1994

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte* [illegible] (TAL) with Contract [illegible]ed De[illegible] Limits (CRDLs). Office of Solid Waste a[illegible] Response A[illegible] Operati[illegible]lity Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. K[illegible]ckenbush	***Date Received***: 02/24/06	***Conc. L[illegible]w/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/24/06	***Percent % Solids***: 95.2	
	Lab Sample ID #:CSR-1A	***Dilution Factor***: 10	***Sample Location Identifier***:CSR-1A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:DB-1	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	**CAS NO.**	**USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)**	**USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)**	**New York Recommended Soil Cleanup Objectives [2] (mg/Kg)**	**USEPA Contract Required Detection Limits [3] (ug/L)**	**Analytical Result (mg/Kg)**	**Concentration Qualifier**	**Usability Qualifier**
Aluminum	7429-90-5	NA	NA	SB	200	2610.00		
Antimony	7440-36-0	31	450	SB	60	0.33	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.61	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	10.20	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.37	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	45.40		
Calcium	7440-70-2	NA	NA	SB	5000	14600.00		
Chromium	7440-47-3	230	3[illegible]00	10 OR SB	10	139.00		
Cobalt	7440-48-4	NA	[illegible]	[illegible]R SB	50	4.12	B	
Copper	7440-50-8	NA	[illegible]	25 OR SB	25	10.60	B	
Iron	7439-89-6	NA	[illegible]	[illegible]00 OR SB	100	8540.00		
Lead*	7439-92-1	400	750	[illegible]B	3	6.37		
Magnesium	7439-95-4	NA	NA	SB	5000	4290.00	B	
Manganese	7439-96-5	NA	NA	SB	15	195.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	10.70	B	
Potassium	7440-09-7	NA	NA	SB	5000	513.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.95	U	
Silver	7440-22-4	390	5,700	SB	10	0.50	B	
Sodium	7440-23-5	NA	NA	SB	5000	453.00	B	
Thallium	7440-28-0	6	91	SB	10	0.09	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	9.49	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	353.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/24/06	***Percent % Solids***: 92.4	
	Lab Sample ID #:CSR-1B	***Dilution Factor***: 10	***Sample Location Identifier***:CSR-1B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:DB-1	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2420.00		
Antimony	7440-36-0	31	450	SB	60	0.32	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.31	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	19.20	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.42	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.99	B	
Calcium	7440-70-2	NA	NA	SB	5000	9250.00		
Chromium	7440-47-3	230	3[illegible]00	10 OR SB	10	45.10		
Cobalt	7440-48-4	NA	[illegible]	[illegible] OR SB	50	2.97	B	
Copper	7440-50-8	NA	[illegible]	25 OR SB	25	27.70		
Iron	7439-89-6	NA	[illegible]	[illegible]00 OR SB	100	7320.00		
Lead*	7439-92-1	400	750	SB	3	22.20		
Magnesium	7439-95-4	NA	NA	SB	5000	2810.00	B	
Manganese	7439-96-5	NA	NA	SB	15	270.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	7.51	B	
Potassium	7440-09-7	NA	NA	SB	5000	576.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.90	U	
Silver	7440-22-4	390	5,700	SB	10	0.27	U	
Sodium	7440-23-5	NA	NA	SB	5000	418.00	B	
Thallium	7440-28-0	6	91	SB	10	0.08	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	9.00	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	119.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives* 1994

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC

INORGANIC ANALY[illegible] DATA SHEET

Site Name: H. M[illegible]kenbush	***Date Received***: 02/24/06	***Conc. Le[illegible]w/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/24/06	***Percent % Solids***: 94.8	
	Lab Sample ID #:CSR-2A	***Dilution Factor***: 10	***Sample Location Identifier***:CSR-2A
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:DB-1	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	**CAS NO.**	**USEPA Residential Soil Screening Levels [(a) (1)] (mg/Kg)**	**USEPA Commercial/Industrial Soil Screening Levels [(a) (1)] (mg/Kg)**	**New York Recommended Soil Cleanup Objectives [(2)] (mg/Kg)**	**USEPA Contract Required Detection Limits [(3)] (ug/L)**	**Analytical Result (mg/Kg)**	**Concentration Qualifier**	**Usability Qualifier**
Aluminum	7429-90-5	NA	NA	SB	200	2600.00		
Antimony	7440-36-0	31	450	SB	60	0.33	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.39	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	11.20	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.29	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.31	B	
Calcium	7440-70-2	NA	NA	SB	5000	19400.00		
Chromium	7440-47-3	230	3,4[illegible]0	10 OR SB	10	29.40	B	
Cobalt	7440-48-4	NA	[illegible]	[illegible]0 OR SB	50	4.35	B	
Copper	7440-50-8	NA	NA	[illegible]5 OR SB	25	10.70	B	
Iron	7439-89-6	NA	[illegible]	[illegible]00 OR SB	[illegible]00	7860.00		
Lead*	7439-92-1	400	750	SB	3	4.21		
Magnesium	7439-95-4	NA	NA	SB	5000	2760.00	B	
Manganese	7439-96-5	NA	NA	SB	15	186.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	7.95	B	
Potassium	7440-09-7	NA	NA	SB	5000	352.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.95	U	
Silver	7440-22-4	390	5,700	SB	10	2.39	B	
Sodium	7440-23-5	NA	NA	SB	5000	373.00	B	
Thallium	7440-28-0	6	91	SB	10	0.09	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	9.54	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	103.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/24/06	***Percent % Solids***: 92.2	
	Lab Sample ID #:CSR-2B	***Dilution Factor***: 10	***Sample Location Identifier***:CSR-2B
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:DB-1	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2050.00		
Antimony	7440-36-0	31	450	SB	60	0.31	U	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.41	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	16.80	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.41	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	1.50	B	
Calcium	7440-70-2	NA	NA	SB	5000	60100.00		
Chromium	7440-47-3	230	3400	10 OR SB	10	59.70		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	3.06	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	10.60	B	
Iron	7439-89-6	NA	NA	2000 OR SB	100	7320.00		
Lead*	7439-92-1	400	750	SB	3	31.50		
Magnesium	7439-95-4	NA	NA	SB	5000	24200.00		
Manganese	7439-96-5	NA	NA	SB	15	573.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	12.70	B	
Potassium	7440-09-7	NA	NA	SB	5000	387.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.88	U	
Silver	7440-22-4	390	5,700	SB	10	0.81	B	
Sodium	7440-23-5	NA	NA	SB	5000	484.00	B	
Thallium	7440-28-0	6	91	SB	10	0.10	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	8.84	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	78.50		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfu[illegible] Sites - Peer Review Draft* March 2001. Publi[illegible]9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartm[illegible]nvironmental Concervation Technical and Administrative Guidance Memorandum #4046, De[illegible]on of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup O[illegible]* .1994

(3) U.S. EPA (Enviro[illegible]Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorg[illegible]alysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contr[illegible]Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M[illegible]ckenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/24/06	***Percent % Solids***: 79.6	
	Lab Sample ID #:SS-hole 1	***Dilution Factor***: 10	***Sample Location Identifier***:SS-hole 1
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Soil	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:DB-1	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (mg/Kg)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	1049.00		
Antimony	7440-36-0	31	450	SB	60	2.00	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	3.18	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	8.55	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.15	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	445.00		
Calcium	7440-70-2	NA	NA	SB	5000	11800.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	79.10		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	1.16	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	963.00		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	7190.00		
Lead*	7439-92-1	400	750	SB	3	108.00		
Magnesium	7439-95-4	NA	NA	SB	5000	446.00	B	
Manganese	7439-96-5	NA	NA	SB	15	61.50		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	49.80	B	
Potassium	7440-09-7	NA	NA	SB	5000	2240.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	1.18	U	
Silver	7440-22-4	390	5,700	SB	10	7.34	B	
Sodium	7440-23-5	NA	NA	SB	5000	1540.00	B	
Thallium	7440-28-0	6	91	SB	10	0.11	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	11.90	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	6110.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/23/06	***Percent % Solids***:	
	Lab Sample ID #:MW-2	***Dilution Factor***: 0	***Sample Location Identifier***:MW-2
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Water	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:MW-2	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (ug/L)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	130.00	B	
Antimony	7440-36-0	31	450	SB	60	3.13	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	7.36	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	171.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.10	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.29	B	
Calcium	7440-70-2	NA	NA	SB	5000	118000.00		
Chromium	7440-47-3	230	3,000	10 OR SB	10	1.67	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	0.63	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	1.95	B	
Iron	7439-89-6	NA	NA	2000 OR SB	100	6125.00		
Lead*	7439-92-1	400	750	SB	3	0.64	B	
Magnesium	7439-95-4	NA	NA	SB	5000	12200.00		
Manganese	7439-96-5	NA	NA	SB	15	627.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	9.71	B	
Potassium	7440-09-7	NA	NA	SB	5000	3940.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.83	U	
Silver	7440-22-4	390	5,700	SB	10	0.25	U	
Sodium	7440-23-5	NA	NA	SB	5000	124000.00		
Thallium	7440-28-0	6	91	SB	10	0.32	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	8.31	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	11.40	B	
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives* 1994

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1), *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)* Office of Solid Waste and Emergency Response, Analytical Operations/Quality Center, Washington DC

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. [illegible]kenbush	***Date Received***: 02/24/06	***Conc. Lev[illegible]w/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/23/06	***Percent % Solids***:	
	Lab Sample ID #:MW-4	***Dilution Factor***: 0	***Sample Location Identifier***:MW-4
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Water	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:MW-2	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (ug/L)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	241.00	B	
Antimony	7440-36-0	31	450	SB	60	3.06	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	2.84	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	182.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.10	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	2.21	B	
Calcium	7440-70-2	NA	NA	SB	5000	101000.00		
Chromium	7440-47-3	230	3,000	10 OR SB	10	4.13	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	1.33	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	8.97	B	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	2720.00		
Lead*	7439-92-1	400	750	SB	3	4.83		
Magnesium	7439-95-4	NA	NA	SB	5000	11100.00		
Manganese	7439-96-5	NA	NA	SB	15	906.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	12.30	B	
Potassium	7440-09-7	NA	NA	SB	5000	150000.00		
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.89	B	
Silver	7440-22-4	390	5,700	SB	10	0.26	B	
Sodium	7440-23-5	NA	NA	SB	5000	621000.00		
Thallium	7440-28-0	6	91	SB	10	0.12	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	8.31	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	55.60		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/23/06	***Percent % Solids***:	
	Lab Sample ID #:MW-5	***Dilution Factor***: 0	***Sample Location Identifier***:MW-5
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Water	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:MW-2	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (ug/L)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	2510.00		
Antimony	7440-36-0	31	450	SB	60	2.09	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	4.70	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	62.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.16	B	
Cadmium	7440-43-9	70	900	1 OR SB	5	48.40		
Calcium	7440-70-2	NA	NA	SB	5000	104000.00		
Chromium	7440-47-3	230	3,400	10 OR SB	10	46.20		
Cobalt	7440-48-4	NA	NA	30 OR SB	50	2.86	B	
Copper	7440-50-8	NA	NA	25 OR SB	25	9.03	B	
Iron	7439-89-6	NA	NA	2,000 OR SB	100	5520.00		
Lead*	7439-92-1	400	750	SB	3	3.20		
Magnesium	7439-95-4	NA	NA	SB	5000	14600.00		
Manganese	7439-96-5	NA	NA	SB	15	222.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	277.00		
Potassium	7440-09-7	NA	NA	SB	5000	11020.00		
Selenium	7782-49-2	390	5,700	2 OR SB	5	2.19	B	
Silver	7440-22-4	390	5,700	SB	10	1.93	B	
Sodium	7440-23-5	NA	NA	SB	5000	167000.00		
Thallium	7440-28-0	6	91	SB	10	0.15	B	
Vanadium	7440-62-2	550	7,900	150 SB	50	8.31	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	1450.00		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfu[illegible]s - Peer Review Draft* March 2001. Public[illegible]55.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartm[illegible]vironmental Concervation Technical and Administrative Guidance Memorandum #4046, Det[illegible]n of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Obj[illegible]* 1994

(3) U.S. EPA (Environ[illegible]rotection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Offi[illegible]d Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M[illenbush]	***Date Received***: 02/24/06	***Conc. Le[vel/med.]***: Low
Address: Herkimer, New York	***Date Analyzed:*** 03/23/06	***Percent % Solids***:
	Lab Sample ID #:MW-6	***Dilution Factor***: 0
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Water	***Depth (ft)***:
Case No.: QUACS1	***(SDG) No.***:MW-2	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)

Program: CERCLA

Sample Location Identifier:MW-6

ANALYTE	CAS NO.	Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)			USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (ug/L)	Data	
		USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)			Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	68.70	B	
Antimony	7440-36-0	31	450	SB	60	2.26	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	8.77	B	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	175.00	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.10	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.28	B	
Calcium	7440-70-2	NA	NA	SB	5000	121000.00		
Chromium	7440-47-3	230	3,[illegible]	10 OR SB	10	2.13	B	
Cobalt	7440-48-4	NA	[illegible]	[illegible] OR SB	50	0.64	B	
Copper	7440-50-8	NA	[illegible]	25 OR SB	25	1.67	B	
Iron	7439-89-6	NA	[illegible]	2000 OR SB	100	5610.00		
Lead*	7439-92-1	400	750	SB	3	0.61	B	
Magnesium	7439-95-4	NA	NA	SB	5000	12700.00		
Manganese	7439-96-5	NA	NA	SB	15	627.00		
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	7.76	B	
Potassium	7440-09-7	NA	NA	SB	5000	3810.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.83	U	
Silver	7440-22-4	390	5,700	SB	10	0.25	U	
Sodium	7440-23-5	NA	NA	SB	5000	122000.00		
Thallium	7440-28-0	6	91	SB	10	0.08	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	8.31	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	11.90	B	
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

INORGANIC ANALYSIS DATA SHEET

Site Name: H. M. Quackenbush	***Date Received***: 02/24/06	***Conc. Level (low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/23/06	***Percent % Solids***:	
	Lab Sample ID #:RB-01	***Dilution Factor***: 0	***Sample Location Identifier*** RB-01
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Water	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:MW-2	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					Data	
ANALYTE	CAS NO.	USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (ug/L)	Concentration Qualifier	Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	9.32	B	
Antimony	7440-36-0	31	450	SB	60	1.67	B	
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.21	U	
Barium	7440-39-3	5,500	79,000	300 OR SB	200	0.69	B	
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.10	U	
Cadmium	7440-43-9	70	900	1 OR SB	5	0.09	B	
Calcium	7440-70-2	NA	NA	SB	5000	112.00	B	
Chromium	7440-47-3	230	3400	10 OR SB	10	1.76	B	
Cobalt	7440-48-4	NA	NA	30 OR SB	50	0.02	U	
Copper	7440-50-8	NA	NA	25 OR SB	25	28.40		
Iron	7439-89-6	NA	NA	2,000 OR SB	100	22.00	B	
Lead*	7439-92-1	400	750	SB	3	0.62	B	
Magnesium	7439-95-4	NA	NA	SB	5000	19.00	B	
Manganese	7439-96-5	NA	NA	SB	15	1.28	B	
Mercury	7439-97-6	23	340	0.1	0.2	NR		
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	1.10	B	
Potassium	7440-09-7	NA	NA	SB	5000	104.00	B	
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.83	U	
Silver	7440-22-4	390	5,700	SB	10	0.25	U	
Sodium	7440-23-5	NA	NA	SB	5000	406.00	B	
Thallium	7440-28-0	6	91	SB	10	0.08	U	
Vanadium	7440-62-2	550	7,900	150 SB	50	8.31	U	
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	28.10		
Cyanide	57-12-5	1,600	23,000	NA	10	NR		

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superf[illegible] Sites - Peer Review Draft* March 2001. Pub[illegible]355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepart[illegible]nvironmental Concervation Technical and Administrative Guidance Memorandum #4046, D[illegible]ion of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup O[illegible]* 1994

(3) U.S. EPA (Enviro[illegible] Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorga[illegible]nalysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDL's)*. Office of Solid Waste and Em[illegible] Response, Analytical [illegible]erations/Data Quality Center, Washington, DC.

INORGANIC ANA[illegible]'S DATA SHEET

Site Name: H[illegible]uackenbush	***Date Received***: 02/24/06	***Conc.*** [illegible] ***(low/med.)***: Low	***Program***: CERCLA
Address: Herkimer, New York	***Date Analyzed:*** 03/23/06	***Percent % Solids***:	
	Lab Sample ID #:RB-02	***Dilution Factor***: 0	***Sample Location Identifier*** RB-02
Lab: U.S.EPA Region 2 Mobile Analytical Laboratory	***Matrix (soil / water)***: Water	***Depth (ft)***:	
Case No.: QUACS1	***(SDG) No.***:MW-2	***EPA Method***: SOP MAL-3.0 (Mod. SW-846 6020A)	

		Soil Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs)					
		USEPA Residential Soil Screening Levels [a] [1] (mg/Kg)	USEPA Commercial/Industrial Soil Screening Levels [a] [1] (mg/Kg)	New York Recommended Soil Cleanup Objectives [2] (mg/Kg)	USEPA Contract Required Detection Limits [3] (ug/L)	Analytical Result (ug/L)	Data
ANALYTE	CAS NO.						Concentration Qualifier / Usability Qualifier
Aluminum	7429-90-5	NA	NA	SB	200	17.60	B
Antimony	7440-36-0	31	450	SB	60	1.97	B
Arsenic	7440-38-2	0.4	2	7.5 OR SB	10	1.74	U
Barium	7440-39-3	5,500	79,000	300 OR SB	200	0.36	B
Beryllium	7440-41-7	160	2,300	0.16 OR SB	5	0.10	U
Cadmium	7440-43-9	70	900	1 OR SB	5	0.45	B
Calcium	7440-70-2	NA	NA	SB	5000	79.00	B
Chromium	7440-47-3	230	3,[illegible]00	10 OR SB	10	1.84	B
Cobalt	7440-48-4	NA	[illegible]	[illegible]0 OR SB	50	0.02	U
Copper	7440-50-8	NA	[illegible]	[illegible]25 OR SB	25	1.55	B
Iron	7439-89-6	NA	[illegible]	[illegible],000 OR SB	100	9.00	B
Lead*	7439-92-1	400	750	SB	3	0.18	B
Magnesium	7439-95-4	NA	NA	SB	5000	9.00	B
Manganese	7439-96-5	NA	NA	SB	15	0.65	B
Mercury	7439-97-6	23	340	0.1	0.2	NR	
Nickel	7440-02-0	1,600	23,000	13 OR SB	40	1.43	B
Potassium	7440-09-7	NA	NA	SB	5000	32.00	B
Selenium	7782-49-2	390	5,700	2 OR SB	5	0.83	U
Silver	7440-22-4	390	5,700	SB	10	0.25	U
Sodium	7440-23-5	NA	NA	SB	5000	121.00	B
Thallium	7440-28-0	6	91	SB	10	0.08	U
Vanadium	7440-62-2	550	7,900	150 SB	50	8.31	U
Zinc	7440-66-6	23,000	340,000	20 OR SB	0	8.38	B
Cyanide	57-12-5	1,600	23,000	NA	10	NR	

Preliminary Data

Data Concentration Qualifier Definitions:

U - Undetected value reported at the Instrument Detection Limit (IDL)

B - Detected value < the Contract Required Detection Limit (CRDL)

Notes:

*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas near highways are much higher and typically**

(a) Values are denoted for the soil ingestion and dermal absorption exposure pathway.

(b) Denotes only the criteria established for the hexavalent chromium constituent.

NA: None Applicable

NR: Not Reported

mg/Kg: milligrams per Kilogram = parts per million (ppm)

ug/Kg: micrograms per Kilogram = parts per billion (ppb)

ug/L: micrograms per Liter = parts per billion (ppb)

SB: Site Background Level

Federal & State Applicable or Relevant and Appropriate Requirements (ARARs) and/or To Be Considereds (TBCs):

(1) U.S.EPA (Environmental Protection Agency). *Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites - Peer Review Draft* March 2001. Publication 9355.4-24. Office of Solid Waste and Emergency Response (OSWER), Washington, DC.

(2) New YorkDepartment of Environmental Concervation Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Table 4, *Recommended Soil Cleanup Objectives.1994*

(3) U.S. EPA (Environmental Protection Agency). January 2000. Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM0 4.1); *Exhibit C: Target Analyte List (TAL) with Contract Required Detection Limits (CRDLs)*. Office of Solid Waste and Emergency Response, Analytical Operations/Data Quality Center, Washington, DC.

APPENDIX F

SOIL AND WELL DATA SHEETS

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/21/06

LOCATION: B-1 West side of plating basement, Photograph 1

EQUIPMENT USED: Geoprobe, stainless steel bowl and disposable scoop

SURFACE SAMPLE:

SAMPLE NAME: B-1A CLP NUMBERS: MB3L29

SAMPLE TIME: 1415 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2.5' SAMPLE DEPTH : 1-3'

SAMPLE CHARACTERISTICS: Mostly rocks, brown, sandy silt.

COMMENTS/WEATHER: Snowing ~30°F

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-1B CLP NUMBERS: MB3L30

SAMPLE TIME: 1432 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2' SAMPLE DEPTH : 5-7'

SAMPLE CHARACTERISTICS: Sandy, light brown soil.

COMMENTS/WEATHER: Snowing ~30°F

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-1C CLP NUMBERS: MB3L31

SAMPLE TIME: 1442 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 2' SAMPLE DEPTH : 10-11'

SAMPLE CHARACTERISTICS: Sand with rocks, some silt, moist

COMMENTS/WEATHER: Snowing ~30°F

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/21/06

LOCATION: B-2, North/middle of plating basement. Photograph 2

EQUIPMENT USED: Geoprobe, stainless steel bowl and disposable scoop

SURFACE SAMPLE:

SAMPLE NAME: B-2A CLP NUMBERS: MB3L32

SAMPLE TIME: 1450 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2' SAMPLE DEPTH : 3-4'

SAMPLE CHARACTERISTICS: Moist, sandy, silt, dark brown

COMMENTS/WEATHER: Sampled below concrete, snowing ~30°F

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-2B CLP NUMBERS: MB3L33

SAMPLE TIME: 1457 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: >2' SAMPLE DEPTH : 6-7'

SAMPLE CHARACTERISTICS: Moist, silt and sand with rocks

COMMENTS/WEATHER: Snowing ~30°F

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/21/06

LOCATION: B-3, Northeast side of plating basement east end of north trench. Photograph 9

EQUIPMENT USED: Geoprobe, stainless steel bowl and disposable scoop

SURFACE SAMPLE:

SAMPLE NAME: B-3A CLP NUMBERS: MB3L34

SAMPLE TIME: 1502 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 8" SAMPLE DEPTH : 3-4'

SAMPLE CHARACTERISTICS: Wet grey silt with some sand

COMMENTS/WEATHER: Sampled entire Geoprobe sleeve / Snowing ~30°F

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-3B CLP NUMBERS: MB3L35

SAMPLE TIME: 1510 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 1.5' SAMPLE DEPTH : 2.5-4'

SAMPLE CHARACTERISTICS: Wet sand and silt, rocky, brown

COMMENTS/WEATHER: Sampled entire Geoprobe sleeve / Snowing ~30°F

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-3C CLP NUMBERS: -----

SAMPLE TIME: ----- ANALYSIS: -------

GEOPROBE INTERVAL: 8 – 12" RECOVERY: 0' SAMPLE DEPTH : -----

SAMPLE CHARACTERISTICS: All water, no sample collected

COMMENTS/WEATHER: Snowing ~30°F

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/21/06

LOCATION: B-4, West/south side of plating basement in the west side of the north trenches. Photograph 5

EQUIPMENT USED: Geoprobe, stainless steel bowl and disposable scoop

SURFACE SAMPLE:

SAMPLE NAME: B-4A CLP NUMBERS: MB3L36

SAMPLE TIME: 1521 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: <2' SAMPLE DEPTH : 2-4'

SAMPLE CHARACTERISTICS: Dry brown sand with rocks, no concrete

COMMENTS/WEATHER: Snowing ~30°F

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-4B CLP NUMBERS: MB3L37

SAMPLE TIME: 1527 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2.5' SAMPLE DEPTH : 4-6.5'

SAMPLE CHARACTERISTICS: Brown sand with rocks

COMMENTS/WEATHER: Snowing ~30°F

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-4C CLP NUMBERS: MB3L38

SAMPLE TIME: 1527 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 2.5' SAMPLE DEPTH : 9-11'

SAMPLE CHARACTERISTICS: Wet with rocks, silty clay,

COMMENTS/WEATHER: Snowing ~30°F

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/21/06

EQUIPMENT USED: Geoprobe, stainless steel bowl and scoop

LOCATION: B-5, South side of Plating Basement between 2 trenches. Photograph 6

SURFACE SAMPLE:

SAMPLE NAME: B-5A CLP NUMBERS: MB3L43

SAMPLE TIME: 1640 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 1' SAMPLE DEPTH : 3-4'

SAMPLE CHARACTERISTICS: Brown sand

COMMENTS/WEATHER: Snowing ~30°F

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-5B CLP NUMBERS: MB3L44,B3L44

SAMPLE TIME: 1652 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 16" SAMPLE DEPTH : 6-8'

SAMPLE CHARACTERISTICS: Sampled entire Geoprobe sleeve /Black silt and brown sand, wet and oily

COMMENTS/WEATHER: Snowing ~30°F

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/21/06

LOCATION: B-6, Southeast side of plating basement east end of northern trench . Photograph 8

EQUIPMENT USED: Geoprobe, stainless steel bowl and disposable scoop

SURFACE SAMPLE:

SAMPLE NAME: B-6A CLP NUMBERS: MB3L39

SAMPLE TIME: 1554 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 1.5' SAMPLE DEPTH : 2.5-4'

SAMPLE CHARACTERISTICS: Brown, sandy silt

COMMENTS/WEATHER: No concrete, collected sample below fill/Snowing ~30°F

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-6B CLP NUMBERS: MB3L40

SAMPLE TIME: 1613 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 30" SAMPLE DEPTH : 6-7'

SAMPLE CHARACTERISTICS: Dry, light brown sand with silt

COMMENTS/WEATHER: Snowing ~30°F

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-6C and duplicate, B-6D CLP NUMBERS: MB3L41/MB3L42

SAMPLE TIME: 1620 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 2' SAMPLE DEPTH : 10-12'

SAMPLE CHARACTERISTICS: Brown silty sand,

COMMENTS/WEATHER: Snowing ~30°F

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/21/06

LOCATION: SShole1, next to B-5 mid south side of plating basement near the southern trench. Photograph 7

EQUIPMENT USED: Geoprobe, stainless steel bowl and scoop

SURFACE SAMPLE:

SAMPLE NAME: SS-hole1 CLP NUMBERS: MB3L45, B3L45

SAMPLE TIME: 1700 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: ---- RECOVERY: --- SAMPLE DEPTH : 0 – 6"

SAMPLE CHARACTERISTICS: Dark brown sandy silt

COMMENTS/WEATHER: Surface soil from hole in the floor of the Plating Basement, No Geoprobe utilized /Snowing ~30°F

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/22/06

LOCATION: B-7, Northeast end of plating basement near elevator. Photograph 11

EQUIPMENT USED: Geoprobe, stainless steel bowl, disposable scoop, EnCores

SURFACE SAMPLE:

SAMPLE NAME: B-7A – MS/MSD CLP NUMBERS: MB3L46

SAMPLE TIME: 0827 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 1.5' SAMPLE DEPTH : 2.5-4'

SAMPLE CHARACTERISTICS: Brown, sandy silt

COMMENTS/WEATHER: PID .1-.4 ppm/Cold and cloudy

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-7B CLP NUMBERS: MB3L47

SAMPLE TIME: 0841 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2' SAMPLE DEPTH : 7-8'

SAMPLE CHARACTERISTICS: Brown sand

COMMENTS/WEATHER: Cold and cloudy

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-7C CLP NUMBERS: MB3L48, B3L48

SAMPLE TIME: 0850 ANALYSIS: Total Metals, cyanide, VOCs

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 3' SAMPLE DEPTH : 10-12'

SAMPLE CHARACTERISTICS: Dark brown with rocks, silt & sand

COMMENTS/WEATHER: PID 1.5 ppm/Cold and cloudy

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/22/06

LOCATION: B-9, Main floor in western end of room with overhead door leading to driveway. Photograph 13

EQUIPMENT USED: Geoprobe, stainless steel bowl and scoop

SURFACE SAMPLE:

SAMPLE NAME: B-9A CLP NUMBERS: MB3L49

SAMPLE TIME: 1345 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2' SAMPLE DEPTH : 3-4'

SAMPLE CHARACTERISTICS: Medium brown silty sand with some clay

COMMENTS/WEATHER: Cold and cloudy

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-9B CLP NUMBERS: MB3L50

SAMPLE TIME: 1351 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2' SAMPLE DEPTH : 7-8'

SAMPLE CHARACTERISTICS: Brown sandy silt

COMMENTS/WEATHER: Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-9C CLP NUMBERS: MB3L51, B3L51

SAMPLE TIME: 1356 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 2.5' SAMPLE DEPTH : 9-10'

SAMPLE CHARACTERISTICS: Brown sandy silt

COMMENTS/WEATHER: Cold and snowing

SOIL DATA SHEET - Continued

SITE NAME: Quackenbush DATE: 2/22/06

LOCATION: B-9

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-9D CLP NUMBERS: MB3L52

SAMPLE TIME: 1400 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 12 – 16' RECOVERY: 2' SAMPLE DEPTH : 15 - 16'

SAMPLE CHARACTERISTICS: Moist brown sandy silt

COMMENTS/WEATHER: Cold and snowing

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/22/06

LOCATION: B-10, East side of room on main floor with overhead door leading to driveway. Photograph 14

EQUIPMENT USED: Geoprobe, stainless steel bowl and disposable scoop, EnCores

SURFACE SAMPLE:

SAMPLE NAME: B-10A CLP NUMBERS: MB3L53

SAMPLE TIME: 1408 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 1' SAMPLE DEPTH : 3 - 4'

SAMPLE CHARACTERISTICS: Brown silty sand

COMMENTS/WEATHER: Sample below concrete after 2 attempts/ Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-10B CLP NUMBERS: MB3L54, B3l54

SAMPLE TIME: 1416 ANALYSIS: Total Metals, cyanide, VOCs

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 3' SAMPLE DEPTH : 6 - 8'

SAMPLE CHARACTERISTICS: Sandy silt with rocks,

COMMENTS/WEATHER: Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-10C CLP NUMBERS: MB3L55

SAMPLE TIME: 1422 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 1' SAMPLE DEPTH : 11- 12'

SAMPLE CHARACTERISTICS: Dry, light brown sandy silt

COMMENTS/WEATHER: Cold and snowing

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/22/06

LOCATION: B-11, Northwest side of room on main floor with overhead door leading to driveway. Photograph 15

EQUIPMENT USED: Geoprobe, stainless steel bowl and scoop

SURFACE SAMPLE:

SAMPLE NAME: B-11A CLP NUMBERS: MB3L56, B3L56

SAMPLE TIME: 1434 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 1.5' SAMPLE DEPTH : 2 - 4'

SAMPLE CHARACTERISTICS: Sandy silt,

COMMENTS/WEATHER: Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-11B and Duplicate B-11D CLP NUMBERS: MB3L57/MB3L58

SAMPLE TIME: 1445 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2.5' SAMPLE DEPTH : 6- 8'

SAMPLE CHARACTERISTICS: Medium Brown, silty sand with gravel

COMMENTS/WEATHER: Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-11C CLP NUMBERS: MB3L58, B3L58

SAMPLE TIME: 1453 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 3' SAMPLE DEPTH : 6 - 7'

SAMPLE CHARACTERISTICS: Medium brown, silty sand

COMMENTS/WEATHER: Cold and snowing

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/22/06

LOCATION: B-12, East side of courtyard. Photograph 16

EQUIPMENT USED: Geoprobe, stainless steel bowl and disposable scoop

SURFACE SAMPLE:

SAMPLE NAME: B-12A CLP NUMBERS: MB3L64

SAMPLE TIME: 1515 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2' SAMPLE DEPTH : 2 - 4'

SAMPLE CHARACTERISTICS: Medium/dark silty sand

COMMENTS/WEATHER: Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-12B CLP NUMBERS: MB3L65

SAMPLE TIME: 1525 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2' SAMPLE DEPTH : 6 - 8'

SAMPLE CHARACTERISTICS: Medium Brown sand with some silt

COMMENTS/WEATHER: Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-12C CLP NUMBERS: MB3L66

SAMPLE TIME: 1520 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 2' SAMPLE DEPTH : 9 – 10'

SAMPLE CHARACTERISTICS: Medium Brown sand with some silt

COMMENTS/WEATHER: Cold and snowing

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: B-13, Northwest side of courtyard. Photograph 17

EQUIPMENT USED: Geoprobe, stainless steel bowl and scoop

SURFACE SAMPLE:

SAMPLE NAME: B-13A –MS/MSD CLP NUMBERS: MB3L67

SAMPLE TIME: 0820 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2' SAMPLE DEPTH : 2 - 4'

SAMPLE CHARACTERISTICS: Medium silty sand

COMMENTS/WEATHER: Very cold

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-13B CLP NUMBERS: MB3L68, B3L68

SAMPLE TIME: 0833 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2' SAMPLE DEPTH : 6 - 8'

SAMPLE CHARACTERISTICS: Medium Brown sand with some silt

COMMENTS/WEATHER: Collected entire Geoprobe sample sleeve/ Very cold

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-13C CLP NUMBERS: MB3L69

SAMPLE TIME: 0838 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 1.5' SAMPLE DEPTH : 8 – 9.5'

SAMPLE CHARACTERISTICS: 2" of moist red clay

COMMENTS/WEATHER: PID 28 ppm/Collected entire Geoprobe sample sleeve/Very cold

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: B-14, Northeast corner of large process room with acid vats. Photograph 18

EQUIPMENT USED: Geoprobe, stainless steel bowl and scoop, EnCores

SURFACE SAMPLE:

SAMPLE NAME: B-14A CLP NUMBERS: MB3L70, B3L70

SAMPLE TIME: 0909 ANALYSIS: Total Metals, cyanide, VOCs

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2' SAMPLE DEPTH : 2 – 4'

SAMPLE CHARACTERISTICS: Black soil below concrete

COMMENTS/WEATHER: PID 250-390 ppm/ Very cold

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-14B CLP NUMBERS: -----

SAMPLE TIME: ----- ANALYSIS: ------

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 0' SAMPLE DEPTH : -----

SAMPLE CHARACTERISTICS:

COMMENTS/WEATHER: No recovery/Very cold

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-14C CLP NUMBERS: MB3L71

SAMPLE TIME: 0930 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 2' SAMPLE DEPTH : 10 – 12'

SAMPLE CHARACTERISTICS: Medium brown sand soil

COMMENTS/WEATHER: Sampled top 10"/Very cold

SOIL DATA SHEET - Continued

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: B-14

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-14D and BNA duplicate B-14E

CLP NUMBERS: MB3L72, B3L72 B3L73

SAMPLE TIME: 0940 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: 12 – 16' RECOVERY: 3' SAMPLE DEPTH : 13 – 16'

SAMPLE CHARACTERISTICS: Medium brown silty sand above grey clay

COMMENTS/WEATHER: Collected entire Geoprobe sample sleeve/ Very cold

SOIL DATA SHEET

SITE NAME: H.M Quackenbush DATE: 2/23/06

LOCATION: B-15, Southwest corner of large, processing room with acid vats. Photograph 19

EQUIPMENT USED: Geoprobe, stainless steel bowl and scoop, EnCores

SURFACE SAMPLE:

SAMPLE NAME: B-15A CLP NUMBERS: MB3L74, B3L74

SAMPLE TIME: 1019 ANALYSIS: Total Metals, cyanide, VOCs

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2' SAMPLE DEPTH : 2 – 4'

SAMPLE CHARACTERISTICS: Brown sand with some silt

COMMENTS/WEATHER: PID 600 ppm/Very cold

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-15B CLP NUMBERS: MB3L75, B3L75

SAMPLE TIME: 1030 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2' SAMPLE DEPTH : 6– 8'

SAMPLE CHARACTERISTICS: Medium/dark silty sand

COMMENTS/WEATHER: Very cold

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-15C CLP NUMBERS: MB3L76

SAMPLE TIME: 1037 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 2' SAMPLE DEPTH : 10 – 12'

SAMPLE CHARACTERISTICS: Medium Brown silty sand w/trace of reddish sand

COMMENTS/WEATHER: Very Cold

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: B-16, Center/northeast end of large, processing room with acid vats. Photograph 20

EQUIPMENT USED: Geoprobe, stainless steel bowl and disposable scoop

SURFACE SAMPLE:

SAMPLE NAME: B-16A CLP NUMBERS: MB3L77

SAMPLE TIME: 1045 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: <2' SAMPLE DEPTH : 0 – 2'

SAMPLE CHARACTERISTICS: Medium/dark brown silty sand

COMMENTS/WEATHER: 20" total recovery, sampled bottom 16"/ had rejection below 4' after two attempts/Very cold

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: CSR-1, South side of chemical storage room. Photograph 34

EQUIPMENT USED: Stainless steel bowl, auger and scoop

SURFACE SAMPLE:

SAMPLE NAME: CSR-1A CLP NUMBERS: MB3L78

SAMPLE TIME: 1055 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: ------ RECOVERY: ----- SAMPLE DEPTH : 0 – 6"

SAMPLE CHARACTERISTICS: Light brown sand

COMMENTS/WEATHER: Collected from a hole in the floor tile without the Geoprobe/ Very cold

SUB-SURFACE SAMPLE:

SAMPLE NAME: CSR-1B CLP NUMBERS: MB3L79, B3L79

SAMPLE TIME: 1108 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: ------ RECOVERY: ----- SAMPLE DEPTH : 2 – 3'

SAMPLE CHARACTERISTICS: Light brown, fluffy sand

COMMENTS/WEATHER: Collected from a hole in the floor tile without the Geoprobe/ Very cold

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: CSR-2, North side of chemical storage room. Photograph 35

EQUIPMENT USED: Stainless steel bowl, auger and scoop

SURFACE SAMPLE:

SAMPLE NAME: CSR-2A CLP NUMBERS: MB3L80, B3L80

SAMPLE TIME: 1055 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: ------ RECOVERY: ----- SAMPLE DEPTH : 0 – 6"

SAMPLE CHARACTERISTICS: Light brown, fluffy sand

COMMENTS/WEATHER: Collected from a hole in the floor tile without the Geoprobe/ Very cold

SUB-SURFACE SAMPLE:

SAMPLE NAME: CSR-2B CLP NUMBERS: MB3L81

SAMPLE TIME: 1120 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: ------ RECOVERY: ----- SAMPLE DEPTH : 1.5 – 2'

SAMPLE CHARACTERISTICS: Light brown, fluffy sand

COMMENTS/WEATHER: Collected from a hole in the floor tile without the Geoprobe/ Very cold

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: B-17, Center/east side of large processing room with acid vats, west of location B-16. Photograph 21

EQUIPMENT USED: Geoprobe, stainless steel bowl and scoop

SURFACE SAMPLE:

SAMPLE NAME: B-17A CLP NUMBERS: MB3L82

SAMPLE TIME: 1130 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2.5' SAMPLE DEPTH : 1 – 2'

SAMPLE CHARACTERISTICS: Medium brown sand

COMMENTS/WEATHER: Very cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-17B CLP NUMBERS: MB3L83

SAMPLE TIME: 1135 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2' SAMPLE DEPTH : 6 – 7'

SAMPLE CHARACTERISTICS: Medium brown sand & silt w/some red sand on top

COMMENTS/WEATHER: Very cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-17C CLP NUMBERS: MB3L84, B3L84

SAMPLE TIME: 1138 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 4' SAMPLE DEPTH : 8 – 10'

SAMPLE CHARACTERISTICS: Tan sand with some rocks

COMMENTS/WEATHER: PID 600 ppm/Very cold and snowing

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: B-18, Center of large processing room with acid vats. Photograph 22

EQUIPMENT USED: Geoprobe, stainless steel bowl and scoop, EnCores

SURFACE SAMPLE:

SAMPLE NAME: B-18A CLP NUMBERS: MB3L85, B3L85

SAMPLE TIME: 1150 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2.5' SAMPLE DEPTH : 2 – 4'

SAMPLE CHARACTERISTICS: Sandy silt w/trace of clay

COMMENTS/WEATHER: Sample bottom 28", Moved location 2 feet due to rejection after first attempt /Cold and snowing.

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-18B- MS/MSD CLP NUMBERS: MB3L86

SAMPLE TIME: 1153 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: <1' SAMPLE DEPTH : 7 – 8'

SAMPLE CHARACTERISTICS: Medium gray silty sand w/trace of reddish sand

COMMENTS/WEATHER: PID 1150 ppb/Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-18C CLP NUMBERS: MB3L87, B3L87

SAMPLE TIME: 1210 ANALYSIS: Total Metals, cyanide, VOCs

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 3' SAMPLE DEPTH : 8 – 10'

SAMPLE CHARACTERISTICS: Medium silty sand, brown

COMMENTS/WEATHER: PID 600 ppm/Cold and snowing

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: B-19, Northeast side of large, processing room with acid vats. Photograph 23

EQUIPMENT USED: Geoprobe, stainless steel bowl and scoop, EnCores

SURFACE SAMPLE:

SAMPLE NAME: B-19A CLP NUMBERS: MB3L88

SAMPLE TIME: 1318 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 3' SAMPLE DEPTH : 2 – 4'

SAMPLE CHARACTERISTICS: Light tan sand, mostly rocks

COMMENTS/WEATHER: Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-19B and inorganic duplicate, B-19D CLP NUMBERS: MB3L89, B3L89 MB3L91

SAMPLE TIME: 1323 ANALYSIS: Total Metals, cyanide, VOCs

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2' SAMPLE DEPTH : 6 – 8'

SAMPLE CHARACTERISTICS: Dark soil at bottom

COMMENTS/WEATHER: PID 550 ppb background, 200 ppb/Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-19C CLP NUMBERS: MB3L90, B3L90

SAMPLE TIME: 1330 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 1.5' SAMPLE DEPTH : 11 – 12'

SAMPLE CHARACTERISTICS: Light/medium brown silty sand

COMMENTS/WEATHER: PID=background/Cold and snowing

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: B-20 East corner of large, processing room with acid vats. Photograph 24

EQUIPMENT USED: Geoprobe, stainless steel bowl and disposable scoop, EnCores

SURFACE SAMPLE:

SAMPLE NAME: B-20A CLP NUMBERS: MB3L92, B3L92

SAMPLE TIME: 1345 ANALYSIS: Total Metals, cyanide, VOCs

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 1.5' SAMPLE DEPTH : 3 – 4'

SAMPLE CHARACTERISTICS: Brown silty sand

COMMENTS/WEATHER: PID = 1500 ppb above background/Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-20B CLP NUMBERS: MB3L93

SAMPLE TIME: 1350 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2' SAMPLE DEPTH : 6 – 8'

SAMPLE CHARACTERISTICS: Medium brown silty sand

COMMENTS/WEATHER: PID=background/Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-20C CLP NUMBERS: MB3L94, B3L94
And BNA duplicate, B-20D B3L95

SAMPLE TIME: 1355 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 3' SAMPLE DEPTH : 9 – 12'

SAMPLE CHARACTERISTICS: Medium/light silty sand, collected bottom 28'

COMMENTS/WEATHER: PID=background/Cold and snowing

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: S-3, Sump pit marked S-3 in the NW corner of large processing room with acid vats. Photograph 36

EQUIPMENT USED: Stainless steel bowl and scoop

SURFACE SAMPLE:

SAMPLE NAME: S-3A CLP NUMBERS: MB3L96, B3L96

SAMPLE TIME: 1402 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: --- RECOVERY: ----- SAMPLE DEPTH : 0 – 6"

SAMPLE CHARACTERISTICS: Moist silty brown, strong acid odor

COMMENTS/WEATHER: Next to plastic catch basin collected with scoop, no Geoprobe, unable to collect deep sample until contractor removes catch basin/ Cold and snowing

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: S-4, Sump pit marked S-4 in the NW corner of large processing room with acid vats. Photograph 36

EQUIPMENT USED: Stainless steel bowl and scoop

SURFACE SAMPLE:

SAMPLE NAME: S-4A CLP NUMBERS: MB3L97, B3L97

SAMPLE TIME: 1414 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: --- RECOVERY: ----- SAMPLE DEPTH : 0 – 6"

SAMPLE CHARACTERISTICS: Moist silty brown, strong acid odor

COMMENTS/WEATHER: Next to plastic catch basin collected with scoop, no Geoprobe, unable to collect deep sample until contractor removes catch basin/ Cold and snowing

SOIL DATA SHEET

SITE NAME: Quackenbush DATE: 2/23/06

LOCATION: DB-1, Drainage basin to the east of the Wastewater Treatment Room

EQUIPMENT USED: Stainless steel bowl, auger and scoop

SURFACE SAMPLE:

SAMPLE NAME: DB-1A CLP NUMBERS: MB3L98, B3L98

SAMPLE TIME: 1449 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: --- RECOVERY: ----- SAMPLE DEPTH : 0 – 1'

SAMPLE CHARACTERISTICS: Very wet brown/black, petroleum odor and organic matter

COMMENTS/WEATHER: Basin is 5' total, with 1' of wet sediment at bottom, was not able to get a deep sample/ Snowing and cold

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: B-21 East side of large, processing room with acid vats. Photograph 26

EQUIPMENT USED: Geoprobe, stainless steel bowl and disposable scoop

SURFACE SAMPLE:

SAMPLE NAME: B-21A CLP NUMBERS: MB3L99

SAMPLE TIME: 1500 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2' SAMPLE DEPTH : 2 – 4'

SAMPLE CHARACTERISTICS: Brown silty sand

COMMENTS/WEATHER: Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-21B CLP NUMBERS: MB3LA0

SAMPLE TIME: 1506 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 1.5' SAMPLE DEPTH : 7 – 8'

SAMPLE CHARACTERISTICS: Medium brown silty sand

COMMENTS/WEATHER: Cold and snowing

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: B-22 East corner of large, processing room with acid vats. Photograph 25

EQUIPMENT USED: Geoprobe, stainless steel bowl and disposable scoop

SURFACE SAMPLE:

SAMPLE NAME: B-22A CLP NUMBERS: MB3LA1

SAMPLE TIME: 1510 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2' SAMPLE DEPTH : 0 – 2'

SAMPLE CHARACTERISTICS: Light and dark grey above brown silty sand

COMMENTS/WEATHER: Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-22B CLP NUMBERS: MB3LA2

SAMPLE TIME: 1520 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 1.5' SAMPLE DEPTH : 7 – 8'

SAMPLE CHARACTERISTICS: Grey silty sand

COMMENTS/WEATHER: Cold and snowing

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: B-23 South corner of large, processing room with acid vats. Photograph 27

EQUIPMENT USED: Geoprobe, stainless steel bowl and scoop

SURFACE SAMPLE:

SAMPLE NAME: B-23A CLP NUMBERS: MB3LA3, B3LA3

SAMPLE TIME: 1532 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2' SAMPLE DEPTH : 2 – 4'

SAMPLE CHARACTERISTICS: Dark brown/black silty sand

COMMENTS/WEATHER: Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-23B CLP NUMBERS: MB3LA4

SAMPLE TIME: 1538 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2' SAMPLE DEPTH : 6 – 8'

SAMPLE CHARACTERISTICS: Dark brown/black silty sand

COMMENTS/WEATHER: Cold and snowing

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: B-24 Southwest corner of large, processing room with acid vats. Photograph 28

EQUIPMENT USED: Geoprobe, stainless steel bowl and scoop

SURFACE SAMPLE:

SAMPLE NAME: B-24A CLP NUMBERS: MB3LA5

SAMPLE TIME: 1550 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2' SAMPLE DEPTH : 2 – 4'

SAMPLE CHARACTERISTICS: Medium light and dark brown silty sand

COMMENTS/WEATHER: Was marked as an optional location/Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-24B CLP NUMBERS: MB3LA6, B3LA6

SAMPLE TIME: 1555 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2' SAMPLE DEPTH : 6 – 8'

SAMPLE CHARACTERISTICS: Medium light and dark brown silty sand

COMMENTS/WEATHER: Cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-24C CLP NUMBERS: MB3LA7, B3LA7

SAMPLE TIME: 1600 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2' SAMPLE DEPTH : 10 – 12'

SAMPLE CHARACTERISTICS: Medium light and dark brown silty sand

COMMENTS/WEATHER: Cold and snowing

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/23/06

LOCATION: B-25 Center of large, processing room with acid vats. Photograph 29

EQUIPMENT USED: Geoprobe, stainless steel bowl and disposable scoop, EnCores

SURFACE SAMPLE:

SAMPLE NAME: B-25A CLP NUMBERS: MB3LB0, B3LB0

SAMPLE TIME: 1610 ANALYSIS: Total Metals, cyanide, VOCs

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2.5' SAMPLE DEPTH : 2 – 4'

SAMPLE CHARACTERISTICS: Light grey and dark brown silty sand

COMMENTS/WEATHER: Was marked as an optional location/cold and snowing

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-25B CLP NUMBERS: MB3LB1

SAMPLE TIME: 1615 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 1.5' SAMPLE DEPTH : 6 – 7'

SAMPLE CHARACTERISTICS: Light grey and dark grey silty sand

COMMENTS/WEATHER: Cold and snowing

SOIL DATA SHEET

SITE NAME: Quackenbush DATE: 2/23/06

LOCATION: DB-2, Drainage basin located in the driveway. Photograph 33

EQUIPMENT USED: Stainless steel bowl, auger and scoop

SURFACE SAMPLE:

SAMPLE NAME: DB-2A CLP NUMBERS: MB3LB2, B3LB2

SAMPLE TIME: 1620 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: --- RECOVERY: ----- SAMPLE DEPTH : 0 – 6"

SAMPLE CHARACTERISTICS: Very wet brown/black, petroleum odor and organic matter

COMMENTS/WEATHER: Very cold

SUB-SURFACE SAMPLE:

SAMPLE NAME: DB-2B CLP NUMBERS: MB3LB3, B3LB3

SAMPLE TIME: 1630 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: --- RECOVERY: ----- SAMPLE DEPTH : 1 – 2'

SAMPLE CHARACTERISTICS: Grey, black, silt, with gravel, very moist

COMMENTS/WEATHER: Very cold

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/24/06

LOCATION: B-26, West side of Wastewater Treatment room. Photograph 30

EQUIPMENT USED: Geoprobe, stainless steel bowl and disposable scoop, EnCores

SURFACE SAMPLE:

SAMPLE NAME: B-26A CLP NUMBERS: MB3LB4

SAMPLE TIME: 0840 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 10" SAMPLE DEPTH : 3 – 4'

SAMPLE CHARACTERISTICS: Medium brown sandy silt w/trace of clay

COMMENTS/WEATHER: Collected bottom 8"/ Very cold and windy

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-26B – MS/MSD And VOC duplicate B-26C CLP NUMBERS: MB3LB5, B3LB5 B3LB6

SAMPLE TIME: 0845 ANALYSIS: Total Metals, cyanide, VOCs

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2' SAMPLE DEPTH : 5 - 7'

SAMPLE CHARACTERISTICS: Medium brown silty sand

COMMENTS/WEATHER: Refusal at 7'/Very cold and windy

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/24/06

LOCATION: B-27, East side of Wastewater Treatment room. Photograph 29

EQUIPMENT USED: Geoprobe, stainless steel bowl and disposable scoop

SURFACE SAMPLE:

SAMPLE NAME: B-27A CLP NUMBERS: MB3LB7
And inorganic duplicate: B-27D MB3LC0

SAMPLE TIME: 0850 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 0 – 4' RECOVERY: 2' SAMPLE DEPTH : 2 – 4'

SAMPLE CHARACTERISTICS: Black sand & med brown silty sand

COMMENTS/WEATHER: Very cold and windy

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-27B CLP NUMBERS: MB3LB8

SAMPLE TIME: 0900 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 4 – 8' RECOVERY: 2' SAMPLE DEPTH : 6 – 8'

SAMPLE CHARACTERISTICS: Grey, med brown, gravel and ash

COMMENTS/WEATHER: Very cold and windy

SUB-SURFACE SAMPLE:

SAMPLE NAME: B-27C CLP NUMBERS: MB3LB9

SAMPLE TIME: 0910 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: 8 – 12' RECOVERY: 2' SAMPLE DEPTH : 10 – 12'

SAMPLE CHARACTERISTICS: Light grey, med brown

COMMENTS/WEATHER: Very cold and windy

SOIL DATA SHEET

SITE NAME: Quackenbush DATE: 2/24/06

LOCATION: BG-1, Background location in the grassy area to the northwest of the site building.

EQUIPMENT USED: Stainless steel bowl, auger and scoop and EnCores

SURFACE SAMPLE:

SAMPLE NAME: BG-1A CLP NUMBERS: MB3LC1, B3LC1

SAMPLE TIME: 0945 ANALYSIS: Total Metals, cyanide, BNAs, VOCs

GEOPROBE INTERVAL: -----' RECOVERY: ---- SAMPLE DEPTH : 0 – 6"

SAMPLE CHARACTERISTICS: Medium brown sandy silt

COMMENTS/WEATHER: Very cold and windy

SUB-SURFACE SAMPLE:

SAMPLE NAME: BG-1B CLP NUMBERS: MB3LC2, B3LC2

SAMPLE TIME: 0950 ANALYSIS: Total Metals, cyanide, BNAs, VOCs

GEOPROBE INTERVAL: -----' RECOVERY: ---- SAMPLE DEPTH : 1 – 2'

SAMPLE CHARACTERISTICS: Medium/dark brown sandy silt

COMMENTS/WEATHER: Very cold and windy

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/24/06

LOCATION: S-3, Sump pit marked S-3 in the NW corner of large processing room with acid vats. Photograph 36

EQUIPMENT USED: Stainless steel bowl and scoop

SUB-SURFACE SAMPLE:

SAMPLE NAME: S-3B CLP NUMBERS: MB3LC3, B3LC3

SAMPLE TIME: 1003 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: --- RECOVERY: ----- SAMPLE DEPTH : 1 – 2'

SAMPLE CHARACTERISTICS: Moist medium brown sandy silt with strong acid odor

COMMENTS/WEATHER: Below plastic catch basin collected with scoop, no Geoprobe,/ Very cold and windy

SOIL DATA SHEET

SITE NAME: H.M. Quackenbush DATE: 2/24/06

LOCATION: S-4, Sump pit marked S-4 in the NW corner of large processing room with acid vats. Photograph 36

EQUIPMENT USED: Stainless steel bowl and scoop

SURFACE SAMPLE:

SAMPLE NAME: S-4B CLP NUMBERS: MB3LC4, B3LC4

SAMPLE TIME: 1006 ANALYSIS: Total Metals, cyanide, BNAs

GEOPROBE INTERVAL: --- RECOVERY: ----- SAMPLE DEPTH : 1 – 2'

SAMPLE CHARACTERISTICS: Moist medium brown sandy silt with strong acid odor

COMMENTS/WEATHER: Below plastic catch basin collected with scoop, no Geoprobe/Very cold and windy

SOIL DATA SHEET

SITE NAME: Quackenbush DATE: 2/24/06

LOCATION: DB-3, Drainage basin located in the courtyard. Photograph 32

EQUIPMENT USED: Stainless steel bowl, auger and scoop

SURFACE SAMPLE:

SAMPLE NAME: DB-3A CLP NUMBERS: MB3LC5

SAMPLE TIME: 1030 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: --- RECOVERY: ----- SAMPLE DEPTH : 0 – 6"

SAMPLE CHARACTERISTICS: Very wet brown/black, petroleum odor and organic matter

COMMENTS/WEATHER: Very cold and windy

SUB-SURFACE SAMPLE:

SAMPLE NAME: DB-3B CLP NUMBERS: MB3LC6

SAMPLE TIME: 1040 ANALYSIS: Total Metals, cyanide

GEOPROBE INTERVAL: --- RECOVERY: ----- SAMPLE DEPTH : 1 – 2'

SAMPLE CHARACTERISTICS: Very wet brown/black, petroleum odor and organic matter

COMMENTS/WEATHER: Very cold and windy

WELL DATA SHEET

Site Name H.M. Quackenbush Date 2/23/06 Well # MW-4

Sampling Personnel Mark Denno, Diane Salkie, Robert Finke

Evacuation Information:

Date/Time 2/22/06 1500 Method 3 Well volume purge method Total Depth 17.55 ft

Top of Casing to Water Level 13.9 ft. bgs Well Vol. 0.6 gal

Water Column Height 3.65ft. Total Volume Evacuated 1.8 gal.

Meter Calibration:

Date/Time 2/22/06 0930

Meters pH(s.u.) not working Conductivity(mSm):12.88 Turbidity(NTU): 0.26 (0.1), 20.7 (20), 96.8(100) D.O. 112% slope

Sampling Information:

Date/Time 2/23/06 1150 Method 3 Well volume Sample/Lab Number B3L63, MB3L63

Field Measurement Data:

Time	Depth to Water (Ft.)	Flow Reading (ml)	Temp (°C)	Specific Conductance (mS/cm)	pH (su)	Dissolved Oxygen (mg/l)	Turbidity (NTU)
1505	13.9	0.25	10.9	4.98		3.22	322

Weather/Comments/Observations/Sample Charac. Began purging at 1500 on 2/22/06, but the well only has 3 feet of water and it ran dry before a sample could be collected. So EPA allowed well to recharge overnight and collected the sample over a few hour period on 2/23/06. Not enough water to collect readings. Sample is very turbid.

WELL DATA SHEET

Site Name H.M. Quackenbush Date 2/22/06 Well # MW-2 and duplicate MW-6

Sampling Personnel Mark Denno, Diane Salkie, Robert Finke

Evacuation Information:

Date/Time 2/22/06 1400 Method Three Well Volume Purge Total Depth 21.5 ft

Top of Casing to Water Level 14.15 ft. bgs Well Vol. 1.2 gal

Water Column Height 7.35 ft. Total Volume Evacuated 3.6 gal

Meter Calibration:

Date/Time 2/22/06 0930

Meters pH(s.u.) not working Conductivity(mSm):12.88 Turbidity(NTU): 0.26 (0.1), 20.7 (20), 96.8(100) D.O. 112% slope

Sampling Information:

Date/Time 2/22/06 1445 Method 3 Well Volume Sample/Lab Number B3L61, MB3L61 and B3L62, MB3L62

Field Measurement Data:

Time	Depth to Water (Ft.)	Volume Evacuated (gal)	Temp (°C)	Specific Conductance (mS/cm)	pH (su)	Dissolved Oxygen (mg/l)	Turbidity (NTU)
1405	14.27	0.25	10.8	1507		1.52	62.2
1415	14.55	1.25	12.4	1357		1.46	34.0
1425	14.60	2.50	11.8	1288		1.82	19.9
1435	14.00	3.75	11.3	1259	5.11	1.61	13.2

Weather/Comments/Observations/Sample Charac. Once again utilized 3 well volume due to slow recharge and short water column. Sample is very turbid.

WELL DATA SHEET

Site Name H.M. Quackenbush Date 2/22/05 Well # MW-5

Sampling Personnel Mark Denno, Diane Salkie, Robert Finke

Evacuation Information:

Date/Time 2/22/06 0958 Method Redi-Flo2, Grundfos pump (low flow) Total Depth 18.1 ft

Well Casing Type/Diam. 2" Top of Casing to Water Level 13.7 ft. bgs Well Vol. 0.73 gal

Water Column Height 4.4ft. Total Volume Evacuated 4.2 gal . Flow 150 ml/min

Meter Calibration:

Date/Time 2/22/06 0930

Meters pH(s.u.) not working Conductivity(mSm):12.88 Turbidity(NTU): 0.26 (0.1), 20.7 (20), 96.8(100) D.O. 112% slope

Sampling Information:

Date/Time 2/22/06 1200 Method Grundfos pump (low flow) Sample/Lab Number B3L60, MB3L60

Field Measurement Data:

Time	Depth to Water (Ft.)	Volume Evacuated (gal)	Temp (°C)	Specific Conductance (mS/cm)	pH (su)	Dissolved Oxygen (mg/l)	Turbidity (NTU)
1005	13.68	1.50	10.9	1371	4.64		>1000
1010	13.68	1.75	12.8	1337	4.57	4.30	559
1015	13.65	2.00	12.9	1335	4.57	3.99	369
1020	13.65	2.05	12.4	1339	4.57	4.21	266
1025	13.65	2.10	12.1	1339	4.25	4.19	207
1030	13.65	2.15	11.4	1337	4.57	4.14	199
1035	13.65	2.20	10.8	1321	4.12	4.03	166
1040	13.65	2.25	8.3	1399	4.57	5.18	111
1045	13.65	2.30	8.9	1390	4.57	5.17	114
1050	13.65	2.35	10.5	1331	4.57	4.90	91.2
1105	13.68	3.50	12.7	1428	4.57	3.83	>1000
1110	13.68	3.55	9.7	1452	4.57	3.87	846
1115	13.68	3.60	9.0	1448	4.57	3.90	494
1120	13.65	3.65	8.8	1456	4.57	3.94	385
1125	13.65	3.70	8.6	1531	4.57	3.92	362
1130	13.65	3.75	9.6	1445	4.57	3.80	251
1135	13.65	3.80	11.0	1444	4.57	3.83	654

Weather/Comments/Observations/Sample Charac. Had difficulty with the pump due to high turbidity and low water level, had to purge the pump at high flow several times.

WELL DATA SHEET - Continued

Site Name H.M. Quackenbush Date 2/22/05 Well # MW-5

Time	Depth to Water (Ft.)	Volume Evacuated (gal)	Temp (°C)	Specific Conductance (mS/cm)	pH (su)	Dissolved Oxygen (mg/l)	Turbidity (NTU)
1140	13.65	3.85	15.0	1379	4.57	3.60	526
1145	13.68	3.90	14.7	1349	4.57	3.39	462
1150	13.65	4.00	15.6	1358	4.57	3.55	218
1155	13.65	4.10	15.2	1339	4.57	3.66	160

APPENDIX G

N.Y.D.E.C. (New York Department of Environmental Conservation) Division Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels

Tables 1 - 4 Recommended Soil Cleanup Objectives.

January 1994



New York State Department of Environmental Conservation

Division of Environmental Remediation

More TAGMs

APPENDIX A

TAGM #4046

Short cut to TAGM 4046 Tables for:

Pesticides/PCBs

Heavy Metals

Table 1
Recommended soil cleanup objectives (mg/kg or ppm)
Volatile Organic Contaminants

Contaminant	Partition Coefficient, Koc	Groundwater Standards/ Criteria, Cw (ug/l or ppb)	Allowable soil conc., Cs (ppm)	Soil cleanup objectives to protect GW quality (ppm)	USEPA Health Based (ppm) Carcin-ogens	USEPA Health Based (ppm) Systemic Toxicants	CRQL (ppb)	Rec. Soil Cleanup Objective (ppm)
Acetone	2.2	50	0.0011	0.11	N/A	8,000	10	0.2
Benzene	83	0.7	0.0006	0.06	24	N/A	5	0.06
Benzoic Acid	54	50	0.027	2.7	N/A	300,000	5	2.7
2-Butanone	4.5	50	0.003	0.3	N/A	4,000	10	0.3

Carbon Disulfide	54	50	0.027	2.7	N/A	8,000	5	2.7
Carbon Tetrachloride	110	5	0.006	0.6	5.4	60	5	0.6
Chlorobenzene	330	5	0.017	1.7	N/A	2,000	5	1.7
Chloroethane	37	50	0.019	1.9	N/A	N/A	10	1.9
Chloroform	31	7	0.003	0.30	114	800	5	0.3
Dibromochloromethane	N/A	50	N/A	N/A	N/A	N/A	5	N/A
1,2-Dichlorobenzene	1,700	4.7	0.079	7.9	N/A	N/A	330	7.9
1,3-Dichlorobenzene	310	5	0.0155	1.55	N/A	N/A	330	1.6
1,4-Dichlorobenzene	1,700	5	0.085	8.5	N/A	N/A	330	8.5
1,1-Dichloroethane	30	5	0.002	0.2	N/A	N/A	5	0.2
1,2-Dichloroethane	14	5	0.001	0.1	7.7	N/A	5	0.1
1,1-Dichloroethene	65	5	0.004	0.4	12	700	5	0.4
1,2-Dichloroethene (trans)	59	5	0.003	0.3	N/A	2,000	5	0.3
1-3 dichloropropane	51	5	0.003	0.3	N/A	N/A	5	0.3
Ethylbenzene	1,100	5	0.055	5.5	N/A	8,000	5	5.5
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	1,230	5	0.060	6.0	N/A	200,000	5	6.0
Methylene chloride	21	5	0.001	0.1	93	5,000	5	0.1
4-Methyl-2-Pentanone	19	50	0.01	1.0	N/A	N/A	10	1.0
Tetrachloroethene	277	5	0.014	1.4	14	800	5	1.4
1,1,1-Trichloroethane	152	5	0.0076	0.76	N/A	7,000	5	0.8
1,1,2,2-Tetrachloroethane	118	5	0.006	0.6	35	N/A	5	0.6
1,2,3-trichloropropane	68	5	0.0034	0.34	N/A	80	5	0.4
1,2,4-trichlorobenzene	670	5	0.034	3.4	N/A	N/A	330	3.4

Toluene	300	5	0.013	1.5	N/A	20,000	5	1.5
Trichloroethene	126	5	0.007	0.70	64	N/A	5	0.7
Vinyl chloride	57	2	0.0012	0.12	N/A	N/A	10	0.2
Xylenes	240	5	0.012	1.2	N/A	200,000	--	1.2

a. Allowable Soil Concentration Cs = f x Cw x Koc

b. Soil cleanup objective = Cs x Correction Factor (CF)

N/A is not available

* Partition coefficient is calculated by using the following equation:

log Koc = -0.55 log S + 3.64, where S is solubility in water in ppm.

All other Koc values are experimental values.

** Correction Factor (CF) of 100 is used as per TAGM #4046

*** As per TAGM #4046, Total VOCs < 10 ppm.

Note: Soil cleanup objectives are developed for soil organic carbon content (f) of 1%, and should be adjusted for the actual soil organic carbon content if it is known.

APPENDIX A of TAGM #4046

TABLE 2
Recommended soil cleanup objectives (mg/kg or ppm)
Semi-Volatile Organic Contaminants

Shortcut to TAGM 4046 Tables for VOCs | Pesticides/PCBs | Heavy Metals

Contaminant	Partition Coefficient, Koc	Groundwater Standards/ Criteria, Cw (ug/l or ppb)	a Allowable soil conc., Cs (ppm)	b ** Soil cleanup objectives to protect GW quality (ppm)	USEPA Health Based (ppm) Carcin-ogens	Systemic Toxicants	CRQL (ppb)	*** Rec. Soil Cleanup Objective (ppm)
Acenaphthene	4,600	20	0.9	90.0	N/A	5,000	330	50.0 ***
Acenaphthylene	2,056 *	20	0.41	41.0	N/A	N/A	330	41.0
Aniline	13.8	5	0.001	0.1	123	N/A	330	0.1
Anthracene	14,000	50	7.00	700.0	N/A	20,000	330	50.0 ***
Benzo(a)anthracene	1,380,000	0.002	0.03	3.0	0.224	N/A	330	0.224 or MDL
Benzo (a) pyrene	5,500,000	0.002 (ND)	0.110	11.0	0.0609	N/A	330	0.061 or MDL
Benzo (b) fluoranthene	550,000	0.002	0.011	1.1	N/A	N/A	330	1.1
Benzo (g,h,i) perylene	1,600,000	5	8.0	800	N/A	N/A	330	50.0 ***
Benzo (k) fluoranthene	550,000	0.002	0.011	1.1	N/A	N/A	330	1.1
bis(2-ethylhexyl)phthalate	8,706 *	50	4.35	435.0	50	2,000	330	50.0 ***
Butylbenzylphthlate	2,430	50	1.215	122.0	N/A	20,000	330	50.0 ***
Chrysene	200,000	0.002	0.004	0.4	N/A	N/A	330	0.4
4- Chloroaniline	43 ****	5	0.0022	0.22	200	300	330	0.220 or MDL
4-Chloro-3-methylphenol	47	5	0.0024	0.24	N/A	N/A	330	0.240 or

								MDL
2-Chlorophenol	15 *	50	0.008	0.8	N/A	400	330	0.8
Dibenzofuran	1,230 *	5	0.062	6.2	N/A	N/A	330	6.2
Dibenzo(a,h)anthracene	33,000,000	50	1,650	165,000	0.0143	N/A	330	0.014 or MDL
3,3'-Dichlorobenzidine	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	380	1	0.004	0.4	N/A	200	330	0.4
2,4-Dinitrophenol	38	5	0.002	0.2	N/A	200	1,600	0.200 or MDL
2,6 Dinitrotoluene	198*	5	0.01	1.0	1.03	N/A	330	1.0
Diethylphthlate	142	50	0.071	7.1	N/A	60,000	330	7.1
Dimethylphthlate	40	50	0.020	2.0	N/A	80,000	330	2.0
Di-n-butyl phthalate	162*	50	0.081	8.1	N/A	8,000	330	8.1
Di-n-octyl phthlate	2,346 *	50	1.2	120.0	N/A	2,000	330	50.0 ***
Fluoranthene	38,000	50	19	1900.0	N/A	3,000	330	50.0 ***
Fluorene	7,300	50	3.5	350.0	N/A	3,000	330	50.0 ***
Hexachlorobenzene	3,900	0.35	0.014	1.4	0.41	60	330	0.41
Indeno (1,2,3-cd)pyrene	1,600,000	0.002	0.032	3.2	N/A	N/A	330	3.2
Isophorone	88.31 *	50	0.044	4.40	1,707	20,000	330	4.40
2-methylnaphthalene	727 *	50	0.364	36.4	N/A	N/A	330	36.4
2-Methylphenol	15	5	0.001	0.1	N/A	N/A	330	0.100 or MDL
4-Methylphenol	17	50	0.009	0.9	N/A	4,000	330	0.9
Naphthalene	1,300	10	0.130	13.0	N/A	300	330	13.0
Nitrobenzene	36	5	0.002	0.2	N/A	40	330	0.200 or MDL
2-Nitroaniline	86	5	0.0043	0.43	N/A	N/A	1,600	0.430 or MDL
2-Nitrophenol	65	5	0.0033	0.33	N/A	N/A	330	0.330 or MDL
								0.100

4-Nitrophenol	21	5	0.001	0.1	N/A	N/A	1,600	or MDL
3-Nitroaniline	93	5	0.005	0.5	N/A	N/A	1,600	0.500 or MDL
Pentachlorophenol	1,022	1	0.01	1.0	N/A	2,000	1,600	1.0 or MDL
Phenanthrene	4,365 *	50	2.20	220.0	N/A	N/A	330	50.0 ***
Phenol	27	1	0.0003	0.03	N/A	50,000	330	0.03 or MDL
Pyrene	13,295 *	50	6.65	665.0	N/A	2,000	330	50.0 ***
2,4,5-Trichlorophenol	89 *	1	0.001	0.1	N/A	8,000	330	0.1

a. Allowable Soil Concentration Cs = f x Cw x Koc
b. Soil cleanup objective = Cs x Correction Factor (CF)
N/A is not available
MDL is Method Detection Limit

* Partition coefficient is calculated by using the following equation:
log Koc = -0.55 log S + 3.64, where S is solubility in water in ppm.
Other Koc values are experimental values.

** Correction Factor (CF) of 100 is used as per TAGM #4046

*** As per TAGM #4046, Total VOCs < 10 ppm., Total Semi- VOCs < 500ppm. and Individual Semi-VOCs < 50 ppm.

**** Koc is derived from the correlation Koc = 0.63 Kow (Determining Soil Response Action Levels..... EPA/540/2-89/057). Kow is obtained from the USEPA computer database 'MAIN'.

Note: Soil cleanup objectives are developed for soil organic carbon content (f) of 1%, and should be adjusted for the actual soil organic carbon content if it is known.

APPENDIX A of TAGM #4046

TABLE 3
Recommended soil cleanup objectives (mg/kg or ppm)
Organic Pesticides / Herbicides and PCBs

Shortcut to TAGM 4046 Tables for VOCs | SVOCs | Heavy Metals

Contaminant	Partition Coefficient, Koc	Groundwater Standards/ Criteria, Cw (ug/l or ppb)	a Allowable soil conc., Cs (ppm)	b ** Soil cleanup objectives to protect GW quality (ppm)	USEPA Health Based (ppm) Carcin-ogens	Systemic Toxicants	CRQL (ppb)	*** Rec. Soil Cleanup Objective (ppm)
Aldrin	96,000	ND (<0.01)	0.005	0.5	0.041	2	8	0.041
alpha- BHC	3,800	ND (<0.05)	0.002	0.2	0.111	N/A	8	0.11
beta - BHC	3,800	ND (<0.05)	0.002	0.2	3.89	N/A	8	0.2
delta - BHC	6,600	ND (<0.05)	0.003	0.3	N/A	N/A	8	0.3
Chlordane	21,305 *	0.1	0.02	2.0	0.54	50	80	0.54
2,4-D	104 *	4.4	0.005	0.5	N/A	800	800	0.5
4,4'- DDD	770,000 *	ND (<0.01)	0.077	7.7	2.9	N/A	16	2.9
4,4'-DDE	440,000 *	ND (<0.01)	0.0440	4.4	2.1	N/A	16	2.1
4,4'-DDT	243,000 *	ND (<0.01)	0.025	2.5	2.1	40	16	2.1
Dibenzo-P-dioxins (PCDD) 2,3,7,8 TCDD	1709800	0.000035	0.0006	0.06	N/A	N/A	N/A	N/A
Dieldrin	10,700 *	ND (< 0.01)	0.0010	0.1	0.044	4	16	0.044
Endosulfan I	8,168 *	0.1	0.009	0.9	N/A	N/A	16	0.9
Endosulfan II	8,031 *	0.1	0.009	0.9	N/A	N/A	16	0.9
Endosulfan Sulfate	10,038 *	0.1	0.01	1.0	N/A	N/A	16	1.0

Endrin	9,157 *	ND (<0.01)	0.001	0.1	N/A	20	8	0.10
Endrin keytone	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
gamma - BHC (Lindane)	1,080	ND (<0.05)	0.0006	0.06	5.4	20	8	0.06
gamma - chlordane	140,000	0.1	0.14	14.0	0.54	5	80	0.54
Heptachlor	12,000	ND (<0.01)	0.0010	0.1	0.16	40	8	0.10
Heptachlor epoxide	220	ND (<0.01)	0.0002	0.02	0.077	0.8	8	0.02
Methoxychlor	25,637	35.0	9.0	900	N/A	400	80	***
Mitotane	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Parathion	760	1.5	0.012	1.2	N/A	500	8	1.2
PCBs	17,510 *	0.1	0.1	10.0	1.0	N/A	160	1.0 (Surface) 10 (sub-surf)
Polychlorinated dibenzo-furans (PCDF)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Silvex	2,600	0.26	0.007	0.7	N/A	600	330	0.7
2,4,5-T	53	35	0.019	1.9	N/A	200	330	1.9

a. Allowable Soil Concentration Cs = f x Cw x Koc
b. Soil cleanup objective = Cs x Correction Factor (CF)
N/A is not available

* Partition coefficient is calculated by using the following equation:
log Koc = -0.55 log S + 3.64, where S is solubility in water in ppm.
All other Koc values are experimental values.

** Correction Factor (CF) of 100 is used as per TAGM #4046

*** As per TAGM #4046, Total VOCs < 10 ppm.

Note: Soil cleanup objectives are developed for soil organic carbon content (f) of 1% (5% for PCBs as per PCB Guidance Document), and should be adjusted for the actual soil organic carbon content if it is known.

APPENDIX A of TAGM #4046

TABLE 4
Recommended soil cleanup objectives (mg/kg or ppm)
Heavy Metals

Shortcut to TAGM 4046 Tables for VOCs | SVOCs | Pesticides / PCBs

Contaminants	Protect Water Quality (ppm)	Eastern USA Background (ppm)	* CRDL (mg/kg or ppm)	***** Rec. Soil Cleanup Objective (ppm)
Aluminum	N/A	33,000	2.0	SB
Antimony	N/A	N/A	0.6	SB
Arsenic	N/A	3-12 **	0.1	7.5 or SB
Barium	N/A	15-600	2.0	300 or SB
Beryllium	N/A	0-1.75	0.05	0.16 (HEAST) or SB
Cadmium	N/A	0.1-1	0.05	1 or SB
Calcium	N/A	130 - 35,000 ***	50.0	SB
Chromium	N/A	1.5 - 40 **	0.1	10 or SB
Cobalt	N/A	2.5 - 60 **	0.5	30 or SB
Copper	N/A	1 - 50	0.25	25 or SB
Cyanide	N/A	N/A	0.1	***
Iron	N/A	2,000 - 550,000	1.0	2,000 or SB
Lead	N/A	****	0.03	SB ****
Magnesium	N/A	100 - 5,000	50.0	SB
Manganese	N/A	50 - 5,000	0.15	SB
Mercury	N/A	0.001 - 0.2	0.002	0.1
Nickel	N/A	0.5 -25	0.4	13 or SB
Potassium	N/A	8,500 - 43,000 **	50.0	SB
Selenium	N/A	0.1 - 3.9	0.05	2 or SB
Silver	N/A	N/A	0.1	SB
Sodium	N/A	6,000 - 8,000	50.0	SB
Thallium	N/A	N/A	0.1	SB
Vanadium	N/A	1-300	0.5	150 or SB
Zinc	N/A	9-50	0.2	20 or SB

Note: Some forms of metal salts such as Aluminum Phosphide, Calcium Cyanide, Potassium Cyanide, Copper cyanide, Silver cyanide, Sodium cyanide, Zinc phosphide, Thallium salts, Vanadium pentoxide and Chromium (VI) compounds are more toxic in nature. Please refer to the USEPA HEASTs database to find cleanup objectives if such metals are present in soil.

SB is site background
N/A is not available

* CRDL is contract required detection limit which is approx. 10 times the CRDL for water.

** New York State background

*** Some forms of Cyanide are complex and very stable while other forms are pH dependent and hence are very unstable. Site-specific form(s) of Cyanide should be taken into consideration when establishing soil cleanup objective.

**** Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.

***** Recommended soil cleanup objectives are average background concentrations as reported in a 1984 survey of reference material by E. Carol McGovern, NYSDEC.

1. Class A are proved human carcinogens
2. Class B are probable human carcinogens
3. Class C are possible human carcinogens

Appendix A - Recommended Soil Cleanup Objectives:

Table 1 - Volatile Organic Contaminants
Table 2 - Semi-Volatile Organic Contaminants
Table 3 - Organic Pesticides / Herbicides and PCBs
Table 4 - Heavy Metals

Appendix B - Total Organic Carbon (TOC)

APPENDIX B TO TAGM 4046

Conventional Sediment Variables
Total Organic Carbon (TOC)
March 1986

TOTAL ORGANIC CARBON (TOC)

USE AND LIMITATIONS

Total organic carbon is a measure of the total amount of nonvolatile, volatile, partially volatile, and particulate organic compounds in a sample. Total organic carbon is independent of the oxidation state of the organic compounds and is not a measure of the organically bound and inorganic elements that can contribute to the biochemical and chemical oxygen demand tests.

Because inorganic carbon (e.g., carbonates, bicarbonates, free CO_2) will interfere with total organic carbon determinations, samples should be treated to remove inorganic carbon before being analyzed.

FIELD PROCEDURES

Collection

Samples can be collected in glass or plastic containers. A minimum sample size of 25 g is recommended. If unrepresentative material is to be removed from the sample, it should be removed in the field under the supervision of the chief scientist and noted on the field log sheet.

Processing

Samples should be stored frozen and can be held for up to 6 months under that condition. Excessive temperatures should not be used to thaw samples.

LABORATORY PROCEDURES

Analytical Procedures

- Equipment
  - Induction furnace
    e.g., Leco WR-12, Dohrmann DC-50, Coleman CH analyzer, Perkin Elmer 240 elemental analyzer, Carlo-Erba 1106
  - Analytical balance
    0.1 mg accuracy
  - Desiccator
  - Combustion boats
  - 10 percent hydrochloric acid (HCL)
  - Cupric oxide fines (or equivalent material)
  - Benzoic acid or other carbon source as a standard.

- Equipment preparation
  - Clean combustion boats by placing them in the induction furnace at 950° C. After being cleaned, combustion boats should not be touched with bare hands.
  - Cool boats to room temperature in a desiccator.
  - Weigh each boat to the nearest 0.1 mg.

- Sample preparation
  - Allow frozen samples to warm to room temperature.
  - Homogenize each sample mechanically, incorporating any overlying water.
  - Transfer a representative aliquot (5-10 g) to a clean container.

- Analytical procedures
  - Dry samples to constant weight at 70 $\pm$ 2°C. The drying temperature is relatively low to minimize loss of volatile organic compounds.
  - Cool dried samples to room temperature in a desiccator.
  - Grind sample using a mortar and pestle to break up aggregates.
  - Transfer a representative aliquot (0.2-0.5 g) to a clean, preweighed combustion boat.
  - Determine sample weight to the nearest 0.1 mg.
  - Add several drops of HCL to the dried sample to remove carbonates. Wait until the effervescing is completed and add more acid. Continue this process until the incremental addition of acid causes no further effervescence. Do not add too much acid at one time as this may cause loss of sample due to frothing. Exposure of small samples (i.e., 1-10 mg) having less than 50 percent carbonate to an HCL atmosphere for 24-48 h has been shown to be an effective means of removing carbonates (Hedges and Stern 1984). If this method is used for sample sizes greater than 10 mg, its effectiveness should be demonstrated by the user.
  - Dry the HCL-treated sample to constant weight at 70 $\pm$ 2° C.
  - Cool to room temperature in a desiccator.
  - Add previously ashed cupric oxide fines or equivalent material (e.g., alumina oxide) to the sample in the combustion boat.
  - Combust the sample in an induction furnace at a minimum temperature of 950 $\pm$

10° C.

- Calculations
  - If an ascarite-filled tube is used to capture CO_2, the carbon content of the sample can be calculated as follows:

$$\text{Percent carbon} = \frac{A\ (0.2729)\ (100)}{B}$$

Where:

A = the weight (g) of CO_2 determined by weighing the ascarite tube before and after combustion

B = dry weight (g) of the unacidified sample in the combustion boat

0.2729 = the ratio of the molecular weight of carbon to the molecular weight of carbon dioxide

A silica gel trap should be placed before the ascarite tube to catch any moisture driven off during sample combustion. Additional silica gel should be placed at the exit end of the ascarite tube to trap any water that might be formed by reaction of the trapped CO_2 with the NaOH in the ascarite.

- If an elemental analyzer is used, the amount of CO_2 will be measured by a thermal conductivity detector. The instrument should be calibrated daily using an empty boat blank as the zero point and at least two standards. Standards should bracket the expected range of carbon concentrations in the samples.

QA/QC Procedures

It is critical that each sample be thoroughly homogenized in the laboratory before a subsample is taken for analysis. Laboratory homogenization should be conducted even if samples were homogenized in the field.

Dried samples should be cooled in a desiccator and held there until they are weighed. If a desiccator is not used, the sediment will accumulate ambient moisture and the sample weight will be overestimated. A color-indicating desiccant is recommended so that spent desiccant can be detected easily. Also, the seal on the desiccator should be checked periodically and, if necessary, the ground glass rims should be greased or the "O" rings should be replaced.

It is recommended that triplicate analyses be conducted on one of every 20 samples, or on one sample per batch if less than 20 samples are analyzed. A method blank should be analyzed at the same frequency as the triplicate analyses. The analytical balance should be inspected daily and calibrated at least once per week. The carbon analyzer should be calibrated daily with freshly prepared standards. A standard reference material

should be analyzed at least once for each major survey.

DATA REPORTING REQUIREMENTS

Total organic carbon should be reported as a percentage of the dry weight of the unacidified sample to the nearest 0.1 unit. The laboratory should report the results of all samples (including QA replicates, method blanks, and standard reference measurements) and should note any problems that may have influenced sample quality. The laboratory should also provide a summary of the calibration procedure and results (e.g., range covered, regression equation, coefficient of determination).

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Thank You for Visiting this Page. We hope it was useful! ~~~~

3. Water Classes and Type

Standards and guidance values are developed for specific classes of fresh and saline surface waters and fresh groundwaters for protection of the best uses assigned to each class. Best uses are described in Part 701. Standards and guidance values are further designated as to "Type." Values for protection of sources of drinking water are designated Health (Water Source) and noted by H(WS). Similarly, values for protection of human consumers of fish are designated as Health (Fish Consumption) and noted by H(FC). Values for protection of aquatic life from chronic effects are designated Aquatic (Chronic) and noted as A(C). Values for protection of aquatic life from acute effects are designated Aquatic (Acute) and noted as A(A). Values for protection of wildlife are designated as Wildlife and noted as W. Values for protection from aesthetic considerations are designated as Aesthetic and noted as E. Designation of the Type of value determines the applicability of section 702.15, which concerns derivation of guidance values.

A summary description of best usage protections, water classes and type of values related to toxic pollutants is presented below. The groupings of Water Classes and Type presented for the summary description are those that frequently appear in Table 1. A complete description of the water classifications is provided in Part 701.

Water Classes	Type	Protection For
A, A-S, AA, AA-S	H(WS)	Source of Drinking Water (surface water)
GA	H(WS)	Source of Drinking Water (groundwater)
A, A-S, AA, AA-S, B, C, D	H(FC)	Human Consumption of Fish (fresh waters)
SA, SB, SC, I, SD	H(FC)	Human Consumption of Fish (saline waters)
A, A-S, AA, AA-S, B, C	A(C)	Fish Propagation (fresh waters)
A, A-S, AA, AA-S, B, C, D	A(A)	Fish Survival (fresh waters)
SA, SB, SC, I	A(C)	Fish Propagation (saline waters)
SA, SB, SC, I, SD	A(A)	Fish Survival (saline waters)
A, A-S, AA, AA-S, B, C, D	W	Wildlife Protection (fresh waters)
SA, SB, SC, I, SD	W	Wildlife Protection (saline waters)
A, A-S, AA, AA-S, B, C, D, GA	E	Aesthetic (fresh waters)
SA, SB, SC, I, SD	E	Aesthetic (saline waters)

For many substances, more than one Type of value will be listed for a specific water class. In these situations, all values apply and may be used to derive the most stringent limitations.

APPENDIX H

U.S. EPA Superfund *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites.*
Exhibit A-2 Generic SSLs for Commercial/Industrial Scenario: Outdoor Worker Receptor
Peer Review Draft

March 2001

United States
Environmental Protection
Agency

Solid Waste and
Emergency Response

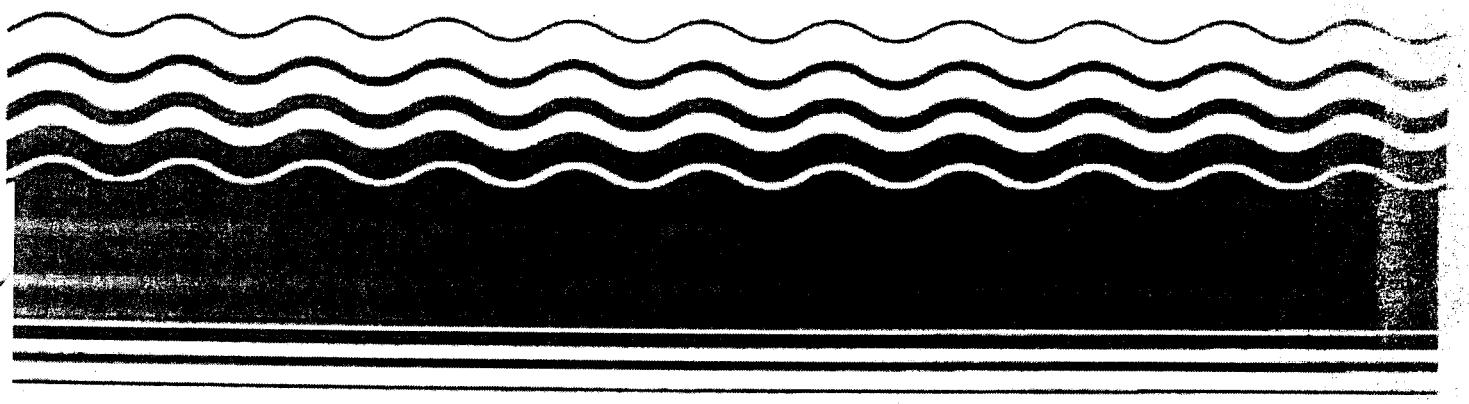
OSWER 9355.4-24
March 2001

Superfund

EPA

SUPPLEMENTAL GUIDANCE FOR DEVELOPING SOIL SCREENING LEVELS FOR SUPERFUND SITES

Peer Review Draft



OSWER 9355.4-24
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SUPPLEMENTAL GUIDANCE FOR DEVELOPING SOIL SCREENING LEVELS FOR SUPERFUND SITES

Peer Review Draft

Office of Emergency and Remedial Response
U.S. Environmental Protection Agency
Washington, DC 20460

APPENDIX A

GENERIC SSLs FOR THE RESIDENTIAL AND COMMERCIAL/INDUSTRIAL SCENARIOS

This appendix provides generic SSLs for 110 chemicals under residential and non-residential (i.e., commercial/industrial) exposure scenarios. Exhibit A-1 presents updated generic SSLs for the residential exposure scenario. The generic SSLs for three of the pathways in this exhibit — inhalation of volatiles in outdoor air, inhalation of fugitive dust, and migration to ground water — were calculated using the same equations and default values for exposure assumptions found in the 1996 *SSG* (and reproduced in Appendix B of this document). However, they incorporate updated values for dispersion factors, for toxicity, and for other chemical-specific parameters presented in Appendix C. The exhibit also presents new SSLs for concurrent exposures via soil ingestion and dermal absorption that are based, in part, on a new quantitative approach for evaluating dermal absorption. SSLs for combined direct ingestion and dermal absorption exposures to contaminants were calculated according to the method described in Section 3.2.1 of this document. The generic residential SSLs in Exhibit A-1 supersede those published in the 1996 *SSG*.

Exhibits A-2 and A-3 present commercial/industrial SSLs for the outdoor worker and indoor worker receptors, respectively. These SSLs have been calculated using the equations and the default values for exposure assumptions and other input parameters presented in Section 4.2.3 of this guidance document. All generic SSLs presented in this appendix, both residential and commercial/industrial, are rounded to two significant figures, with the exception of values less than 10 mg/kg, which are rounded to one significant figure.

EPA does not present generic SSLs for the construction exposure scenario because the complexity and variability of exposure conditions for construction activities precludes the development of such values. For information on developing SSLs for exposures during construction activities, users should refer to Chapter 5 or Appendix E of the guidance document.

The generic residential and non-residential SSLs are not necessarily protective of all known human exposure pathways or ecological threats. Before applying SSLs, it is therefore necessary to compare the conceptual site model (developed in Step 1 of the soil screening process) with the assumptions underlying the generic SSLs to ensure that site conditions and exposure pathways are consistent with these assumptions (See Exhibit A-4.) If this comparison indicates that the site is more complex than the generic SSL scenario, or that there are significant exposure pathways not accounted for by the SSL scenario, then generic SSLs alone are **not** sufficient to evaluate the site, and additional, more detailed site-specific investigation is necessary.

In each exhibit, the first column presents SSLs based on the combined soil ingestion and dermal absorption exposure pathway. When data on dermal absorption from soil are unavailable, these SSLs are based on ingestion exposures only. SSLs for this pathway may be updated in the future as dermal absorption data become available for other contaminants.

The second column in Exhibits A-1 and A-2 presents SSLs for the outdoor inhalation of volatiles pathway. Although residential receptors and indoor workers are potentially exposed to volatiles in indoor air as well, EPA has not calculated generic SSLs for migration of volatiles into indoor air because it is very difficult to identify suitable standardized default values for inputs such as dimensions of commercial buildings and the distance between contamination and a building's foundation. EPA provides spreadsheet models that can be used to calculate SSLs for this pathway using the simple site-specific or detailed site-specific approaches.[1] The third column in Exhibit A-1 and A-2 lists SSLs for the inhalation of fugitive dusts pathway. Because inhalation of fugitive dust is typically not a concern for organic compounds, SSLs for this pathway are presented only for inorganic compounds, which are listed at the end of each exhibit. Conversely, with the exception of mercury, no SSLs for the inhalation of volatiles pathway are provided for inorganic compounds because these chemicals exhibit extremely low volatility.

The user should note that several of the generic SSLs for the inhalation of volatiles pathway are determined by the chemical-specific soil saturation limit (C_{sat}) which is used to screen for the presence of non-aqueous phase liquids (NAPLs). As indicated in Section 4.2.3, in situations where the residual concentration of a compound that is a liquid at ambient soil temperature exceeds C_{sat}, the compound may exist as free-phase liquid (see Exhibit C-3 in Appendix C for a list of those compounds present in liquid phase at typical ambient soil temperatures). In these cases, further investigation will be required.

The final two columns in Exhibits A-1 through A-3 present generic SSLs for the migration to ground water pathway. The generic commercial/industrial SSLs for this pathway are the same as those for residential use and are unchanged from the 1996 *SSG*. As discussed in Section 4.2.3, this approach protects potential potable ground water resources that may be present beneath sites with commercial/industrial uses and protects off-site residents who may ingest ground water contaminated by the site. The migration to ground water SSLs are back-calculated from an acceptable target soil leachate concentration using a dilution-attenuation factor (DAF). The first of the two columns of SSLs for this pathway presents levels calculated using a DAF of 20 to account for reductions in contaminant concentration due to natural processes occurring in the subsurface. The second column presents SSL values for the migration to ground water pathway calculated assuming a DAF of one (i.e., no dilution or attenuation between the source and the receptor well). These levels should be used at sites where little or no dilution or attenuation of soil leachate concentrations is expected; this will be the case at sites with characteristics such as shallow water tables, fractured media, karst topography, or source size greater than 30 acres.

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[1] The vapor intrusion spreadsheets can be found on EPA's web site at http://www.epa.gov/superfund/programs/risk/airmodel/johnson_ettinger.htm.

After all possible SSLs for all potential receptors at a site have been identified from the tables in Exhibits A-1 through A-3, the site manager should select the lowest applicable SSL for each exposure pathway to be used for comparison to site contaminant concentrations in soil. Generally, where the relevant SSL for a given pathway of concern is not exceeded, the user may eliminate the pathway from further investigation. If all pathways of concern are eliminated for an area of the site based on comparison with residential SSLs, that area can be eliminated from further investigation. However, if commercial/industrial SSLs are used in soil screening evaluations, elimination of an area from further consideration is contingent on an analysis of institutional control options. Users should consult Section 4.3.2 of the guidance document for more information.

The final exhibit in this appendix (Exhibit A-4) presents the default values for physical site characteristics that are used in calculating SSLs (both residential and commercial/industrial) for the inhalation and migration to ground water pathways. These values describe the nature of the contaminant source area, the characteristics of site soil, meteorologic conditions, and hydrogeologic characteristics, and serve either as direct input parameters for SSL equations or as assumptions for developing input parameters for the equations.

Analysis of Effects of Source Size on Generic SSLs

The generic SSLs presented have been developed assuming an infinite source and a 0.5 acre source size. For an analysis of the sensitivity of generic SSLs to changes in source size and the depths to which infinite source SSLs are protective at larger sites, please refer to Attachment A and Table A-3 in the *Technical Background Document* of the 1996 *SSG*, or the following sources:

- US EPA, 1990. *Guidance on Remedial Actions for Superfund Sites with PCB Contamination*. Office of Solid Waste and Emergency Response, Washington, D.C. NTIS PB91-921206CDH.

- US EPA, 1994. *Revised Interim Soil Lead Guidance for CERCLA sites and RCRA Corrective Action Facilities*. Office of Solid Waste and Emergency Response, Washington, D.C. Directive 9355.4-12.

Exhibit A-2

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: OUTDOOR WORKER RECEPTOR[a]

Compound		Ingestion-Dermal	Inhalation of Volatiles	Inhalation of Fugitive Particulates	Migration to Ground Water	
					DAF=20	DAF=1
Organics	CAS No.	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Acenaphthene	83-32-9	37,000 [b]	--- [c]	---	570 [b]	29 [b]
Acetone (2-Propanone)	67-64-1	110,000 [b,c]	--- [c]	---	16 [b]	0.8 [b]
Aldrin	309-00-2	0.2 [c,e]	6 [e]	---	0.5 [e]	0.02 [e]
Anthracene	120-12-7	180,000 [b]	--- [c]	---	12,000 [b]	590 [b]
Benz(a)anthracene	56-55-3	2 [e]	--- [c]	---	2 [e]	0.08 [e,f]
Benzene	71-43-2	58 [c,e]	1 [e]	---	0.03	0.002 [f]
Benzo(b)fluoranthene	205-99-2	2 [e]	--- [c]	---	5 [e]	0.2 [e,f]
Benzo(k)fluoranthene	207-08-9	23 [e]	--- [c]	---	49 [e]	2 [e]
Benzoic acid	65-85-0	1,000,000 [b,c]	--- [c]	---	400 [b,i]	20 [b,i]
Benzo(a)pyrene	50-32-8	0.2 [e]	--- [c]	---	8	0.4
Bis(2-chloroethyl)ether	111-44-4	2 [e]	0.4 [e]	---	0.0004 [e,f]	0.00002 [e,f]
Bis(2-ethylhexyl)phthalate	117-81-7	140 [e]	--- [c]	---	3,600	180
Bromodichloromethane	75-27-4	51 [c,e]	--- [c]	---	0.6	0.03
Bromoform (tribromomethane)	75-25-2	400 [c,e]	88 [e]	---	0.8	0.04
Butanol	71-36-3	110,000 [b,c]	--- [c]	---	17 [b]	0.9 [b]
Butyl benzyl phthalate	85-68-7	140,000 [b]	--- [c]	---	930 [d]	810 [b]
Carbazole	86-74-8	96 [e]	--- [c]	---	0.6 [e]	0.03 [e,f]
Carbon disulfide	75-15-0	110,000 [b,c]	720 [d]	---	32 [b]	2 [b]
Carbon tetrachloride	56-23-5	24 [c,e]	0.6 [e]	---	0.07	0.003 [f]
Chlordane	57-74-9	7 [e]	120 [e]	---	10	0.5
p-Chloroaniline	106-47-8	2,700 [b]	--- [c]	---	0.7 [b]	0.03 [b,f]
Chlorobenzene	108-90-7	23,000 [b,c]	180 [b]	---	1	0.07
Chlorodibromomethane	124-48-1	38 [c,e]	--- [c]	---	0.4	0.02
Chloroform	67-66-3	520 [c,e]	0.5 [e]	---	0.6	0.03
2-Chlorophenol	95-57-8	3,400 [b]	--- [c]	---	4 [b,i]	0.2 [b,f,i]
Chrysene	218-01-9	230 [e]	--- [c]	---	160 [e]	8 [e]
DDD	72-54-8	13 [c,e]	--- [c]	---	16 [e]	0.8 [e]
DDE	72-55-9	9 [c,e]	--- [c]	---	54 [e]	3 [e]
DDT	50-29-3	8 [e]	--- [g]	---	32 [e]	2 [e]
Dibenz(a,h)anthracene	53-70-3	0.2 [e]	--- [c]	---	2 [e]	0.08 [e,f]
Di-n-butyl phthalate	84-74-2	68,000 [b]	--- [c]	---	2,300 [d]	270 [b]
1,2-Dichlorobenzene	95-50-1	62,000 [b]	600 [d]	---	17	0.9
1,4-Dichlorobenzene	106-46-7	80 [e]	--- [g]	---	2	0.1 [f]
3,3-Dichlorobenzidine	91-94-1	4 [e]	--- [c]	---	0.007 [e,f]	0.0003 [e,f]
1,1-Dichloroethane	75-34-3	110,000 [b,c]	1,700 [d]	---	23 [b]	1 [b]
1,2-Dichloroethane	107-06-2	35 [c,e]	0.6 [e]	---	0.02	0.001 [f]
1,1-Dichloroethylene	75-35-4	5 [c,e]	0.1 [e]	---	0.06	0.003 [f]
cis-1,2-Dichloroethylene	156-59-2	11,000 [b,c]	--- [c]	---	0.4	0.02
trans-1,2-Dichloroethylene	156-60-5	23,000 [b,c]	--- [c]	---	0.7	0.03
2,4-Dichlorophenol	120-83-2	2,100 [b]	--- [c]	---	1 [b,i]	0.05 [b,f,i]
1,2-Dichloropropane	78-87-5	47 [c,e]	21 [b]	---	0.03	0.001 [f]
1,3-Dichloropropene	542-75-6	32 [c,e]	2 [e]	---	0.004 [e]	0.0002 [e]

Exhibit A-2 (continued)

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: OUTDOOR WORKER RECEPTOR[a]

Compound	CAS No.	Ingestion-Dermal (mg/kg)	Inhalation of Volatiles (mg/kg)	Inhalation of Fugitive Particulates (mg/kg)	Migration to Ground Water	
					DAF=20 (mg/kg)	DAF=1 (mg/kg)
***Organics* (continued)**						
Dieldrin	60-57-1	0.2 [c,e]	2 [e]	---	0.004 [e]	0.0002 [e,f]
Diethylphthalate	84-66-2	550,000 [b]	--- [c]	---	470 [b]	23 [b]
2,4-Dimethylphenol	105-67-9	14,000 [b]	--- [c]	---	9 [b]	0.4 [b]
2,4-Dinitrophenol	51-28-5	1,400 [b]	--- [c]	---	0.2 [b,f,i]	0.008 [b,f,i]
2,4-Dinitrotoluene	121-14-2	3 [e]	--- [c]	---	0.0008 [e,f]	0.00004 [e,f]
2,6-Dinitrotoluene	606-20-2	3 [e]	--- [c]	---	0.0007 [e,f]	0.00003 [e,f]
Di-n-octyl phthalate	117-84-0	14,000 [b]	--- [c]	---	10,000 [d]	10,000 [d]
Endosulfan	115-29-7	6,800 [b,c]	--- [c]	---	18 [b]	0.9 [b]
Endrin	72-20-8	340 [b,c]	--- [c]	---	1	0.05
Ethylbenzene	100-41-4	110,000 [b,c]	400 [d]	---	13	0.7
Fluoranthene	206-44-0	24,000 [b]	--- [c]	---	4,300 [b]	210 [b]
Fluorene	86-73-7	24,000 [b]	--- [c]	---	560 [b]	28 [b]
Heptachlor	76-44-8	0.7 [c,e]	7 [e]	---	23	1
Heptachlor Epoxide	1024-57-3	0.3 [c,e]	8 [e]	---	0.7	0.03
Hexachlorobenzene	118-74-1	1 [e]	2 [e]	---	2	0.1 [f]
Hexachloro-1,3-butadiene	87-68-3	25 [e]	13 [e]	---	2	0.1 [f]
α-HCH (α-BHC)	319-84-6	0.5 [c,e]	1 [e]	---	0.0005 [e,f]	0.00003 [e,f]
β-HCH(β-BHC)	319-85-7	2 [c,e]	--- [g]	---	0.003 [e]	0.0001 [e,f]
γ-HCH(Lindane)	58-89-9	2 [e]	--- [c]	---	0.009	0.0005 [f]
Hexachlorocyclopentadiene	77-47-4	4,800 [b]	14 [b]	---	400	20 [b]
Hexachloroethane	67-72-1	140 [e]	92 [e]	---	0.5 [e]	0.02 [e,f]
Indeno(1,2,3-cd)pyrene	193-39-5	2 [e]	--- [c]	---	14 [e]	0.7 [e]
Isophorone	78-59-1	2,000 [e]	--- [c]	---	0.5 [e]	0.03 [e,f]
Methoxychlor	72-43-5	5,700 [b,c]	--- [c]	---	160	8
Methyl bromide	74-83-9	1,600 [b,c]	13 [b]	---	0.2 [b]	0.01 [b,f]
Methylene chloride	75-09-2	420 [c,e]	22 [e]	---	0.02 [e]	0.001 [e,f]
2-Methylphenol (o-cresol)	95-48-7	34,000 [b]	--- [c]	---	15 [b]	0.8 [b]
Naphthalene	91-20-3	12,000 [b]	240 [b]	---	84 [b]	4 [b]
Nitrobenzene	98-95-3	340 [b]	130 [b]	---	0.1 [b,f]	0.007 [b,f]
N-Nitrosodiphenylamine	86-30-6	390 [e]	--- [c]	---	1 [e]	0.06 [e,f]
N-Nitrosodi-n-propylamine	621-64-7	0.3 [e]	--- [c]	---	0.00005 [e,f]	0.000002 [e,f]
Pentachlorophenol	87-86-5	10 [e]	--- [c]	---	0.03 [f,i]	0.001 [f,i]
Phenol	108-95-2	410,000 [b]	--- [c]	---	100 [b]	5 [b]
Pyrene	129-00-0	18,000 [b]	--- [c]	---	4,200 [b]	210 [b]
Styrene	100-42-5	230,000 [b,c]	1,500 [d]	---	4	0.2
1,1,2,2-Tetrachloroethane	79-34-5	16 [c,e]	1 [e]	---	0.003 [e,f]	0.0002 [e,f]
Tetrachloroethylene	127-18-4	61 [c,e]	18 [e]	---	0.06	0.003 [f]
Toluene	108-88-3	230,000 [b,c]	650 [d]	---	12	0.6
Toxaphene	8001-35-2	3 [c,e]	150 [e]	---	31	2
1,2,4-Trichlorobenzene	120-82-1	6,800 [b]	3,200 [d]	---	5	0.3 [f]
1,1,1-Trichloroethane	71-55-6	--- [c]	1,200 [d]	---	2	0.1
1,1,2-Trichloroethane	79-00-5	56 [c,e]	2 [e]	---	0.02	0.0009 [f]
Trichloroethylene	79-01-6	290 [c,e]	8 [e]	---	0.06	0.003 [f]
2,4,5-Trichlorophenol	95-95-4	68,000 [b]	--- [c]	---	270 [b,i]	14 [b,i]

Exhibit A-2 (continued)

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: OUTDOOR WORKER RECEPTOR[a]

Compound	CAS No.	Ingestion-Dermal (mg/kg)	Inhalation of Volatiles (mg/kg)	Inhalation of Fugitive Particulates (mg/kg)	Migration to Ground Water	
					DAF=20 (mg/kg)	DAF=1 (mg/kg)
***Organics* (continued)**						
2,4,6-Trichlorophenol	88-06-2	170 [e]	340 [e]	---	0.2 [e,f,i]	0.008 [e,f,i]
Vinyl acetate	108-05-4	--- [c]	1,400 [b]	---	170 [b]	8 [b]
Vinyl chloride (chloroethene)	75-01-4	4 [c,e]	1 [e]	---	0.01 [f,i]	0.0007 [f]
m-Xylene	108-38-3	1,000,000 [b,c]	--- [c]	---	210	10
o-Xylene	95-47-6	1,000,000 [b,c]	--- [c]	---	190	9
p-Xylene	106-42-3	1,000,000 [b,c]	--- [c]	---	200	10
Inorganics						
Antimony	7440-36-0	450 [b,c]	---	--- [c]	5	0.3
Arsenic	7440-38-2	2 [e]	---	1,400 [e]	29 [i]	1 [i]
Barium	7440-39-3	79,000 [b,c]	---	1,000,000 [b]	1,600 [i]	82 [i]
Beryllium	7440-41-7	2,300 [c,e]	---	2,600 [e]	63 [i]	3 [i]
Cadmium	7440-43-9	900 [b,h]	---	3,400 [e]	8 [i]	0.4 [i]
Chromium (total)	7440-47-3	3,400 [b,c]	---	510 [e]	38 [i]	2 [i]
Chromium (III)	16065-83-1	1,000,000 [b,c]	---	--- [c]	--- [g]	--- [g]
Chromium (VI)	18540-29-9	3,400 [b,c]	---	510 [e]	38 [i]	2 [i]
Cyanide (amenable)	57-12-5	23,000 [b,c]	---	--- [c]	40	2
Lead	7439-92-1	750 [j]	---	--- [j]	--- [j]	--- [j]
Mercury	7439-97-6	340 [b,c,k]	14 [b,l]	---	2 [i]	0.1 [i]
Nickel	7440-02-0	23,000 [b,c]	---	26,000 [e]	130 [i]	7 [i]
Selenium	7782-49-2	5,700 [b,c]	---	--- [c]	5 [i]	0.3 [i]
Silver	7440-22-4	5,700 [b,c]	---	--- [c]	34 [b,i]	2 [b,i]
Thallium	7440-28-0	91 [b,c,l]	---	--- [c]	0.7 [i]	0.04 [i]
Vanadium	7440-62-2	7,900 [b,c]	---	--- [c]	6,000 [b]	300 [b]
Zinc	7440-66-6	340,000 [b,c]	---	--- [c]	12,000 [b,i]	620 [b,i]

DAF = Dilution Attenuation Factor

[a] Screening level based on human health criteria only

[b] Calculated values correspond to a noncancer hazard quotient of 1

[c] Ingestion-Dermal pathway: no dermal absorption data available; calculated based on ingestion data only. Inhalation of volatiles pathway: no toxicity criteria available

[d] Soil Saturation Limit (Csat)

[e] Calculated values correspond to a cancer risk of 1 in 1,000,000

[f] Level is at or below Contract Laboratory Program required quantification limit for Regular Analytical Services (RAS)

[g] Chemical-specific properties are such that this pathway is not of concern at any soil contaminant concentration

[h] SSL is based on dietary RfD

[i] SSL for pH of 6.8

[j] A screening level of 750 mg/kg has been set for lead based on conservative inputs to the Technical Review Workgroup for Lead's Adult Pb model (http://www.epa.gov/oerrpage/superfund/programs/lead/adfaqs.htm)

[k] SSL is based on RfD for mercuric chloride (CAS No. 007847-94-7)

[l] SSL is based on Rfd for thallium chloride (CAS No. 7791-12-0)

Exhibit A-3

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: INDOOR WORKER RECEPTOR[a]

Compound			Migration to Ground Water	
Organics	CAS No.	Ingestion-Dermal* (mg/kg)	DAF=20 (mg/kg)	DAF=1 (mg/kg)
Acenaphthene	83-32-9	120,000 [b]	570 [b]	29 [b]
Acetone (2-Propanone)	67-64-1	200,000 [b]	16 [b]	0.8 [b]
Aldrin	309-00-2	0.3 [e]	0.5 [e]	0.02 [e]
Anthracene	120-12-7	610,000 [b]	12,000 [b]	590 [b]
Benz(a)anthracene	56-55-3	8 [e]	2 [e]	0.08 [e,f]
Benzene	71-43-2	100 [e]	0.03	0.002 [f]
Benzo(b)fluoranthene	205-99-2	8 [e]	5 [e]	0.2 [e,f]
Benzo(k)fluoranthene	207-08-9	78 [e]	49 [e]	2 [e]
Benzoic acid	65-85-0	1,000,000 [b]	400 [b,i]	20 [b,i]
Benzo(a)pyrene	50-32-8	0.8 [e]	8	0.4
Bis(2-chloroethyl)ether	111-44-4	5 [e]	0.0004 [e,f]	0.00002 [e,f]
Bis(2-ethylhexyl)phthalate	117-81-7	410 [e]	3,600	180
Bromodichloromethane	75-27-4	92 [e]	0.6	0.03
Bromoform (tribromomethane)	75-25-2	720 [e]	0.8	0.04
Butanol	71-36-3	200,000 [b]	17 [b]	0.9 [b]
Butyl benzyl phthalate	85-68-7	410,000 [b]	930 [d]	810 [b]
Carbazole	86-74-8	290 [e]	0.6 [e]	0.03 [e,f]
Carbon disulfide	75-15-0	200,000 [b]	32 [b]	2 [b]
Carbon tetrachloride	56-23-5	44 [e]	0.07	0.003 [f]
Chlordane	57-74-9	16 [e]	10	0.5
p-Chloroaniline	106-47-8	8,200 [b]	0.7 [b]	0.03 [b,f]
Chlorobenzene	108-90-7	41,000 [b]	1	0.07
Chlorodibromomethane	124-48-1	68 [e]	0.4	0.02
Chloroform	67-66-3	940 [e]	0.6	0.03
2-Chlorophenol	95-57-8	10,000 [b]	4 [b,i]	0.2 [b,f,i]
Chrysene	218-01-9	780 [e]	160 [e]	8 [e]
DDD	72-54-8	24 [e]	16 [e]	0.8 [e]
DDE	72-55-9	17 [e]	54 [e]	3 [e]
DDT	50-29-3	17 [e]	32 [e]	2 [e]
Dibenz(a,h)anthracene	53-70-3	0.8 [e]	2 [e]	0.08 [e,f]
Di-n-butyl phthalate	84-74-2	200,000 [b]	2,300 [d]	270 [b]
1,2-Dichlorobenzene	95-50-1	180,000 [b]	17	0.9
1,4-Dichlorobenzene	106-46-7	240 [e]	2	0.1 [f]
3,3-Dichlorobenzidine	91-94-1	13 [e]	0.007 [e,f]	0.0003 [e,f]
1,1-Dichloroethane	75-34-3	200,000 [b]	23 [b]	1 [b]
1,2-Dichloroethane	107-06-2	63 [e]	0.02	0.001 [f]
1,1-Dichloroethylene	75-35-4	10 [e]	0.06	0.003 [f]
cis-1,2-Dichloroethylene	156-59-2	20,000 [b]	0.4	0.02
trans-1,2-Dichloroethylene	156-60-5	41,000 [b]	0.7	0.03
2,4-Dichlorophenol	120-83-2	6,100 [b]	1 [b,i]	0.05 [b,f,i]

Exhibit A-3 (continued)

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: INDOOR WORKER RECEPTOR[a]

Compound			Migration to Ground Water	
Organics(continued)	CAS No.	Ingestion-Dermal* (mg/kg)	DAF=20 (mg/kg)	DAF=1 (mg/kg)
1,2-Dichloropropane	78-87-5	84 [e]	0.03	0.001 [f]
1,3-Dichloropropene	542-75-6	57 [e]	0.004 [e]	0.0002 [e]
Dieldrin	60-57-1	0.4 [e]	0.004 [e]	0.0002 [e,f]
Diethylphthalate	84-66-2	1,000,000 [b]	470 [b]	23 [b]
2,4-Dimethylphenol	105-67-9	41,000 [b]	9 [b]	0.4 [b]
2,4-Dinitrophenol	51-28-5	4,100 [b]	0.2 [b,f,i]	0.008 [b,f,i]
2,4-Dinitrotoluene	121-14-2	8 [e]	0.0008 [e,f]	0.00004 [e,f]
2,6-Dinitrotoluene	606-20-2	8 [e]	0.0007 [e,f]	0.00003 [e,f]
Di-n-octyl phthalate	117-84-0	41,000 [b]	10,000 [d]	10,000 [d]
Endosulfan	115-29-7	12,000 [b]	18 [b]	0.9 [b]
Endrin	72-20-8	610 [b]	1	0.05
Ethylbenzene	100-41-4	200,000 [b]	13	0.7
Fluoranthene	206-44-0	82,000 [b]	4,300 [b]	210 [b]
Fluorene	86-73-7	82,000 [b]	560 [b]	28 [b]
Heptachlor	76-44-8	1 [e]	23	1
Heptachlor Epoxide	1024-57-3	0.6 [e]	0.7	0.03
Hexachlorobenzene	118-74-1	4 [e]	2	0.1 [f]
Hexachloro-1,3-butadiene	87-68-3	73 [e]	2	0.1 [f]
α-HCH (α-BHC)	319-84-6	0.9 [e]	0.0005 [e,f]	0.00003 [e,f]
β-HCH(β-BHC)	319-85-7	3 [e]	0.003 [e]	0.0001 [e,f]
γ-HCH(Lindane)	58-89-9	4 [e]	0.009	0.0005 [f]
Hexachlorocyclopentadiene	77-47-4	14,000 [b]	400	20
Hexachloroethane	67-72-1	410 [e]	0.5 [e]	0.02 [e,f]
Indeno(1,2,3-cd)pyrene	193-39-5	8 [e]	14 [e]	0.7 [e]
Isophorone	78-59-1	6,000 [e]	0.5 [e]	0.03 [e,f]
Methoxychlor	72-43-5	10,000 [b]	160	8
Methyl bromide	74-83-9	2,900 [b]	0.2 [b]	0.01 [b,f]
Methylene chloride	75-09-2	760 [e]	0.02 [e]	0.001 [e,f]
2-Methylphenol (o-cresol)	95-48-7	100,000 [b]	15 [b]	0.8 [b]
Naphthalene	91-20-3	41,000 [b]	84 [b]	4 [b]
Nitrobenzene	98-95-3	1,000 [b]	0.1 [b,f]	0.007 [b,f]
N-Nitrosodiphenylamine	86-30-6	1,200 [e]	1 [e]	0.06 [e,f]
N-Nitrosodi-n-propylamine	621-64-7	0.8 [e]	0.00005 [e,f]	0.000002 [e,f]
Pentachlorophenol	87-86-5	48 [e]	0.03 [f,i]	0.001 [f,i]
Phenol	108-95-2	1,000,000 [b]	100 [b]	5 [b]
Pyrene	129-00-0	61,000 [b]	4,200 [b]	210 [b]
Styrene	100-42-5	410,000 [b]	4	0.2
1,1,2,2-Tetrachloroethane	79-34-5	29 [e]	0.003 [e,f]	0.0002 [e,f]
Tetrachloroethylene	127-18-4	110 [e]	0.06	0.003 [f]
Toluene	108-88-3	410,000 [b]	12	0.6
Toxaphene	8001-35-2	5 [e]	31	2
1,2,4-Trichlorobenzene	120-82-1	20,000 [b]	5	0.3 [f]
1,1,1-Trichloroethane	71-55-6	--- [c]	2	0.1

Exhibit A-3 (continued)

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: INDOOR WORKER RECEPTOR[a]

Compound	CAS No.	Ingestion-Dermal* (mg/kg)	Migration to Ground Water	
			DAF=20 (mg/kg)	DAF=1 (mg/kg)
Organics(continued)				
1,1,2-Trichloroethane	79-00-5	100 [e]	0.02	0.0009 [f]
Trichloroethylene	79-01-6	520 [e]	0.06	0.003 [f]
2,4,5-Trichlorophenol	95-95-4	200,000 [b]	270 [b,i]	14 [b,i]
2,4,6-Trichlorophenol	88-06-2	520 [e]	0.2 [e,f,i]	0.008 [e,f,i]
Vinyl acetate	108-05-4	--- [c]	170 [b]	8 [b]
Vinyl chloride (chloroethene)	75-01-4	8 [e]	0.01 [f,i]	0.0007 [f]
m-Xylene	108-38-3	1,000,000 [b]	210	10
o-Xylene	95-47-6	1,000,000 [b]	190	9
p-Xylene	106-42-3	1,000,000 [b]	200	10
Inorganics				
Antimony	7440-36-0	820 [b]	5	0.3
Arsenic	7440-38-2	4 [e]	29 [i]	1 [i]
Barium	7440-39-3	140,000 [b]	1,600 [i]	82 [i]
Beryllium	7440-41-7	4,100 [b]	63 [i]	3 [i]
Cadmium	7440-43-9	2,000 [b,h]	8 [i]	0.4 [i]
Chromium (total)	7440-47-3	6,100 [b]	38 [i]	2 [i]
Chromium (III)	16065-83-1	1,000,000 [b]	--- [g]	--- [g]
Chromium (VI)	18540-29-9	6,100 [b]	38 [i]	2 [i]
Cyanide (amenable)	57-12-5	41,000 [b]	40	2
Lead	7439-92-1	750 [j]	--- [j]	--- [j]
Mercury	7439-97-6	610 [b,k]	2 [i]	0.1 [i]
Nickel	7440-02-0	41,000 [b]	130 [i]	7 [i]
Selenium	7782-49-2	10,000 [b]	5 [i]	0.3 [i]
Silver	7440-22-4	10,000 [b]	34 [b,i]	2 [b,i]
Thallium	7440-28-0	160 [b,l]	0.7 [i]	0.04 [i]
Vanadium	7440-62-2	14,000 [b]	6,000 [b]	300 [b]
Zinc	7440-66-6	610,000 [b]	12,000 [b,i]	620 [b,i]

DAF = Dilution Attenuation Factor

* No dermal absorption data available for indoor worker receptor; calculated based on ingestion data only

[a] Screening level based on human health criteria only

[b] Calculated values correspond to a noncancer hazard quotient of 1

[c] Ingestion-Dermal pathway: no dermal absorption data available; calculated based on ingestion data only. Inhalation of volatiles pathway: no toxicity criteria available

[d] Soil Saturation Limit (Csat)

[e] Calculated values correspond to a cancer risk of 1 in 1,000,000

[f] Level is at or below Contract Laboratory Program required quantification limit for Regular Analytical Services (RAS)

[g] Chemical-specific properties are such that this pathway is not of concern at any soil contaminant concentration

[h] SSL is based on dietary RfD

[i] SSL for pH of 6.8

[j] A screening level of 750 mg/kg has been set for lead based on conservative inputs to the Technical Review Workgroup for Lead's Adult Pb model (http://www.epa.gov/oerrpage/superfund/programs/lead/adfaqs.htm)

[k] SSL is based on RfD for mercuric chloride (CAS No. 007847-94-7)

[l] SSL is based on Rfd for thallium chloride (CAS No. 7791-12-0)

Exhibit A-1

GENERIC SSLs FOR RESIDENTIAL SCENARIO[a]

Compound	CAS No.	Ingestion-Dermal (mg/kg)	Inhalation of Volatiles (mg/kg)	Inhalation of Fugitive Particulates (mg/kg)	Migration to Ground Water	
					DAF=20 (mg/kg)	DAF=1 (mg/kg)
Organics						
Acenaphthene	83-32-9	3,400 [b]	--- [c]	---	570 [b]	29 [b]
Acetone (2-Propanone)	67-64-1	7,800 [b,c]	--- [c]	---	16 [b]	0.8 [b]
Aldrin	309-00-2	0.04 [c,e]	3 [e]	---	0.5 [e]	0.02 [e]
Anthracene	120-12-7	17,000 [b]	--- [c]	---	12,000 [b]	590 [b]
Benz(a)anthracene	56-55-3	0.6 [e]	--- [c]	---	2 [e]	0.08 [e,f]
Benzene	71-43-2	12 [c,e]	0.8 [e]	---	0.03	0.002 [f]
Benzo(b)fluoranthene	205-99-2	0.6 [e]	--- [c]	---	5 [e]	0.2 [e,f]
Benzo(k)fluoranthene	207-08-9	6 [e]	--- [c]	---	49 [e]	2 [e]
Benzoic acid	65-85-0	310,000 [b,c]	--- [c]	---	400 [b,i]	20 [b,i]
Benzo(a)pyrene	50-32-8	0.06 [e,f]	--- [c]	---	8	0.4
Bis(2-chloroethyl)ether	111-44-4	0.4 [e]	0.2 [e,f]	---	0.0004 [e,f]	0.00002 [e,f]
Bis(2-ethylhexyl)phthalate	117-81-7	35 [e]	--- [c]	---	3,600	180
Bromodichloromethane	75-27-4	10 [c,e]	--- [c]	---	0.6	0.03
Bromoform (tribromomethane)	75-25-2	81 [c,e]	52 [e]	---	0.8	0.04
Butanol	71-36-3	7,800 [b,c]	--- [c]	---	17 [b]	0.9 [b]
Butyl benzyl phthalate	85-68-7	12,000 [b]	--- [c]	---	930 [d]	810 [b]
Carbazole	86-74-8	24 [e]	--- [c]	---	0.6 [e]	0.03 [e,f]
Carbon disulfide	75-15-0	7,800 [b,c]	720 [d]	---	32 [b]	2 [b]
Carbon tetrachloride	56-23-5	5 [c,e]	0.3 [e]	---	0.07	0.003 [f]
Chlordane	57-74-9	2 [e]	72 [e]	---	10	0.5
p-Chloroaniline	106-47-8	240 [b]	--- [c]	---	0.7 [b]	0.03 [b,f]
Chlorobenzene	108-90-7	1,600 [b,c]	130 [b]	---	1	0.07
Chlorodibromomethane	124-48-1	8 [c,e]	--- [c]	---	0.4	0.02
Chloroform	67-66-3	100 [c,e]	0.3 [e]	---	0.6	0.03
2-Chlorophenol	95-57-8	310 [b]	--- [c]	---	4 [b,i]	0.2 [b,f,i]
Chrysene	218-01-9	62 [e]	--- [c]	---	160 [e]	8 [e]
DDD	72-54-8	3 [c,e]	--- [c]	---	16 [e]	0.8 [e]
DDE	72-55-9	2 [c,e]	--- [c]	---	54 [e]	3 [e]
DDT	50-29-3	2 [e]	--- [g]	---	32 [e]	2 [e]
Dibenz(a,h)anthracene	53-70-3	0.06 [e,f]	--- [c]	---	2 [e]	0.08 [e,f]
Di-n-butyl phthalate	84-74-2	6,100 [b]	--- [c]	---	2,300 [d]	270 [b]
1,2-Dichlorobenzene	95-50-1	5,500 [b]	600 [d]	---	17	0.9
1,4-Dichlorobenzene	106-46-7	20 [e]	--- [g]	---	2	0.1 [f]
3,3-Dichlorobenzidine	91-94-1	1 [e]	--- [c]	---	0.007 [e,f]	0.0003 [e,f]
1,1-Dichloroethane	75-34-3	7,800 [b,c]	1,200 [b]	---	23 [c]	1 [b]
1,2-Dichloroethane	107-06-2	7 [c,e]	0.4 [e]	---	0.02	0.001 [f]
1,1-Dichloroethylene	75-35-4	1 [c,e]	0.07 [e]	---	0.06	0.003 [f]
cis-1,2-Dichloroethylene	156-59-2	780 [b,c]	--- [c]	---	0.4	0.02
trans-1,2-Dichloroethylene	156-60-5	1,600 [b,c]	--- [c]	---	0.7	0.03
2,4-Dichlorophenol	120-83-2	180 [b]	--- [c]	---	1 [b,i]	0.05 [b,f,i]

Exhibit A-1 (continued)

GENERIC SSLs FOR RESIDENTIAL SCENARIO[a]

Compound	CAS No.	Ingestion-Dermal (mg/kg)	Inhalation of Volatiles (mg/kg)	Inhalation of Fugitive Particulates (mg/kg)	Migration to Ground Water	
					DAF=20 (mg/kg)	DAF=1 (mg/kg)
Organics (continued)						
1,2-Dichloropropane	78-87-5	9 [c,e]	15 [b]	---	0.03	0.001 [f]
1,3-Dichloropropene	542-75-6	6 [c,e]	1 [e]	---	0.004 [e]	0.0002 [e]
Dieldrin	60-57-1	0.04 [c,e]	1 [e]	---	0.004 [e]	0.0002 [e,f]
Diethylphthalate	84-66-2	49,000 [b]	--- [c]	---	470 [b]	23 [b]
2,4-Dimethylphenol	105-67-9	1,200 [b]	--- [c]	---	9 [b]	0.4 [b]
2,4-Dinitrophenol	51-28-5	120 [b]	--- [c]	---	0.2 [b,f,i]	0.008 [b,f,i]
2,4-Dinitrotoluene	121-14-2	0.7 [e]	--- [c]	---	0.0008 [e,f]	0.00004 [e,f]
2,6-Dinitrotoluene	606-20-2	0.7 [e]	--- [c]	---	0.0007 [e,f]	0.00003 [e,f]
Di-n-octyl phthalate	117-84-0	1,200 [b]	--- [c]	---	10,000 [d]	10,000 [d]
Endosulfan	115-29-7	470 [b,c]	--- [c]	---	18 [b]	0.9 [b]
Endrin	72-20-8	23 [b,c]	--- [c]	---	1	0.05
Ethylbenzene	100-41-4	7,800 [b,c]	400 [d]	---	13	0.7
Fluoranthene	206-44-0	2,300 [b]	--- [c]	---	4,300 [b]	210 [b]
Fluorene	86-73-7	2,300 [b]	--- [c]	---	560 [b]	28 [b]
Heptachlor	76-44-8	0.1 [c,e]	4 [e]	---	23	1
Heptachlor Epoxide	1024-57-3	0.07 [c,e]	5 [e]	---	0.7	0.03
Hexachlorobenzene	118-74-1	0.3 [e]	1 [e]	---	2	0.1 [f]
Hexachloro-1,3-butadiene	87-68-3	6 [e]	8 [e]	---	2	0.1 [f]
α-HCH (α-BHC)	319-84-6	0.1 [c,e]	0.7 [e]	---	0.0005 [e,f]	0.00003 [e,f]
β-HCH(β-BHC)	319-85-7	0.4 [c,e]	6 [e]	---	0.003 [e]	0.0001 [e,f]
γ-HCH(Lindane)	58-89-9	0.4 [e]	--- [c]	---	0.009	0.0005 [f]
Hexachlorocyclopentadiene	77-47-4	430 [b]	10 [b]	---	400	20
Hexachloroethane	67-72-1	35 [e]	54 [e]	---	0.5 [e]	0.02 [e,f]
Indeno(1,2,3-cd)pyrene	193-39-5	0.6 [e]	--- [c]	---	14 [e]	0.7 [e]
Isophorone	78-59-1	510 [e]	--- [c]	---	0.5 [e]	0.03 [e,f]
Methoxychlor	72-43-5	390 [b,c]	--- [c]	---	160	8
Methyl bromide	74-83-9	110 [b,c]	9 [b]	---	0.2 [b]	0.01 [b,f]
Methylene chloride	75-09-2	85 [c,e]	13 [e]	---	0.02 [e]	0.001 [e,f]
2-Methylphenol (o-cresol)	95-48-7	3,100 [b]	--- [c]	---	15 [b]	0.8 [b]
Naphthalene	91-20-3	1,100 [b]	170 [c]	---	84 [b]	4 [b]
Nitrobenzene	98-95-3	31 [b]	90 [b]	---	0.1 [b,f]	0.007 [b,f]
N-Nitrosodiphenylamine	86-30-6	99 [e]	--- [c]	---	1 [e]	0.06 [e,f]
N-Nitrosodi-n-propylamine	621-64-7	0.07 [e,f]	--- [c]	---	0.00005 [e,f]	0.000002 [e,f]
Pentachlorophenol	87-86-5	3 [e]	--- [c]	---	0.03 [f,i]	0.001 [f,i]
Phenol	108-95-2	37,000 [b]	--- [c]	---	100 [b]	5 [b]
Pyrene	129-00-0	1,700 [b]	--- [c]	---	4,200 [b]	210 [b]
Styrene	100-42-5	16,000 [b,c]	1,500 [d]	---	4	0.2
1,1,2,2-Tetrachloroethane	79-34-5	3 [c,e]	0.6 [e]	---	0.003 [e,f]	0.0002 [e,f]
Tetrachloroethylene	127-18-4	12 [c,e]	10 [e]	---	0.06	0.003 [f]
Toluene	108-88-3	16,000 [b,c]	650 [d]	---	12	0.6
Toxaphene	8001-35-2	0.6 [c,e]	87 [e]	---	31	2
1,2,4-Trichlorobenzene	120-82-1	610 [b]	3,200 [d]	---	5	0.3 [f]
1,1,1-Trichloroethane	71-55-6	--- [c]	1,200 [d]	---	2	0.1

Exhibit A-1 (continued)

GENERIC SSLs FOR RESIDENTIAL SCENARIO[a]

Compound	CAS No.	Ingestion-Dermal (mg/kg)	Inhalation of Volatiles (mg/kg)	Inhalation of Fugitive Particulates (mg/kg)	Migration to Ground Water	
					DAF=20 (mg/kg)	DAF=1 (mg/kg)
Organics (continued)						
1,1,2-Trichloroethane	79-00-5	11 c,e	1 e	---	0.02	0.0009 f
Trichloroethylene	79-01-6	58 c,e	5 e	---	0.06	0.003 f
2,4,5-Trichlorophenol	95-95-4	6,100 b	--- c	---	270 b,i	14 b,i
2,4,6-Trichlorophenol	88-06-2	44 e	200 e	---	0.2 e,f,i	0.008 e,f,i
Vinyl acetate	108-05-4	--- c	980 b	---	170 b	8 b
Vinyl chloride (chloroethene)	75-01-4	0.9 c,e	0.6 e	---	0.01 f,i	0.0007 f
m-Xylene	108-38-3	160,000 b,c	--- c	---	210	10
o-Xylene	95-47-6	160,000 b,c	--- c	---	190	9
p-Xylene	106-42-3	160,000 b,c	--- c	---	200	10
Inorganics						
Antimony	7440-36-0	31 b,c	---	--- c	5	0.3
Arsenic	7440-38-2	0.4 e	---	770 e	29 i	1 i
Barium	7440-39-3	5,500 b,c	---	710,000 b	1,600 i	82 i
Beryllium	7440-41-7	160 c,e	---	1,400 e	63 i	3 i
Cadmium	7440-43-9	70 b,h	---	1,800 e	8 i	0.4 i
Chromium (total)	7440-47-3	230 b,c	---	280 e	38 i	2 i
Chromium (III)	16065-83-1	120,000 b,c	---	--- c	--- g	--- g
Chromium (VI)	18540-29-9	230 b,c	---	280 e	38 i	2 i
Cyanide (amenable)	57-12-5	1,600 b,c	---	--- c	40	2
Lead	7439-92-1	400 j	---	--- j	--- j	--- j
Mercury	7439-97-6	23 b,c,k	10 b,l	---	2 i	0.1 i
Nickel	7440-02-0	1,600 b,c	---	14,000 e	130 i	7 i
Selenium	7782-49-2	390 b,c	---	--- c	5 i	0.3 i
Silver	7440-22-4	390 b,c	---	--- c	34 b,i	2 b,i
Thallium	7440-28-0	6 b,c,l	---	--- c	0.7 i	0.04 i
Vanadium	7440-62-2	550 b,c	---	--- c	6,000 b	300 b
Zinc	7440-66-6	23,000 b,c	---	--- c	12,000 b,i	620 b,i

DAF = Dilution Attenuation Factor

[a] Screening level based on human health criteria only

[b] Calculated values correspond to a noncancer hazard quotient of 1

[c] Ingestion-Dermal pathway: no dermal absorption data available; calculated based on ingestion data only. Inhalation of volatiles pathway: no toxicity criteria available

[d] Soil Saturation Limit (Csat)

[e] Calculated values correspond to a cancer risk of 1 in 1,000,000

[f] Level is at or below Contract Laboratory Program required quantification limit for Regular Analytical Services (RAS)

[g] Chemical-specific properties are such that this pathway is not of concern at any soil contaminant concentration

[h] SSL is based on dietary RfD

[i] SSL for pH of 6.8

[j] A screening level of 400 mg/kg has been set for lead based on *Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities* (U.S. EPA, 1994)

[k] SSL is based on RfD for mercuric chloride (CAS No. 007847-94-7)

[l] SSL is based on Rfd for thallium chloride (CAS No. 7791-12-0)

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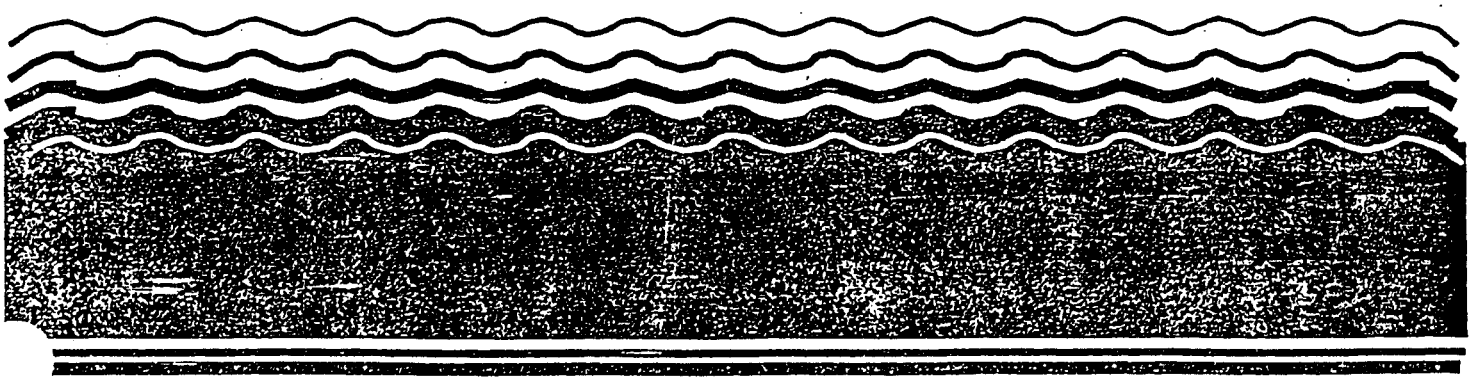

APPENDIX A

Generic SSL

Table A-1 provides generic SSLs for 110 chemicals. Generic SSLs are derived using default values in th standardized equations presented in Part 2 of this document. The default values (listed in Table A-2) are conservative and are likely to be protective for the majority of site conditions across the nation.

However, the generic SSLs are not necessarily protective of all known human exposure pathways, reasonable land uses, or ecological threats. Thus, before applying generic SSLs at a site, it is extremel important to compare the conceptual site model (see the *User's Guide*) with the assumptions behind the SSLs to ensure that the site conditions and exposure pathways match those used to develop generic SSLs (see Parts 1 and 2 and Table A-2). If this comparison indicates that the site is more complex than the SSL scenario, or that there are significant exposure pathways not accounted for by the SSLs, then generic SSLs are not sufficient for a full evaluation of the site. A more detailed site-specific approach will be necessary to evaluate the additional pathways or site conditions.

Generic SSLs are presented separately for major pathways of concern in both surface and subsurface soils. The first column to the right of the chemical name presents levels based on direct ingestion of soil and the second column presents levels based on inhalation. As discussed in the *User's Guide*, the fugitive dust pathway may be of concern for certain metals but does not appear to be of concern for organic compounds. Therefore, SSLs for the fugitive dust pathway are only presented for inorganic compounds. Except for mercury, no SSLs for the inhalation of volatiles pathway are provided for inorganic compounds because these chemicals are not volatile.

The user should note that several of the generic SSLs for the inhalation of volatiles pathway are determined by the soil saturation concentration (C_{sat}), which is used to address and screen the potential presence of nonaqueous phase liquids (NAPLs). As explained in Section 2.4.4, for compounds that are liquid at ambient soil temperature, concentrations above C_{sat} indicate a potential for free-phase liquid contamination to be present and the need for additional investigation.

The third column presents generic SSL values for the migration to ground water pathway developed using a default DAF (dilution-attenuation factor) of 20 to account for natural processes that reduce contaminant concentrations in the subsurface (see Section 2.5.6). SSLs in Table A-1 are rounded to two significant figures except for values less than 10, which are rounded to one significant figure. Note that the 20 DAF values in Table A-1 are not exactly 20 times the 1 DAF values because each SSL is calculated independently in both the 20 DAF and 1 DAF columns, with the final value presented according to the aforementioned rounding conventions.

The fourth column contains the generic SSLs for the migration to ground water pathway developed assuming no dilution or attenuation between the source and the receptor well (i.e., a DAF of 1). These values can be used at sites where little or no dilution or attenuation of soil leachate concentrations is expected at a site (e.g., sites with shallow water tables, fractured media, karst topography, or source size greater than 30 acres).

Generally, if an SSL is not exceeded for a pathway of concern, the user may eliminate the pathway or areas of the site from further investigation. If more than one exposure pathway is of concern, the lowest SSL should be used.

Table A-1 (continued)

CAS No.	Compound	Ingestion (mg/kg)	Inhalation volatiles (mg/kg)	Migration to ground water: 20 DAF (mg/kg)	Migration to ground water: 1 DAF (mg/kg)
Organics					
78-87-5	1,2-Dichloropropane	9 [e]	15 [b]	0.03	0.001 [f]
542-75-6	1,3-Dichloropropene	4 [e]	0.1 [e]	0.004 [e]	0.0002 [e]
60-57-1	Dieldrin	0.04 [e]	1 [e]	0.004 [e]	0.0002 [e,f]
84-66-2	Diethylphthalate	63,000 [b]	2,000 [d]	470 [b]	23 [b]
105-67-9	2,4-Dimethylphenol	1,600 [b]	— [c]	9 [b]	0.4 [b]
51-28-5	2,4-Dinitrophenol	160 [b]	— [c]	0.3 [b,f]	0.01 [b,f]
121-14-2	2,4-Dinitrotoluene	0.9 [e]	— [c]	0.0008 [e,f]	4E-05 [e,f]
606-20-2	2,6-Dinitrotoluene	0.9 [e]	— [c]	0.0007 [e,f]	3E-05 [e,f]
117-84-0	Di-*n*-octyl phthalate	1,600 [b]	10,000 [d]	10,000 [d]	10,000 [d]
115-29-7	Endosulfan	470 [b]	— [c]	18 [b]	0.9 [b]
72-20-8	Endrin	23 [b]	— [c]	1	0.05
100-41-4	Ethylbenzene	7,800 [b]	400 [d]	13	0.7
206-44-0	Fluoranthene	3,100 [b]	— [c]	4,300 [b]	210 [b]
86-73-7	Fluorene	3,100 [b]	— [c]	560 [b]	28 [b]
76-44-8	Heptachlor	0.1 [e]	4 [e]	23	1
1024-57-3	Heptachlor epoxide	0.07 [e]	5 [e]	0.7	0.03
118-74-1	Hexachlorobenzene	0.4 [e]	1 [e]	2	0.1 [f]
87-68-3	Hexachloro-1,3-butadiene	8 [e]	8 [e]	2	0.1 [f]
319-84-6	α-HCH (α-BHC)	0.1 [e]	0.8 [e]	0.0005 [e,f]	3E-05 [e,f]
319-85-7	β-HCH (β-BHC)	0.4 [e]	— [g]	0.003 [e]	0.0001 [e,f]
58-89-9	γ-HCH (Lindane)	0.5 [e]	— [c]	0.009	0.0005 [f]
77-47-4	Hexachlorocyclopentadiene	550 [b]	10 [b]	400	20
67-72-1	Hexachloroethane	46 [e]	55 [e]	0.5 [e]	0.02 [e,f]
193-39-5	Indeno(1,2,3-*cd*)pyrene	0.9 [e]	— [c]	14 [e]	0.7 [e]
78-59-1	Isophorone	670 [e]	4,600 [d]	0.5 [e]	0.03 [e,f]
7439-97-6	Mercury	23 [b,i]	10 [b,i]	2 [i]	0.1 [i]
72-43-5	Methoxychlor	390 [b]	— [c]	160	8
74-83-9	Methyl bromide	110 [b]	10 [b]	0.2 [b]	0.01 [b,f]
75-09-2	Methylene chloride	85 [e]	13 [e]	0.02 [e]	0.001 [e,f]
95-48-7	2-Methylphenol	3,900 [b]	— [c]	15 [b]	0.8 [b]
91-20-3	Naphthalene	3,100 [b]	— [c]	84 [b]	4 [b]
98-95-3	Nitrobenzene	39 [b]	92 [b]	0.1 [b,f]	0.007 [b,f]
86-30-6	*N*-Nitrosodiphenylamine	130 [e]	— [c]	1 [e]	0.06 [e,f]
621-64-7	*N*-Nitrosodi-*n*-propylamine	0.09 [e,f]	— [c]	5E-05 [e,f]	2E-06 [e,f]
1336-36-3	PCBs	1 [h]	— [h]	— [h]	— [h]
87-86-5	Pentachlorophenol	3 [e,j]	— [c]	0.03 [f,j]	0.001 [f,j]
108-95-2	Phenol	47,000 [b]	— [c]	100 [b]	5 [b]
129-00-0	Pyrene	2,300 [b]	— [c]	4,200 [b]	210 [b]
100-42-5	Styrene	16,000 [b]	1,500 [d]	4	0.2
79-34-5	1,1,2,2-Tetrachloroethane	3 [e]	0.6 [e]	0.003 [e,f]	0.0002 [e,f]

Table A-1 (continued)

Inorganics

CAS No.	Compound	Ingestion (mg/kg)	Inhalation fugitive particulate (mg/kg)	Migration to ground w 20 DAF (mg/kg)	Migration to ground w 1 DAF (mg/kg)
7440-36-0	Antimony	31 [b]	--- [c]	5	0.3
7440-38-2	Arsenic	0.4 [e]	750 [e]	29 [l]	1 [l]
7440-39-3	Barium	5,500 [b]	6.9E+05 [b]	1,600 [l]	82 [l]
7440-41-7	Beryllium	0.1 [e]	1,300 [e]	63 [l]	3 [l]
7440-43-9	Cadmium	78 [b,m]	1,800 [e]	8 [l]	0.4 [l]
7440-47-3	Chromium (total)	390 [b]	270 [e]	38 [l]	2 [l]
16065-83-1	Chromium (III)	78,000 [b]	--- [c]	--- [g]	--- [g]
18540-29-9	Chromium (VI)	390 [b]	270 [e]	38 [i]	2 [i]
57-12-5	Cyanide (amenable)	1,600 [b]	--- [c]	40	2
7439-92-1	Lead	400 [k]	--- [k]	--- [k]	--- [k]
7440-02-0	Nickel	1,600 [b]	13,000 [e]	130 [i]	7 [i]
7782-49-2	Selenium	390 [b]	--- [c]	5 [i]	0.3 [i]
7440-22-4	Silver	390 [b]	--- [c]	34 [b,i]	2 [b,i]
7440-28-0	Thallium	--- [c]	--- [c]	0.7 [i]	0.04 [i]
7440-62-2	Vanadium	550 [b]	--- [c]	6,000 [b]	300 [b]
7440-66-6	Zinc	23,000 [b]	--- [c]	12,000 [b,i]	620 [b,i]

DAF = Dilution and attenuation factor.

[a] Screening levels based on human health criteria only.

[b] Calculated values correspond to a noncancer hazard quotient of 1.

[c] No toxicity criteria available for that route of exposure.

[d] Soil saturation concentration (C_{sat}).

[e] Calculated values correspond to a cancer risk level of 1 in 1,000,000.

[f] Level is at or below Contract Laboratory Program required quantitation limit for Regular Analytical Services (RAS).

[g] Chemical-specific properties are such that this pathway is not of concern at any soil contaminant concentration.

[h] A preliminary remediation goal of 1 mg/kg has been set for PCBs based on *Guidance on Remedial Actions for Superfund Sites with PCB Contamination* (U.S. EPA, 1990) and on EPA efforts to manage PCB contamination.

[i] SSL for pH of 6.8.

[j] Ingestion SSL adjusted by a factor of 0.5 to account for dermal exposure.

[k] A screening level of 400 mg/kg has been set for lead based on *Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities* (U.S. EPA, 1994).

[l] SSL is based on RfD for mercuric chloride (CAS No. 007487-94-7).

[m] SSL is based on dietary RfD.

Analysis of Effects of Source Size on Generic SSLs

A large number of commenters on the December 1994 Soil Screening Guidance suggested that most contaminated soil sources were 0.5 acre or less. Before changing this default assumption from 30 acres to 0.5 acre, the Office of Emergency and Remedial Response (OERR) conducted an analysis of the effects of changing the area of a contaminated soil source on generic SSLs calculated for the inhalation and migration to ground water exposure pathways. This analysis includes:

- An analysis of the sensitivity of SSLs to a change in source area from 30 acres to 0.5 acre
- Mass-limit modeling results showing the depth of contamination for a 30-acre source that corresponds to a 0.5-acre SSL.

All equations, assumptions, and model input parameters used in this analysis are consistent with those described in Part 2 of this document unless otherwise indicated. Chemical properties used in the analysis are described in Part 5 of this document.

In summary, the results of this analysis indicate that:

- The SSLs are not particularly sensitive to varying the source area from 30 acres to 0.5 acre. This reduction in source area lowers SSLs for the inhalation pathway by about a factor of 2 and lowers SSLs for the migration to ground water pathway by a factor of 2.9 under typical hydrogeologic conditions.
- Half-acre SSLs calculated for 43 volatile and semivolatile contaminants using the infinite source models correspond to mass-limit SSLs for a 30-acre source uniformly contaminated to a depth of about 1 to 21 meters (depending on contaminant and pathway); the average depth is 8 meters for the inhalation pathway (21 contaminants) and 11 meters for the migration to ground water pathway (43 contaminants).

Sensitivity Analysis. For the inhalation pathway, source area affects the Q/C value (a measure of dispersion), which directly affects the final SSL and is not chemical-specific. Higher Q/C values result in higher SSLs. As shown in Table 3 (Section 2.4.3), the effect of area on the Q/C value is not sensitive to meteorological conditions, with the ratio of a 0.5-acre Q/C to a 30-acre Q/C ranging from 1.93 to 1.96 over the 29 conditions analyzed. Decreasing the source area from 30 acres to 0.5 acre will therefore increase inhalation SSLs by about a factor of 2.

For the migration to ground water pathway, source area affects the DAF, which also directly affects the final SSLs and is not chemical-specific. The sensitivity analysis for the dilution factor is more complicated than for Q/C because increasing source area (expressed as the length of source parallel to ground water flow) not only increases infiltration to the aquifer, which decreases the dilution factor, but also increases the mixing zone depth, which tends to increase the dilution factor. The first effect generally overrides the second (i.e., longer sources have lower dilution factors) except for very thick aquifers (see Section 2.5.7).

The sensitivity analysis described in Section 2.5.7 shows that the dilution model is most sensitive to the aquifer's Darcy velocity (i.e., hydraulic conductivity × hydraulic gradient). For a less conservative Darcy velocity (90th percentile), decreasing the source area from 30 acres to 0.5 acre increased the dilution factor by a factor of 3.1 (see Table 9, Section 2.5.7). For the conditions analyzed, decreasing the source area from 30 acres to 0.5 acre affected dilution factor from no increase to a factor of 4.3 increase. No increase in dilution factor for a 0.5-acre source was observed for the less conservative

Table A-3.Source Depth where 30-acre[a] Mass-Limit SSLs = 0.5-acre[b] Infinite-Source SSLs[c]

Chemical	Source depth (m)	
	Inhalation	Migration to ground water[c]
Acetone	NA	21
Benzene	8.1	12
Benzoic acid	NA	21
Bis(2-chloroethyl)ether	0.7	18
Bromodichloromethane	NA	13
Bromoform	0.9	11
Butanol	NA	20
Carbon disulfide	19	11
Carbon tetrachloride	11	6
Chlorobenzene	3.5	6
Chlorodibromomethane	NA	13
Chloroform	8.3	14
2-Chlorophenol	NA	4
1,2-Dichlorobenzene	NA	3
1,4-Dichlorobenzene	NA	3
1,1-Dichloroethane	9.1	15
1,2-Dichloroethane	5.6	18
1,1-Dichloroethylene	15	10
cis-1,2-Dichloroethylene	NA	15
trans-1,2-Dichloroethylene	NA	12
2,4-Dichlorophenol	NA	8
1,2-Dichloropropane	6.2	14
1,3-Dichloropropene	12	12
2,4-Dimethylphenol	NA	7
2,4-Dinitrophenol	NA	21
2,4-Dinitrotoluene	NA	11
2,6-Dinitrotoluene	NA	12
Ethylbenzene	NA	4
Methyl bromide	12	17
Methylene chloride	8.9	18
2-Methylphenol	NA	11
Nitrobenzene	0.5	13
1,1,2,2-Tetrachloroethane	1.6	11
Tetrachloroethylene	8.7	7
Toluene	NA	7
1,1,1-Trichloroethane	NA	9
1,1,2-Trichloroethane	3.4	14
Trichloroethylene	6.8	7
Vinyl acetate	4.6	20

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Solid Waste and
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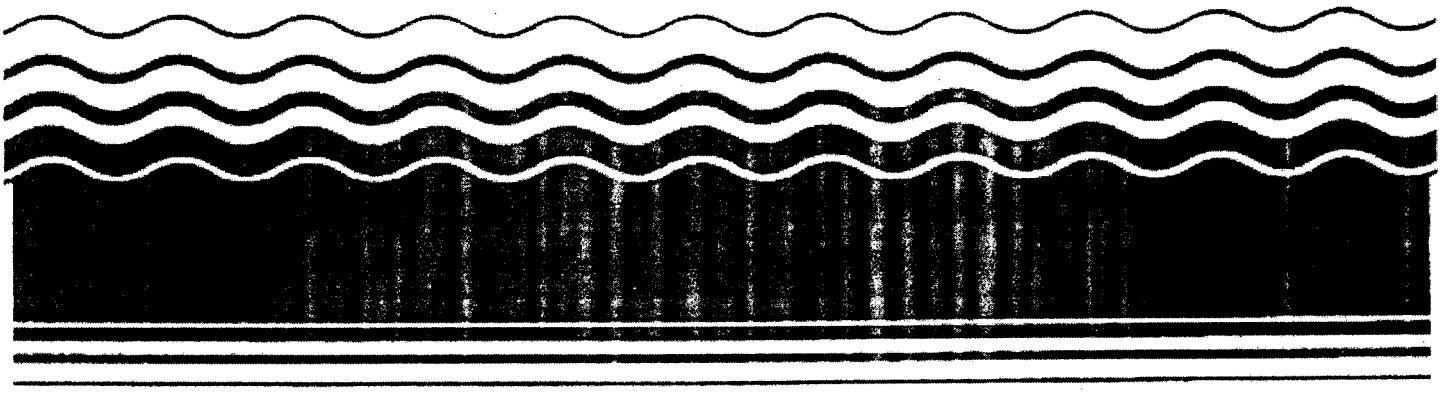

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APPENDIX A

GENERIC SSLs FOR THE RESIDENTIAL AND COMMERCIAL/INDUSTRIAL SCENARIOS

This appendix provides generic SSLs for 110 chemicals under residential and non-residential (i.e., commercial/industrial) exposure scenarios. Exhibit A-1 presents updated generic SSLs for the residential exposure scenario. The generic SSLs for three of the pathways in this exhibit — inhalation of volatiles in outdoor air, inhalation of fugitive dust, and migration to ground water — were calculated using the same equations and default values for exposure assumptions found in the 1996 *SSG* (and reproduced in Appendix B of this document). However, they incorporate updated values for dispersion factors, for toxicity, and for other chemical-specific parameters presented in Appendix C. The exhibit also presents new SSLs for concurrent exposures via soil ingestion and dermal absorption that are based, in part, on a new quantitative approach for evaluating dermal absorption. SSLs for combined direct ingestion and dermal absorption exposures to contaminants were calculated according to the method described in Section 3.2.1 of this document. The generic residential SSLs in Exhibit A-1 supersede those published in the 1996 *SSG*.

Exhibits A-2 and A-3 present commercial/industrial SSLs for the outdoor worker and indoor worker receptors, respectively. These SSLs have been calculated using the equations and the default values for exposure assumptions and other input parameters presented in Section 4.2.3 of this guidance document. All generic SSLs presented in this appendix, both residential and commercial/industrial, are rounded to two significant figures, with the exception of values less than 10 mg/kg, which are rounded to one significant figure.

EPA does not present generic SSLs for the construction exposure scenario because the complexity and variability of exposure conditions for construction activities precludes the development of such values. For information on developing SSLs for exposures during construction activities, users should refer to Chapter 5 or Appendix E of the guidance document.

The generic residential and non-residential SSLs are not necessarily protective of all known human exposure pathways or ecological threats. Before applying SSLs, it is therefore necessary to compare the conceptual site model (developed in Step 1 of the soil screening process) with the assumptions underlying the generic SSLs to ensure that site conditions and exposure pathways are consistent with these assumptions (See Exhibit A-4.) If this comparison indicates that the site is more complex than the generic SSL scenario, or that there are significant exposure pathways not accounted for by the SSL scenario, then generic SSLs alone are **not** sufficient to evaluate the site, and additional, more detailed site-specific investigation is necessary.

In each exhibit, the first column presents SSLs based on the combined soil ingestion and dermal absorption exposure pathway. When data on dermal absorption from soil are unavailable, these SSLs are based on ingestion exposures only. SSLs for this pathway may be updated in the future as dermal absorption data become available for other contaminants.

The second column in Exhibits A-1 and A-2 presents SSLs for the outdoor inhalation of volatiles pathway. Although residential receptors and indoor workers are potentially exposed to volatiles in indoor air as well, EPA has not calculated generic SSLs for migration of volatiles into indoor air because it is very difficult to identify suitable standardized default values for inputs such as dimensions of commercial buildings and the distance between contamination and a building's foundation. EPA provides spreadsheet models that can be used to calculate SSLs for this pathway using the simple site-specific or detailed site-specific approaches.[1] The third column in Exhibit A-1 and A-2 lists SSLs for the inhalation of fugitive dusts pathway. Because inhalation of fugitive dust is typically not a concern for organic compounds, SSLs for this pathway are presented only for inorganic compounds, which are listed at the end of each exhibit. Conversely, with the exception of mercury, no SSLs for the inhalation of volatiles pathway are provided for inorganic compounds because these chemicals exhibit extremely low volatility.

The user should note that several of the generic SSLs for the inhalation of volatiles pathway are determined by the chemical-specific soil saturation limit (C_{sat}) which is used to screen for the presence of non-aqueous phase liquids (NAPLs). As indicated in Section 4.2.3, in situations where the residual concentration of a compound that is a liquid at ambient soil temperature exceeds C_{sat}, the compound may exist as free-phase liquid (see Exhibit C-3 in Appendix C for a list of those compounds present in liquid phase at typical ambient soil temperatures). In these cases, further investigation will be required.

The final two columns in Exhibits A-1 through A-3 present generic SSLs for the migration to ground water pathway. The generic commercial/industrial SSLs for this pathway are the same as those for residential use and are unchanged from the 1996 *SSG*. As discussed in Section 4.2.3, this approach protects potential potable ground water resources that may be present beneath sites with commercial/industrial uses and protects off-site residents who may ingest ground water contaminated by the site. The migration to ground water SSLs are back-calculated from an acceptable target soil leachate concentration using a dilution-attenuation factor (DAF). The first of the two columns of SSLs for this pathway presents levels calculated using a DAF of 20 to account for reductions in contaminant concentration due to natural processes occurring in the subsurface. The second column presents SSL values for the migration to ground water pathway calculated assuming a DAF of one (i.e., no dilution or attenuation between the source and the receptor well). These levels should be used at sites where little or no dilution or attenuation of soil leachate concentrations is expected; this will be the case at sites with characteristics such as shallow water tables, fractured media, karst topography, or source size greater than 30 acres.

[1] The vapor intrusion spreadsheets can be found on EPA's web site at http://www.epa.gov/superfund/programs/risk/airmodel/johnson_ettinger.htm.

After all possible SSLs for all potential receptors at a site have been identified from the tables in Exhibits A-1 through A-3, the site manager should select the lowest applicable SSL for each exposure pathway to be used for comparison to site contaminant concentrations in soil. Generally, where the relevant SSL for a given pathway of concern is not exceeded, the user may eliminate the pathway from further investigation. If all pathways of concern are eliminated for an area of the site based on comparison with residential SSLs, that area can be eliminated from further investigation. However, if commercial/industrial SSLs are used in soil screening evaluations, elimination of an area from further consideration is contingent on an analysis of institutional control options. Users should consult Section 4.3.2 of the guidance document for more information.

The final exhibit in this appendix (Exhibit A-4) presents the default values for physical site characteristics that are used in calculating SSLs (both residential and commercial/industrial) for the inhalation and migration to ground water pathways. These values describe the nature of the contaminant source area, the characteristics of site soil, meteorologic conditions, and hydrogeologic characteristics, and serve either as direct input parameters for SSL equations or as assumptions for developing input parameters for the equations.

Analysis of Effects of Source Size on Generic SSLs

The generic SSLs presented have been developed assuming an infinite source and a 0.5 acre source size. For an analysis of the sensitivity of generic SSLs to changes in source size and the depths to which infinite source SSLs are protective at larger sites, please refer to Attachment A and Table A-3 in the *Technical Background Document* of the 1996 *SSG*, or the following sources:

- US EPA, 1990. *Guidance on Remedial Actions for Superfund Sites with PCB Contamination*. Office of Solid Waste and Emergency Response, Washington, D.C. NTIS PB91-921206CDH.

- US EPA, 1994. *Revised Interim Soil Lead Guidance for CERCLA sites and RCRA Corrective Action Facilities*. Office of Solid Waste and Emergency Response, Washington, D.C. Directive 9355.4-12.

Exhibit A-1

GENERIC SSLs FOR RESIDENTIAL SCENARIO[a]

Compound	CAS No.	Ingestion-Dermal (mg/kg)	Inhalation of Volatiles (mg/kg)	Inhalation of Fugitive Particulates (mg/kg)	Migration to Ground Water	
					DAF=20 (mg/kg)	DAF=1 (mg/kg)
Organics						
Acenaphthene	83-32-9	3,400 [b]	--- [c]	---	570 [b]	29 [b]
Acetone (2-Propanone)	67-64-1	7,800 [b,c]	--- [c]	---	16 [b]	0.8 [b]
Aldrin	309-00-2	0.04 [c,e]	3 [e]	---	0.5 [e]	0.02 [e]
Anthracene	120-12-7	17,000 [b]	--- [c]	---	12,000 [b]	590 [b]
Benz(a)anthracene	56-55-3	0.6 [e]	--- [c]	---	2 [e]	0.08 [e,f]
Benzene	71-43-2	12 [c,e]	0.8 [e]	---	0.03	0.002 [f]
Benzo(b)fluoranthene	205-99-2	0.6 [e]	--- [c]	---	5 [e]	0.2 [e,f]
Benzo(k)fluoranthene	207-08-9	6 [e]	--- [c]	---	49 [e]	2 [e]
Benzoic acid	65-85-0	310,000 [b,c]	--- [c]	---	400 [b,i]	20 [b,i]
Benzo(a)pyrene	50-32-8	0.06 [e,f]	--- [c]	---	8	0.4
Bis(2-chloroethyl)ether	111-44-4	0.4 [e]	0.2 [e,f]	---	0.0004 [e,f]	0.00002 [e,f]
Bis(2-ethylhexyl)phthalate	117-81-7	35 [e]	--- [c]	---	3,600	180
Bromodichloromethane	75-27-4	10 [c,e]	--- [c]	---	0.6	0.03
Bromoform (tribromomethane)	75-25-2	81 [c,e]	52 [e]	---	0.8	0.04
Butanol	71-36-3	7,800 [b,c]	--- [c]	---	17 [b]	0.9 [b]
Butyl benzyl phthalate	85-68-7	12,000 [b]	--- [c]	---	930 [d]	810 [b]
Carbazole	86-74-8	24 [e]	--- [c]	---	0.6 [e]	0.03 [e,f]
Carbon disulfide	75-15-0	7,800 [b,c]	720 [d]	---	32 [b]	2 [b]
Carbon tetrachloride	56-23-5	5 [c,e]	0.3 [e]	---	0.07	0.003 [f]
Chlordane	57-74-9	2 [e]	72 [e]	---	10	0.5
p-Chloroaniline	106-47-8	240 [b]	--- [c]	---	0.7 [b]	0.03 [b,f]
Chlorobenzene	108-90-7	1,600 [b,c]	130 [b]	---	1	0.07
Chlorodibromomethane	124-48-1	8 [c,e]	--- [c]	---	0.4	0.02
Chloroform	67-66-3	100 [c,e]	0.3 [e]	---	0.6	0.03
2-Chlorophenol	95-57-8	310 [b]	--- [c]	---	4 [b,i]	0.2 [b,f,i]
Chrysene	218-01-9	62 [e]	--- [c]	---	160 [e]	8 [e]
DDD	72-54-8	3 [c,e]	--- [c]	---	16 [e]	0.8 [e]
DDE	72-55-9	2 [c,e]	--- [c]	---	54 [e]	3 [e]
DDT	50-29-3	2 [e]	--- [g]	---	32 [e]	2 [e]
Dibenz(a,h)anthracene	53-70-3	0.06 [e,f]	--- [c]	---	2 [e]	0.08 [e,f]
Di-n-butyl phthalate	84-74-2	6,100 [b]	--- [c]	---	2,300 [d]	270 [b]
1,2-Dichlorobenzene	95-50-1	5,500 [b]	600 [d]	---	17	0.9
1,4-Dichlorobenzene	106-46-7	20 [e]	--- [g]	---	2	0.1 [f]
3,3-Dichlorobenzidine	91-94-1	1 [e]	--- [c]	---	0.007 [e,f]	0.0003 [e,f]
1,1-Dichloroethane	75-34-3	7,800 [b,c]	1,200 [b]	---	23 [b]	1 [b]
1,2-Dichloroethane	107-06-2	7 [c,e]	0.4 [e]	---	0.02	0.001 [f]
1,1-Dichloroethylene	75-35-4	1 [c,e]	0.07 [e]	---	0.06	0.003 [f]
cis-1,2-Dichloroethylene	156-59-2	780 [b,c]	--- [c]	---	0.4	0.02
trans-1,2-Dichloroethylene	156-60-5	1,600 [b,c]	--- [c]	---	0.7	0.03
2,4-Dichlorophenol	120-83-2	180 [b]	--- [c]	---	1 [b,i]	0.05 [b,f,i]

Exhibit A-1 (continued)

GENERIC SSLs FOR RESIDENTIAL SCENARIO[a]

Compound					Migration to Ground Water	
Organics (continued)	CAS No.	Ingestion-Dermal (mg/kg)	Inhalation of Volatiles (mg/kg)	Inhalation of Fugitive Particulates (mg/kg)	DAF=20 (mg/kg)	DAF=1 (mg/kg)
1,2-Dichloropropane	78-87-5	9 [c,e]	15 [b]	---	0.03	0.001 [f]
1,3-Dichloropropene	542-75-6	6 [c,e]	1 [e]	---	0.004 [e]	0.0002 [e]
Dieldrin	60-57-1	0.04 [c,e]	1 [e]	---	0.004 [e]	0.0002 [e,f]
Diethylphthalate	84-66-2	49,000 [b]	--- [c]	---	470 [b]	23 [b]
2,4-Dimethylphenol	105-67-9	1,200 [b]	--- [c]	---	9 [b]	0.4 [b]
2,4-Dinitrophenol	51-28-5	120 [b]	--- [c]	---	0.2 [b,f,i]	0.008 [b,f,i]
2,4-Dinitrotoluene	121-14-2	0.7 [e]	--- [c]	---	0.0008 [e,f]	0.00004 [e,f]
2,6-Dinitrotoluene	606-20-2	0.7 [e]	--- [c]	---	0.0007 [e,f]	0.00003 [e,f]
Di-n-octyl phthalate	117-84-0	1,200 [b]	--- [c]	---	10,000 [d]	10,000 [d]
Endosulfan	115-29-7	470 [b,c]	--- [c]	---	18 [b]	0.9 [b]
Endrin	72-20-8	23 [b,c]	--- [c]	---	1	0.05
Ethylbenzene	100-41-4	7,800 [b,c]	400 [d]	---	13	0.7
Fluoranthene	206-44-0	2,300 [b]	--- [c]	---	4,300 [b]	210 [b]
Fluorene	86-73-7	2,300 [b]	--- [c]	---	560 [b]	28 [b]
Heptachlor	76-44-8	0.1 [c,e]	4 [e]	---	23	1
Heptachlor Epoxide	1024-57-3	0.07 [c,e]	5 [e]	---	0.7	0.03
Hexachlorobenzene	118-74-1	0.3 [e]	1 [e]	---	2	0.1 [f]
Hexachloro-1,3-butadiene	87-68-3	6 [e]	8 [e]	---	2	0.1 [f]
α-HCH (α-BHC)	319-84-6	0.1 [c,e]	0.7 [e]	---	0.0005 [e,f]	0.00003 [e,f]
β-HCH(β-BHC)	319-85-7	0.4 [c,e]	6 [e]	---	0.003 [e]	0.0001 [e,f]
γ-HCH(Lindane)	58-89-9	0.4 [e]	--- [c]	---	0.009	0.0005 [f]
Hexachlorocyclopentadiene	77-47-4	430 [b]	10 [b]	---	400	20
Hexachloroethane	67-72-1	35 [e]	54 [e]	---	0.5 [e]	0.02 [e,f]
Indeno(1,2,3-cd)pyrene	193-39-5	0.6 [e]	--- [c]	---	14 [e]	0.7 [e]
Isophorone	78-59-1	510 [e]	--- [c]	---	0.5 [e]	0.03 [e,f]
Methoxychlor	72-43-5	390 [b,c]	--- [c]	---	160	8
Methyl bromide	74-83-9	110 [b,c]	9 [b]	---	0.2 [b]	0.01 [b,f]
Methylene chloride	75-09-2	85 [c,e]	13 [e]	---	0.02 [e]	0.001 [e,f]
2-Methylphenol (o-cresol)	95-48-7	3,100 [b]	--- [c]	---	15 [b]	0.8 [b]
Naphthalene	91-20-3	1,100 [b]	170 [c]	---	84 [b]	4 [b]
Nitrobenzene	98-95-3	31 [b]	90 [b]	---	0.1 [b,f]	0.007 [b,f]
N-Nitrosodiphenylamine	86-30-6	99 [e]	--- [c]	---	1 [e]	0.06 [e,f]
N-Nitrosodi-n-propylamine	621-64-7	0.07 [e,f]	--- [c]	---	0.00005 [e,f]	0.000002 [e,f]
Pentachlorophenol	87-86-5	3 [e]	--- [c]	---	0.03 [f,i]	0.001 [f,i]
Phenol	108-95-2	37,000 [b]	--- [c]	---	100 [b]	5 [b]
Pyrene	129-00-0	1,700 [b]	--- [c]	---	4,200 [b]	210 [b]
Styrene	100-42-5	16,000 [b,c]	1,500 [d]	---	4	0.2
1,1,2,2-Tetrachloroethane	79-34-5	3 [c,e]	0.6 [e]	---	0.003 [e,f]	0.0002 [e,f]
Tetrachloroethylene	127-18-4	12 [c,e]	10 [e]	---	0.06	0.003 [f]
Toluene	108-88-3	16,000 [b,c]	650 [d]	---	12	0.6
Toxaphene	8001-35-2	0.6 [c,e]	87 [e]	---	31	2
1,2,4-Trichlorobenzene	120-82-1	610 [b]	3,200 [d]	---	5	0.3 [f]
1,1,1-Trichloroethane	71-55-6	--- [c]	1,200 [d]	---	2	0.1

Exhibit A-1 (continued)

GENERIC SSLs FOR RESIDENTIAL SCENARIO[a]

Compound	CAS No.	Ingestion-Dermal (mg/kg)	Inhalation of Volatiles (mg/kg)	Inhalation of Fugitive Particulates (mg/kg)	Migration to Ground Water	
					DAF=20 (mg/kg)	DAF=1 (mg/kg)
Organics (continued)						
1,1,2-Trichloroethane	79-00-5	11 [c,e]	1 [e]	---	0.02	0.0009 [f]
Trichloroethylene	79-01-6	58 [c,e]	5 [e]	---	0.06	0.003 [f]
2,4,5-Trichlorophenol	95-95-4	6,100 [b]	--- [c]	---	270 [b,l]	14 [b,l]
2,4,6-Trichlorophenol	88-06-2	44 [e]	200 [e]	---	0.2 [e,f,l]	0.008 [e,f,l]
Vinyl acetate	108-05-4	--- [c]	980 [b]	---	170 [b]	8 [b]
Vinyl chloride (chloroethene)	75-01-4	0.9 [c,e]	0.6 [e]	---	0.01 [f,l]	0.0007 [f]
m-Xylene	108-38-3	160,000 [b,c]	--- [c]	---	210	10
o-Xylene	95-47-6	160,000 [b,c]	--- [c]	---	190	9
p-Xylene	106-42-3	160,000 [b,c]	--- [c]	---	200	10
Inorganics						
Antimony	7440-36-0	31 [b,c]	---	--- [c]	5	0.3
Arsenic	7440-38-2	0.4 [e]	---	770 [e]	29 [i]	1 [i]
Barium	7440-39-3	5,500 [b,c]	---	710,000 [b]	1,600 [i]	82 [i]
Beryllium	7440-41-7	160 [c,e]	---	1,400 [e]	63 [i]	3 [i]
Cadmium	7440-43-9	70 [b,h]	---	1,800 [e]	8 [i]	0.4 [i]
Chromium (total)	7440-47-3	230 [b,c]	---	280 [e]	38 [i]	2 [i]
Chromium (III)	16065-83-1	120,000 [b,c]	---	--- [c]	--- [g]	--- [g]
Chromium (VI)	18540-29-9	230 [b,c]	---	280 [e]	38 [i]	2 [i]
Cyanide (amenable)	57-12-5	1,600 [b,c]	---	--- [c]	40	2
Lead	7439-92-1	400 [j]	---	--- [j]	--- [j]	--- [j]
Mercury	7439-97-6	23 [b,c,k]	10 [b,l]	---	2 [i]	0.1 [i]
Nickel	7440-02-0	1,600 [b,c]	---	14,000 [e]	130 [i]	7 [i]
Selenium	7782-49-2	390 [b,c]	---	--- [c]	5 [i]	0.3 [i]
Silver	7440-22-4	390 [b,c]	---	--- [c]	34 [b,l]	2 [b,l]
Thallium	7440-28-0	6 [b,c,l]	---	--- [c]	0.7 [i]	0.04 [i]
Vanadium	7440-62-2	550 [b,c]	---	--- [c]	6,000 [b]	300 [b]
Zinc	7440-66-6	23,000 [b,c]	---	--- [c]	12,000 [b,l]	620 [b,l]

DAF = Dilution Attenuation Factor

[a] Screening level based on human health criteria only

[b] Calculated values correspond to a noncancer hazard quotient of 1

[c] Ingestion-Dermal pathway: no dermal absorption data available; calculated based on ingestion data only. Inhalation of volatiles pathway: no toxicity criteria available

[d] Soil Saturation Limit (Csat)

[e] Calculated values correspond to a cancer risk of 1 in 1,000,000

[f] Level is at or below Contract Laboratory Program required quantification limit for Regular Analytical Services (RAS)

[g] Chemical-specific properties are such that this pathway is not of concern at any soil contaminant concentration

[h] SSL is based on dietary RfD

[i] SSL for pH of 6.8

[j] A screening level of 400 mg/kg has been set for lead based on *Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities* (U.S. EPA, 1994)

[k] SSL is based on RfD for mercuric chloride (CAS No. 007847-94-7)

[l] SSL is based on Rfd for thallium chloride (CAS No. 7791-12-0)

Exhibit A-2

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: OUTDOOR WORKER RECEPTOR[a]

Compound		Ingestion-Dermal	Inhalation of Volatiles	Inhalation of Fugitive Particulates	Migration to Ground Water	
					DAF=20	DAF=1
Organics	**CAS No.**	**(mg/kg)**	**(mg/kg)**	**(mg/kg)**	**(mg/kg)**	**(mg/kg)**
Acenaphthene	83-32-9	37,000 [b]	--- [c]	---	570 [b]	29 [b]
Acetone (2-Propanone)	67-64-1	110,000 [b,c]	--- [c]	---	16 [b]	0.8 [b]
Aldrin	309-00-2	0.2 [c,e]	6 [e]	---	0.5 [e]	0.02 [e]
Anthracene	120-12-7	180,000 [b]	--- [c]	---	12,000 [b]	590 [b]
Benz(a)anthracene	56-55-3	2 [e]	--- [c]	---	2 [e]	0.08 [e,f]
Benzene	71-43-2	58 [c,e]	1 [e]	---	0.03	0.002 [f]
Benzo(b)fluoranthene	205-99-2	2 [e]	--- [c]	---	5 [e]	0.2 [e,f]
Benzo(k)fluoranthene	207-08-9	23 [e]	--- [c]	---	49 [e]	2 [e]
Benzoic acid	65-85-0	1,000,000 [b,c]	--- [c]	---	400 [b,i]	20 [b,i]
Benzo(a)pyrene	50-32-8	0.2 [e]	--- [c]	---	8	0.4
Bis(2-chloroethyl)ether	111-44-4	2 [e]	0.4 [e]	---	0.0004 [e,f]	0.00002 [e,f]
Bis(2-ethylhexyl)phthalate	117-81-7	140 [e]	--- [c]	---	3,600	180
Bromodichloromethane	75-27-4	51 [c,e]	--- [c]	---	0.6	0.03
Bromoform (tribromomethane)	75-25-2	400 [c,e]	88 [e]	---	0.8	0.04
Butanol	71-36-3	110,000 [b,c]	--- [c]	---	17 [b]	0.9 [b]
Butyl benzyl phthalate	85-68-7	140,000 [b]	--- [c]	---	930 [d]	810 [b]
Carbazole	86-74-8	96 [e]	--- [c]	---	0.6 [e]	0.03 [e,f]
Carbon disulfide	75-15-0	110,000 [b,c]	720 [d]	---	32 [b]	2 [b]
Carbon tetrachloride	56-23-5	24 [c,e]	0.6 [e]	---	0.07	0.003 [f]
Chlordane	57-74-9	7 [e]	120 [e]	---	10	0.5
p-Chloroaniline	106-47-8	2,700 [b]	--- [c]	---	0.7 [b]	0.03 [b,f]
Chlorobenzene	108-90-7	23,000 [b,c]	180 [b]	---	1	0.07
Chlorodibromomethane	124-48-1	38 [c,e]	--- [c]	---	0.4	0.02
Chloroform	67-66-3	520 [c,e]	0.5 [e]	---	0.6	0.03
2-Chlorophenol	95-57-8	3,400 [b]	--- [c]	---	4 [b,i]	0.2 [b,f,i]
Chrysene	218-01-9	230 [e]	--- [c]	---	160 [e]	8 [e]
DDD	72-54-8	13 [c,e]	--- [c]	---	16 [e]	0.8 [e]
DDE	72-55-9	9 [c,e]	--- [c]	---	54 [e]	3 [e]
DDT	50-29-3	8 [e]	--- [g]	---	32 [e]	2 [e]
Dibenz(a,h)anthracene	53-70-3	0.2 [e]	--- [c]	---	2 [e]	0.08 [e,f]
Di-n-butyl phthalate	84-74-2	68,000 [b]	--- [c]	---	2,300 [d]	270 [b]
1,2-Dichlorobenzene	95-50-1	62,000 [b]	600 [d]	---	17	0.9
1,4-Dichlorobenzene	106-46-7	80 [e]	--- [g]	---	2	0.1 [f]
3,3-Dichlorobenzidine	91-94-1	4 [e]	--- [c]	---	0.007 [e,f]	0.0003 [e,f]
1,1-Dichloroethane	75-34-3	110,000 [b,c]	1,700 [d]	---	23 [b]	1 [b]
1,2-Dichloroethane	107-06-2	35 [c,e]	0.6 [e]	---	0.02	0.001 [f]
1,1-Dichloroethylene	75-35-4	5 [c,e]	0.1 [e]	---	0.06	0.003 [f]
cis-1,2-Dichloroethylene	156-59-2	11,000 [b,c]	--- [c]	---	0.4	0.02
trans-1,2-Dichloroethylene	156-60-5	23,000 [b,c]	--- [c]	---	0.7	0.03
2,4-Dichlorophenol	120-83-2	2,100 [b]	--- [c]	---	1 [b,i]	0.05 [b,f,i]
1,2-Dichloropropane	78-87-5	47 [c,e]	21 [b]	---	0.03	0.001 [f]
1,3-Dichloropropene	542-75-6	32 [c,e]	2 [e]	---	0.004 [e]	0.0002 [e]

Exhibit A-2 (continued)

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: OUTDOOR WORKER RECEPTOR[a]

Compound		Ingestion-Dermal	Inhalation of Volatiles	Inhalation of Fugitive Particulates	Migration to Ground Water	
					DAF=20	DAF=1
Organics (continued)	CAS No.	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Dieldrin	60-57-1	0.2 [c,e]	2 [e]	---	0.004 [e]	0.0002 [e,f]
Diethylphthalate	84-66-2	550,000 [b]	--- [c]	---	470 [b]	23 [b]
2,4-Dimethylphenol	105-67-9	14,000 [b]	--- [c]	---	9 [b]	0.4 [b]
2,4-Dinitrophenol	51-28-5	1,400 [b]	--- [c]	---	0.2 [b,f,i]	0.008 [b,f,i]
2,4-Dinitrotoluene	121-14-2	3 [e]	--- [c]	---	0.0008 [e,f]	0.00004 [e,f]
2,6-Dinitrotoluene	606-20-2	3 [e]	--- [c]	---	0.0007 [e,f]	0.00003 [e,f]
Di-n-octyl phthalate	117-84-0	14,000 [b]	--- [c]	---	10,000 [d]	10,000 [d]
Endosulfan	115-29-7	6,800 [b,c]	--- [c]	---	18 [b]	0.9 [b]
Endrin	72-20-8	340 [b,c]	--- [c]	---	1	0.05
Ethylbenzene	100-41-4	110,000 [b,c]	400 [d]	---	13	0.7
Fluoranthene	206-44-0	24,000 [b]	--- [c]	---	4,300 [b]	210 [b]
Fluorene	86-73-7	24,000 [b]	--- [c]	---	560 [b]	28 [b]
Heptachlor	76-44-8	0.7 [c,e]	7 [e]	---	23	1
Heptachlor Epoxide	1024-57-3	0.3 [c,e]	8 [e]	---	0.7	0.03
Hexachlorobenzene	118-74-1	1 [e]	2 [e]	---	2	0.1 [f]
Hexachloro-1,3-butadiene	87-68-3	25 [e]	13 [e]	---	2	0.1 [f]
α-HCH (α-BHC)	319-84-6	0.5 [c,e]	1 [e]	---	0.0005 [e,f]	0.00003 [e,f]
β-HCH(β-BHC)	319-85-7	2 [c,e]	--- [g]	---	0.003 [e]	0.0001 [e,f]
γ-HCH(Lindane)	58-89-9	2 [e]	--- [c]	---	0.009	0.0005 [f]
Hexachlorocyclopentadiene	77-47-4	4,800 [b]	14 [b]	---	400	20
Hexachloroethane	67-72-1	140 [e]	92 [e]	---	0.5 [e]	0.02 [e,f]
Indeno(1,2,3-cd)pyrene	193-39-5	2 [e]	--- [c]	---	14 [e]	0.7 [e]
Isophorone	78-59-1	2,000 [e]	--- [c]	---	0.5 [e]	0.03 [e,f]
Methoxychlor	72-43-5	5,700 [b,c]	--- [c]	---	160	8
Methyl bromide	74-83-9	1,600 [b,c]	13 [b]	---	0.2 [b]	0.01 [b,f]
Methylene chloride	75-09-2	420 [c,e]	22 [e]	---	0.02 [e]	0.001 [e,f]
2-Methylphenol (o-cresol)	95-48-7	34,000 [b]	--- [c]	---	15 [b]	0.8 [b]
Naphthalene	91-20-3	12,000 [b]	240 [b]	---	84 [b]	4 [b]
Nitrobenzene	98-95-3	340 [b]	130 [b]	---	0.1 [b,f]	0.007 [b,f]
N-Nitrosodiphenylamine	86-30-6	390 [e]	--- [c]	---	1 [e]	0.06 [e,f]
N-Nitrosodi-n-propylamine	621-64-7	0.3 [e]	--- [c]	---	0.00005 [e,f]	0.000002 [e,f]
Pentachlorophenol	87-86-5	10 [e]	--- [c]	---	0.03 [f,i]	0.001 [f,i]
Phenol	108-95-2	410,000 [b]	--- [c]	---	100 [b]	5 [b]
Pyrene	129-00-0	18,000 [b]	--- [c]	---	4,200 [b]	210 [b]
Styrene	100-42-5	230,000 [b,c]	1,500 [d]	---	4	0.2
1,1,2,2-Tetrachloroethane	79-34-5	16 [c,e]	1 [e]	---	0.003 [e,f]	0.0002 [e,f]
Tetrachloroethylene	127-18-4	61 [c,e]	18 [e]	---	0.06	0.003 [f]
Toluene	108-88-3	230,000 [b,c]	650 [d]	---	12	0.6
Toxaphene	8001-35-2	3 [c,e]	150 [e]	---	31	2
1,2,4-Trichlorobenzene	120-82-1	6,800 [b]	3,200 [d]	---	5	0.3 [f]
1,1,1-Trichloroethane	71-55-6	--- [c]	1,200 [d]	---	2	0.1
1,1,2-Trichloroethane	79-00-5	56 [c,e]	2 [e]	---	0.02	0.0009 [f]
Trichloroethylene	79-01-6	290 [c,e]	8 [e]	---	0.06	0.003 [f]
2,4,5-Trichlorophenol	95-95-4	68,000 [b]	--- [c]	---	270 [b,i]	14 [b,i]

Exhibit A-2 (continued)

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: OUTDOOR WORKER RECEPTOR[a]

Compound	CAS No.	Ingestion-Dermal (mg/kg)	Inhalation of Volatiles (mg/kg)	Inhalation of Fugitive Particulates (mg/kg)	Migration to Ground Water	
					DAF=20 (mg/kg)	DAF=1 (mg/kg)
***Organics* (continued)**						
2,4,6-Trichlorophenol	88-06-2	170 [e]	340 [e]	---	0.2 [e,f,i]	0.008 [e,f,i]
Vinyl acetate	108-05-4	--- [c]	1,400 [b]	---	170 [b]	8 [b]
Vinyl chloride (chloroethene)	75-01-4	4 [c,e]	1 [e]	---	0.01 [f,i]	0.0007 [f]
m-Xylene	108-38-3	1,000,000 [b,c]	--- [c]	---	210	10
o-Xylene	95-47-6	1,000,000 [b,c]	--- [c]	---	190	9
p-Xylene	106-42-3	1,000,000 [b,c]	--- [c]	---	200	10
Inorganics						
Antimony	7440-36-0	450 [b,c]	---	--- [c]	5	0.3
Arsenic	7440-38-2	2 [e]	---	1,400 [e]	29 [i]	1 [i]
Barium	7440-39-3	79,000 [b,c]	---	1,000,000 [b]	1,600 [i]	82 [i]
Beryllium	7440-41-7	2,300 [c,e]	---	2,600 [e]	63 [i]	3 [i]
Cadmium	7440-43-9	900 [b,h]	---	3,400 [e]	8 [i]	0.4 [i]
Chromium (total)	7440-47-3	3,400 [b,c]	---	510 [e]	38 [i]	2 [i]
Chromium (III)	16065-83-1	1,000,000 [b,c]	---	--- [c]	--- [g]	--- [g]
Chromium (VI)	18540-29-9	3,400 [b,c]	---	510 [e]	38 [i]	2 [i]
Cyanide (amenable)	57-12-5	23,000 [b,c]	---	--- [c]	40	2
Lead	7439-92-1	750 [j]	---	--- [j]	--- [j]	--- [j]
Mercury	7439-97-6	340 [b,c,k]	14 [b,l]	---	2 [i]	0.1 [i]
Nickel	7440-02-0	23,000 [b,c]	---	26,000 [e]	130 [i]	7 [i]
Selenium	7782-49-2	5,700 [b,c]	---	--- [c]	5 [i]	0.3 [i]
Silver	7440-22-4	5,700 [b,c]	---	--- [c]	34 [b,i]	2 [b,i]
Thallium	7440-28-0	91 [b,c,l]	---	--- [c]	0.7 [i]	0.04 [i]
Vanadium	7440-62-2	7,900 [b,c]	---	--- [c]	6,000 [b]	300 [b]
Zinc	7440-66-6	340,000 [b,c]	---	--- [c]	12,000 [b,i]	620 [b,i]

DAF = Dilution Attenuation Factor

[a] Screening level based on human health criteria only

[b] Calculated values correspond to a noncancer hazard quotient of 1

[c] Ingestion-Dermal pathway: no dermal absorption data available; calculated based on ingestion data only. Inhalation of volatiles pathway: no toxicity criteria available

[d] Soil Saturation Limit (Csat)

[e] Calculated values correspond to a cancer risk of 1 in 1,000,000

[f] Level is at or below Contract Laboratory Program required quantification limit for Regular Analytical Services (RAS)

[g] Chemical-specific properties are such that this pathway is not of concern at any soil contaminant concentration

[h] SSL is based on dietary RfD

[i] SSL for pH of 6.8

[j] A screening level of 750 mg/kg has been set for lead based on conservative inputs to the Technical Review Workgroup for Lead's Adult Pb model (http://www.epa.gov/oerrpage/superfund/programs/lead/adfaqs.htm)

[k] SSL is based on RfD for mercuric chloride (CAS No. 007847-94-7)

[l] SSL is based on Rfd for thallium chloride (CAS No. 7791-12-0)

Exhibit A-3

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: INDOOR WORKER RECEPTOR[a]

Compound			Migration to Ground Water	
Organics	CAS No.	Ingestion-Dermal* (mg/kg)	DAF=20 (mg/kg)	DAF=1 (mg/kg)
Acenaphthene	83-32-9	120,000 [b]	570 [b]	29 [b]
Acetone (2-Propanone)	67-64-1	200,000 [b]	16 [b]	0.8 [b]
Aldrin	309-00-2	0.3 [e]	0.5 [e]	0.02 [e]
Anthracene	120-12-7	610,000 [b]	12,000 [b]	590 [b]
Benz(a)anthracene	56-55-3	8 [e]	2 [e]	0.08 [e,f]
Benzene	71-43-2	100 [e]	0.03	0.002 [f]
Benzo(b)fluoranthene	205-99-2	8 [e]	5 [e]	0.2 [e,f]
Benzo(k)fluoranthene	207-08-9	78 [e]	49 [e]	2 [e]
Benzoic acid	65-85-0	1,000,000 [b]	400 [b,i]	20 [b,i]
Benzo(a)pyrene	50-32-8	0.8 [e]	8	0.4
Bis(2-chloroethyl)ether	111-44-4	5 [e]	0.0004 [e,f]	0.00002 [e,f]
Bis(2-ethylhexyl)phthalate	117-81-7	410 [e]	3,600	180
Bromodichloromethane	75-27-4	92 [e]	0.6	0.03
Bromoform (tribromomethane)	75-25-2	720 [e]	0.8	0.04
Butanol	71-36-3	200,000 [b]	17 [b]	0.9 [b]
Butyl benzyl phthalate	85-68-7	410,000 [b]	930 [d]	810 [b]
Carbazole	86-74-8	290 [e]	0.6 [e]	0.03 [e,f]
Carbon disulfide	75-15-0	200,000 [b]	32 [b]	2 [b]
Carbon tetrachloride	56-23-5	44 [e]	0.07	0.003 [f]
Chlordane	57-74-9	16 [e]	10	0.5
p-Chloroaniline	106-47-8	8,200 [b]	0.7 [b]	0.03 [b,f]
Chlorobenzene	108-90-7	41,000 [b]	1	0.07
Chlorodibromomethane	124-48-1	68 [e]	0.4	0.02
Chloroform	67-66-3	940 [e]	0.6	0.03
2-Chlorophenol	95-57-8	10,000 [b]	4 [b,i]	0.2 [b,f,i]
Chrysene	218-01-9	780 [e]	160 [e]	8 [e]
DDD	72-54-8	24 [e]	16 [e]	0.8 [e]
DDE	72-55-9	17 [e]	54 [e]	3 [e]
DDT	50-29-3	17 [e]	32 [e]	2 [e]
Dibenz(a,h)anthracene	53-70-3	0.8 [e]	2 [e]	0.08 [e,f]
Di-n-butyl phthalate	84-74-2	200,000 [b]	2,300 [d]	270 [b]
1,2-Dichlorobenzene	95-50-1	180,000 [b]	17	0.9
1,4-Dichlorobenzene	106-46-7	240 [e]	2	0.1 [f]
3,3-Dichlorobenzidine	91-94-1	13 [e]	0.007 [e,f]	0.0003 [e,f]
1,1-Dichloroethane	75-34-3	200,000 [b]	23 [b]	1 [b]
1,2-Dichloroethane	107-06-2	63 [e]	0.02	0.001 [f]
1,1-Dichloroethylene	75-35-4	10 [e]	0.06	0.003 [f]
cis-1,2-Dichloroethylene	156-59-2	20,000 [b]	0.4	0.02
trans-1,2-Dichloroethylene	156-60-5	41,000 [b]	0.7	0.03
2,4-Dichlorophenol	120-83-2	6,100 [b]	1 [b,i]	0.05 [b,f,i]

Exhibit A-3 (continued)

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: INDOOR WORKER RECEPTOR[a]

Compound	CAS No.	Ingestion-Dermal* (mg/kg)	Migration to Ground Water	
			DAF=20 (mg/kg)	DAF=1 (mg/kg)
Organics(continued)				
1,2-Dichloropropane	78-87-5	84 [e]	0.03	0.001 [f]
1,3-Dichloropropene	542-75-6	57 [e]	0.004 [e]	0.0002 [e]
Dieldrin	60-57-1	0.4 [e]	0.004 [e]	0.0002 [e,f]
Diethylphthalate	84-66-2	1,000,000 [b]	470 [b]	23 [b]
2,4-Dimethylphenol	105-67-9	41,000 [b]	9 [b]	0.4 [b]
2,4-Dinitrophenol	51-28-5	4,100 [b]	0.2 [b,f,i]	0.008 [b,f,i]
2,4-Dinitrotoluene	121-14-2	8 [e]	0.0008 [e,f]	0.00004 [e,f]
2,6-Dinitrotoluene	606-20-2	8 [e]	0.0007 [e,f]	0.00003 [e,f]
Di-n-octyl phthalate	117-84-0	41,000 [b]	10,000 [d]	10,000 [d]
Endosulfan	115-29-7	12,000 [b]	18 [b]	0.9 [b]
Endrin	72-20-8	610 [b]	1	0.05
Ethylbenzene	100-41-4	200,000 [b]	13	0.7
Fluoranthene	206-44-0	82,000 [b]	4,300 [b]	210 [b]
Fluorene	86-73-7	82,000 [b]	560 [b]	28 [b]
Heptachlor	76-44-8	1 [e]	23	1
Heptachlor Epoxide	1024-57-3	0.6 [e]	0.7	0.03
Hexachlorobenzene	118-74-1	4 [e]	2	0.1 [f]
Hexachloro-1,3-butadiene	87-68-3	73 [e]	2	0.1 [f]
α-HCH (α-BHC)	319-84-6	0.9 [e]	0.0005 [e,f]	0.00003 [e,f]
β-HCH(β-BHC)	319-85-7	3 [e]	0.003 [e]	0.0001 [e,f]
γ-HCH(Lindane)	58-89-9	4 [e]	0.009	0.0005 [f]
Hexachlorocyclopentadiene	77-47-4	14,000 [b]	400	20
Hexachloroethane	67-72-1	410 [e]	0.5 [e]	0.02 [e,f]
Indeno(1,2,3-cd)pyrene	193-39-5	8 [e]	14 [e]	0.7 [e]
Isophorone	78-59-1	6,000 [e]	0.5 [e]	0.03 [e,f]
Methoxychlor	72-43-5	10,000 [b]	160	8
Methyl bromide	74-83-9	2,900 [b]	0.2 [b]	0.01 [b,f]
Methylene chloride	75-09-2	760 [e]	0.02 [e]	0.001 [e,f]
2-Methylphenol (o-cresol)	95-48-7	100,000 [b]	15 [b]	0.8 [b]
Naphthalene	91-20-3	41,000 [b]	84 [b]	4 [b]
Nitrobenzene	98-95-3	1,000 [b]	0.1 [b,f]	0.007 [b,f]
N-Nitrosodiphenylamine	86-30-6	1,200 [e]	1 [e]	0.06 [e,f]
N-Nitrosodi-n-propylamine	621-64-7	0.8 [e]	0.00005 [e,f]	0.000002 [e,f]
Pentachlorophenol	87-86-5	48 [e]	0.03 [f,i]	0.001 [f,i]
Phenol	108-95-2	1,000,000 [b]	100 [b]	5 [b]
Pyrene	129-00-0	61,000 [b]	4,200 [b]	210 [b]
Styrene	100-42-5	410,000 [b]	4	0.2
1,1,2,2-Tetrachloroethane	79-34-5	29 [e]	0.003 [e,f]	0.0002 [e,f]
Tetrachloroethylene	127-18-4	110 [e]	0.06	0.003 [f]
Toluene	108-88-3	410,000 [b]	12	0.6
Toxaphene	8001-35-2	5 [e]	31	2
1,2,4-Trichlorobenzene	120-82-1	20,000 [b]	5	0.3 [f]
1,1,1-Trichloroethane	71-55-6	--- [c]	2	0.1

Exhibit A-3 (continued)

GENERIC SSLs FOR COMMERCIAL/INDUSTRIAL SCENARIO: INDOOR WORKER RECEPTOR[a]

Compound	CAS No.	Ingestion-Dermal* (mg/kg)	Migration to Ground Water	
			DAF=20 (mg/kg)	DAF=1 (mg/kg)
Organics(continued)				
1,1,2-Trichloroethane	79-00-5	100 [e]	0.02	0.0009 [f]
Trichloroethylene	79-01-6	520 [e]	0.06	0.003 [f]
2,4,5-Trichlorophenol	95-95-4	200,000 [b]	270 [b,i]	14 [b,i]
2,4,6-Trichlorophenol	88-06-2	520 [e]	0.2 [e,f,i]	0.008 [e,f,i]
Vinyl acetate	108-05-4	--- [c]	170 [b]	8 [b]
Vinyl chloride (chloroethene)	75-01-4	8 [e]	0.01 [f,i]	0.0007 [f]
m-Xylene	108-38-3	1,000,000 [b]	210	10
o-Xylene	95-47-6	1,000,000 [b]	190	9
p-Xylene	106-42-3	1,000,000 [b]	200	10
Inorganics				
Antimony	7440-36-0	820 [b]	5	0.3
Arsenic	7440-38-2	4 [e]	29 [i]	1 [i]
Barium	7440-39-3	140,000 [b]	1,600 [i]	82 [i]
Beryllium	7440-41-7	4,100 [b]	63 [i]	3 [i]
Cadmium	7440-43-9	2,000 [b,h]	8 [i]	0.4 [i]
Chromium (total)	7440-47-3	6,100 [b]	38 [i]	2 [i]
Chromium (III)	16065-83-1	1,000,000 [b]	--- [g]	--- [g]
Chromium (VI)	18540-29-9	6,100 [b]	38 [i]	2 [i]
Cyanide (amenable)	57-12-5	41,000 [b]	40	2
Lead	7439-92-1	750 [j]	--- [j]	--- [j]
Mercury	7439-97-6	610 [b,k]	2 [i]	0.1 [i]
Nickel	7440-02-0	41,000 [b]	130 [i]	7 [i]
Selenium	7782-49-2	10,000 [b]	5 [i]	0.3 [i]
Silver	7440-22-4	10,000 [b]	34 [b,i]	2 [b,i]
Thallium	7440-28-0	160 [b,l]	0.7 [i]	0.04 [i]
Vanadium	7440-62-2	14,000 [b]	6,000 [b]	300 [b]
Zinc	7440-66-6	610,000 [b]	12,000 [b,i]	620 [b,i]

DAF = Dilution Attenuation Factor

* No dermal absorption data available for indoor worker receptor; calculated based on ingestion data only

[a] Screening level based on human health criteria only

[b] Calculated values correspond to a noncancer hazard quotient of 1

[c] Ingestion-Dermal pathway: no dermal absorption data available; calculated based on ingestion data only. Inhalation of volatiles pathway: no toxicity criteria available

[d] Soil Saturation Limit (Csat)

[e] Calculated values correspond to a cancer risk of 1 in 1,000,000

[f] Level is at or below Contract Laboratory Program required quantification limit for Regular Analytical Services (RAS)

[g] Chemical-specific properties are such that this pathway is not of concern at any soil contaminant concentration

[h] SSL is based on dietary RfD

[i] SSL for pH of 6.8

[j] A screening level of 750 mg/kg has been set for lead based on conservative inputs to the Technical Review Workgroup for Lead's Adult Pb model (http://www.epa.gov/oerrpage/superfund/programs/lead/adfaqs.htm)

[k] SSL is based on RfD for mercuric chloride (CAS No. 007847-94-7)

[l] SSL is based on Rfd for thallium chloride (CAS No. 7791-12-0)

Exhibit A-4

GENERIC SSLs: DEFAULT VALUES FOR PARAMETERS DESCRIBING SITE CONDITIONS - INHALATION AND MIGRATION TO GROUND WATER PATHWAYS

Parameter	SSL Pathway: Inhalation	SSL Pathway: Migration to Ground Water	Method
Source Characteristics			
Continuous vegetative cover	●		50 percent
Roughness height	○		0.5 cm for open terrain; used to derive $U_{t,7}$
Source area (A)	●	○	0.5 acres (2,024m^2); used to derive L for GW
Source length (L)		●	45 m (assumes square source)
Source depth		○	Extends to water table (i.e., no attenuation in unsaturated zone)
Soil Characteristics			
Soil texture	○	○	Loam; defines soil characteristics/parameters
Dry soil bulk density (ρ_b)	●	●	1.5 kg/L
Soil porosity (n)	●	○	0.43
Vol. soil water content (θ_w)	●	●	0.15 (INH); 0.30 (GW; Indoor INH)*
Vol. soil air content (θ_a)	●	●	0.28 (INH); 0.13 (GW; Indoor INH)*
Soil organic carbon (f_{oc})	●	●	0.006 (0.6%, INH); 0.002 (0.2%, GW)
Soil pH	○	○	6.8; used to determine pH-specific K_d (metals) and K_{OC} (ionizable organics)
Mode soil aggregate size	○		0.5 mm; used to derive $U_{t,7}$
Threshold windspeed @ 7 m ($U_{t,7}$)	●		11.32 m/s
Meteorological Data			
Mean annual windspeed (U_m)	●		4.69 m/s (Minneapolis, MN)
Air dispersion factor (Q/C)	●		90th percentile conterminous U.S.
Volatilization Q/C	●		68.18; Los Angeles, CA; 0.5-acre source
Fugitive particulate Q/C	●		93.77; Minneapolis, MN; 0.5-acre source
Hydrogeologic Characteristics (DAF)			
Hydrogeologic setting		○	Generic (national); surficial aquifer
Dilution/attenuation factor (DAF)		●	20 or 1

● Indicates parameters used directly in the SSL equations.
○ Indicates parameters/assumptions used to develop input parameters for SSL equations.
INH = Inhalation pathway.
GW = Migration to ground water pathway.
Indoor INH = Inhalation of volatiles in indoor air pathway.
* The inhalation of volatiles in indoor air pathway is evaluated using subsurface soil defaults for θ_w and θ_a. The model's default parameters assume contamination located directly beneath a basement floor that is two meters below the ground surface.

APPENDIX I

U.S. Code of Federal Regulations (CFR)Title 40: Protection of Environment. Part 141: National Primary Drinking Water Regulations

Subpart G: National Revised Primary Drinking Water Regulations: Maximum Contaminant Levels.

July 2002

Current Drinking Water Standards

National Primary Drinking Water Regulations (NPDWRs or primary standards) are legally enforceable standards that apply to public water systems. Primary standards protect public health by limiting the levels of contaminants in drinking water. The table below divides these contaminants into:

EPA 816-F-02-01
July 200
Printable PDF versio

Microorganisms | Disinfectants | Disinfection Byproducts | Inorganic Chemicals | Organic Chemicals | Radionuclides

For more information, see Setting Standards for Safe Drinking Water to learn about EPA's standard-setting process or look at a timeline that shows the order in which EPA regulated these contaminants. For copies of the complete regulations regarding these contaminants, follow these links:

- National Primary Drinking Water Regulations
- National Secondary Drinking Water Regulations

National Primary Drinking Water Regulations

Microorganisms	MCLG[1] (mg/L)[2]	MCL or TT[1] (mg/L)[2]	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Cryptosporidium	zero	TT[3]	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and fecal animal waste
Giardia lamblia	zero	TT[3]	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste
Heterotrophic plate count	n/a	TT[3]	HPC has no health effects; it is an analytic method used to measure the variety of bacteria that are common in water. The lower the concentration of bacteria in drinking water, the better maintained the water system is.	HPC measures a range of bacteria that are naturally present in the environment

Disinfectants	MRDL[1] (mg/L)[2]	MRDL[1] (mg/L)[2]	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Chloramines (as Cl_2)	MRDLG=4[1]	MRDL=4.0[1]	Eye/nose irritation; stomach discomfort, anemia	Water additive used to control microbes
Chlorine (as Cl_2)	MRDLG=4[1]	MRDL=4.0[1]	Eye/nose irritation; stomach discomfort	Water additive used to control microbes
Chlorine dioxide (as ClO_2)	MRDLG=0.8[1]	MRDL=0.8[1]	Anemia: infants & young children: nervous system effects	Water additive used to control microbes

Inorganic Chemicals	MCLG[1] (mg/L)[2]	MCL or TT[1] (mg/L)[2]	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Antimony	0.006	0.006	Increase in blood cholesterol; decrease in blood sugar	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	0[7]	0.010 as of 01/23/06	Skin damage or problems with circulatory systems, and may have increased risk of getting cancer	Erosion of natural deposits; runoff from orchards, runoff from glass & electronicsproduction wastes
Asbestos (fiber >10 micrometers)	7 million fibers per liter	7 MFL	Increased risk of developing benign intestinal polyps	Decay of asbestos cement in water mains; erosion of natural deposits
Barium	2	2	Increase in blood pressure	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium	0.004	0.004	Intestinal lesions	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium	0.005	0.005	Kidney damage	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium (total)	0.1	0.1	Allergic dermatitis	Discharge from steel and pulp mills; erosion of natural deposits

Local Drinking Water Information

Drinking Water Standards

Legionella	zero	TT[3]	Legionnaire's Disease, a type of pneumonia	Found naturally in water; multiplies in heating systems
Total Coliforms (including fecal coliform and *E. Coli*)	zero	5.0%[4]	Not a health threat in itself; it is used to indicate whether other potentially harmful bacteria may be present[5]	Coliforms are naturally present in the environment; as well as feces; fecal coliforms and *E. coli* only come from human and animal fecal waste.
Turbidity	n/a	TT[3]	Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (e.g., whether disease-causing organisms are present). Higher turbidity levels are often associated with higher levels of disease-causing microorganisms such as viruses, parasites and some bacteria. These organisms can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.	Soil runoff
Viruses (enteric)	zero	TT[3]	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste

Disinfection Byproducts	MCLG[1] (mg/L)[2]	MCL or TT[1] (mg/L)[2]	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Bromate	zero	0.010	Increased risk of cancer	Byproduct of drinking water disinfection
Chlorite	0.8	1.0	Anemia; infants & young children: nervous system effects	Byproduct of drinking water disinfection
Haloacetic acids (HAA5)	n/a[6]	0.060	Increased risk of cancer	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHMs)	none[7] / n/a[6]	0.10 / 0.080	Liver, kidney or central nervous system problems; increased risk of cancer	Byproduct of drinking water disinfection

Public Drinking Water Systems

Copper	1.3	TT[8]; Action Level=1.3	Short term exposure: Gastrointestinal distress Long term exposure: Liver or kidney damage People with Wilson's Disease should consult their personal doctor if the amount of copper in their water exceeds the action level	Corrosion of household plumbing systems; erosion of natural deposits
Cyanide (as free cyanide)	0.2	0.2	Nerve damage or thyroid problems	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride	4.0	4.0	Bone disease (pain and tenderness of the bones); Children may get mottled teeth	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Lead	zero	TT[8]; Action Level=0.015	Infants and children: Delays in physical or mental development; children could show slight deficits in attention span and learning abilities Adults: Kidney problems; high blood pressure	Corrosion of household plumbing systems; erosion of natural deposits
Mercury (inorganic)	0.002	0.002	Kidney damage	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands
Nitrate (measured as Nitrogen)	10	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Nitrite (measured as Nitrogen)	1	1	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	0.05	0.05	Hair or fingernail loss; numbness in fingers or toes; circulatory problems	Discharge from petroleum refineries; erosion of natural deposits; discharge from mines
Thallium	0.0005	0.002	Hair loss; changes in blood; kidney, intestine, or liver problems	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

Organic Chemicals	MCLG[1] (mg/L)[2]	MCL or TT[1] (mg/L)[2]	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Acrylamide	zero	TT[9]	Nervous system or blood problems; increased risk of cancer	Added to water during sewage/wastewater treatment
Alachlor	zero	0.002	Eye, liver, kidney or spleen problems; anemia; increased risk of cancer	Runoff from herbicide used on row crops
Atrazine	0.003	0.003	Cardiovascular system or reproductive problems	Runoff from herbicide used on row crops
Benzene	zero	0.005	Anemia; decrease in blood platelets; increased risk of cancer	Discharge from factories; leaching from gas storage tanks and landfills
Benzo(a)pyrene (PAHs)	zero	0.0002	Reproductive difficulties; increased risk of cancer	Leaching from linings of water storage tanks and distribution lines

Carbofuran	0.04	0.04	Problems with blood, nervous system, or reproductive system	Leaching of soil fumigant used on rice and alfalfa
Carbon tetrachloride	zero	0.005	Liver problems; increased risk of cancer	Discharge from chemical plants and other industrial activities
Chlordane	zero	0.002	Liver or nervous system problems; increased risk of cancer	Residue of banned termiticide
Chlorobenzene	0.1	0.1	Liver or kidney problems	Discharge from chemical and agricultural chemical factories
2,4-D	0.07	0.07	Kidney, liver, or adrenal gland problems	Runoff from herbicide used on row crops
Dalapon	0.2	0.2	Minor kidney changes	Runoff from herbicide used on rights of way
1,2-Dibromo-3-chloropropane (DBCP)	zero	0.0002	Reproductive difficulties; increased risk of cancer	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
o-Dichlorobenzene	0.6	0.6	Liver, kidney, or circulatory system problems	Discharge from industrial chemical factories
p-Dichlorobenzene	0.075	0.075	Anemia; liver, kidney or spleen damage; changes in blood	Discharge from industrial chemical factories
1,2-Dichloroethane	zero	0.005	Increased risk of cancer	Discharge from industrial chemical factories
1,1-Dichloroethylene	0.007	0.007	Liver problems	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene	0.07	0.07	Liver problems	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene	0.1	0.1	Liver problems	Discharge from industrial chemical factories
Dichloromethane	zero	0.005	Liver	Discharge from drug

			problems; increased risk of cancer	and chemical factories
1,2-Dichloropropane	zero	0.005	Increased risk of cancer	Discharge from industrial chemical factories
Di(2-ethylhexyl) adipate	0.4	0.4	General toxic effects or reproductive difficulties	Discharge from chemical factories
Di(2-ethylhexyl) phthalate	zero	0.006	Reproductive difficulties; liver problems; increased risk of cancer	Discharge from rubber and chemical factories
Dinoseb	0.007	0.007	Reproductive difficulties	Runoff from herbicide used on soybeans and vegetables
Dioxin (2,3,7,8-TCDD)	zero	0.00000003	Reproductive difficulties; increased risk of cancer	Emissions from waste incineration and other combustion; discharge from chemical factories
Diquat	0.02	0.02	Cataracts	Runoff from herbicide use
Endothall	0.1	0.1	Stomach and intestinal problems	Runoff from herbicide use
Endrin	0.002	0.002	Liver problems	Residue of banned insecticide
Epichlorohydrin	zero	TT[9]	Increased cancer risk, and over a long period of time, stomach problems	Discharge from industrial chemical factories; an impurity of some water treatment chemicals
Ethylbenzene	0.7	0.7	Liver or kidneys problems	Discharge from petroleum refineries
Ethylene dibromide	zero	0.00005	Problems with liver, stomach, reproductive system, or kidneys; increased risk of cancer	Discharge from petroleum refineries
Glyphosate	0.7	0.7	Kidney problems; reproductive difficulties	Runoff from herbicide use
Heptachlor	zero	0.0004	Liver damage; increased risk	Residue of banned termiticide



			of cancer	
Heptachlor epoxide	zero	0.0002	Liver damage; increased risk of cancer	Breakdown of heptachlor
Hexachlorobenzene	zero	0.001	Liver or kidney problems; reproductive difficulties; increased risk of cancer	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene	0.05	0.05	Kidney or stomach problems	Discharge from chemical factories
Lindane	0.0002	0.0002	Liver or kidney problems	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor	0.04	0.04	Reproductive difficulties	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl (Vydate)	0.2	0.2	Slight nervous system effects	Runoff/leaching from insecticide used on apples, potatoes, and tomatoes
Polychlorinated biphenyls (PCBs)	zero	0.0005	Skin changes; thymus gland problems; immune deficiencies; reproductive or nervous system difficulties; increased risk of cancer	Runoff from landfills; discharge of waste chemicals
Pentachlorophenol	zero	0.001	Liver or kidney problems; increased cancer risk	Discharge from wood preserving factories
Picloram	0.5	0.5	Liver problems	Herbicide runoff
Simazine	0.004	0.004	Problems with blood	Herbicide runoff
Styrene	0.1	0.1	Liver, kidney, or circulatory system problems	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene	zero	0.005	Liver problems; increased risk of cancer	Discharge from factories and dry cleaners
Toluene	1	1	Nervous	Discharge from



			system, kidney, or liver problems	petroleum factories
Toxaphene	zero	0.003	Kidney, liver, or thyroid problems; increased risk of cancer	Runoff/leaching from insecticide used on cotton and cattle
2,4,5-TP (Silvex)	0.05	0.05	Liver problems	Residue of banned herbicide
1,2,4-Trichlorobenzene	0.07	0.07	Changes in adrenal glands	Discharge from textile finishing factories
1,1,1-Trichloroethane	0.20	0.2	Liver, nervous system, or circulatory problems	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane	0.003	0.005	Liver, kidney, or immune system problems	Discharge from industrial chemical factories
Trichloroethylene	zero	0.005	Liver problems; increased risk of cancer	Discharge from metal degreasing sites and other factories
Vinyl chloride	zero	0.002	Increased risk of cancer	Leaching from PVC pipes; discharge from plastic factories
Xylenes (total)	10	10	Nervous system damage	Discharge from petroleum factories; discharge from chemical factories

Radionuclides	MCLG[1] (mg/L)[2]	MCL or TT[1] (mg/L)[2]	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Alpha particles	none[7] ---------- zero	15 picocuries per Liter (pCi/L)	Increased risk of cancer	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation
Beta particles and photon emitters	none[7] ---------- zero	4 millirems per year	Increased risk of cancer	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation
Radium 226 and Radium 228 (combined)	none[7] ---------- zero	5 pCi/L	Increased risk of cancer	Erosion of natural deposits
Uranium	zero	30 ug/L as of 12/08/03	Increased risk of cancer, kidney toxicity	Erosion of natural deposits

Notes

[1] Definitions:
Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed ir drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.
Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.
Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflec the benefits of the use of disinfectants to control microbial contaminants.
Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

[2] Units are in milligrams per liter (mg/L) unless otherwise noted. Milligrams per liter are equivalent to parts per million.

[3] EPA's surface water treatment rules require systems using surface water or ground water under the direct influence of surface water to (1) disinfect their water, and (2) filter their wate or meet criteria for avoiding filtration so that the following contaminants are controlled at the following levels:

- Cryptosporidium (as of1/1/02 for systems serving >10,000 and 1/14/05 for systems serving <10,000) 99% removal.

- *Giardia lamblia:* 99.9% removal/inactivation
- Viruses: 99.99% removal/inactivation
- *Legionella:* No limit, but EPA believes that if *Giardia* and viruses are removed/inactivated, *Legionella* will also be controlled.
- Turbidity: At no time can turbidity (cloudiness of water) go above 5 nephelolometric turbidity units (NTU); systems that filter must ensure that the turbidity go no higher than 1 NTU (0.5 NTU for conventional or direct filtration) in at least 95% of the daily samples in any month. As of January 1, 2002, turbidity may never exceed 1 NTU, and must not exceed 0.3 NTU in 95% of daily samples in any month.
- HPC: No more than 500 bacterial colonies per milliliter.
- Long Term 1 Enhanced Surface Water Treatment (Effective Date: January 14, 2005): Surface water systems or (GWUDI) systems serving fewer than 10,000 people must comply with the applicable Long Term 1 Enhanced Surface Water Treatment Rule provisions (e.g. turbidity standards, individual filter monitoring, Cryptosporidium removal requirements, updated watershed control requirements for unfiltered systems).
- Filter Backwash Recycling; The Filter Backwash Recycling Rule requires systems that recycle to return specific recycle flows through all processes of the system's existing conventional or direct filtration system or at an alternate location approved by the state.

[4] more than 5.0% samples total coliform-positive in a month. (For water systems that collect fewer than 40 routine samples per month, no more than one sample can be total coliform-positive per month.) Every sample that has total coliform must be analyzed for either fecal coliforms or *E. coli* if two consecutive TC-positive samples, and one is also positive for *E.coli* fecal coliforms, system has an acute MCL violation.

[5] Fecal coliform and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Disease-causing microbes (pathogens) in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. These pathogens may pose a special health risk for infants, young children, and people with severely compromised immune systems.

[6] Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants:

- Trihalomethanes: bromodichloromethane (zero); bromoform (zero); dibromochloromethane (0.06 mg/L). Chloroform is regulated with this group but has no MCLG.
- Haloacetic acids: dichloroacetic acid (zero); trichloroacetic acid (0.3 mg/L). Monochloroacetic acid, bromoacetic acid, and dibromoacetic acid are regulated with this group but have no MCLGs.

[7] MCLGs were not established before the 1986 Amendments to the Safe Drinking Water Act. Therefore, there is no MCLG for this contaminant.

[8] Lead and copper are regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. If more than 10% of tap water samples exceed the action level, water systems must take additional steps. For copper, the action level is 1.3 mg/L, and for lead is 0.015 mg/L.

[9] Each water system must certify, in writing, to the state (using third-party or manufacturer's certification) that when acrylamide and epichlorohydrin are used in drinking water systems, the combination (or product) of dose and monomer level does not exceed the levels specified, as follows:

- Acrylamide = 0.05% dosed at 1 mg/L (or equivalent)
- Epichlorohydrin = 0.01% dosed at 20 mg/L (or equivalent)

TABLE 11 (CONTINUED)

CONSTITUENT	CAS No.	GROUND WATER QUALITY CRITERIA	PRACTICAL QUANTITATION LEVELS (PQLs)
Sulfate	14808-79-8	250,000	5.0
Taste	-	None Objectionable	NA
TCDD (2,3,7,8-Tetrachlorodibenzo-p-dioxin)	1746-01-6	$2X10^{-10}$	0.00001
1,1,1,2-Tetrachloroethane	630-20-6	0.01	NA
1,1,2,2-Tetrachloroethane	79-34-5	0.002	0.001
Tetrachloroethylene	127-18-4	0.0004	0.001
2,3,4,6-Tetrachlorophenol	58-90-2	NA	0.010
Thallium	7440-28-0	0.0005	0.010
Toluene	108-88-3	1.0	0.005
Total dissolved solids (TDS)	-	500,000	10,000
Toxaphene	8001-35-2	0.00003	0.003
2,4,5-TP (Silvex)	93-72-1	0.05	0.005
1,2,4-Trichlorobenzene	120-82-1	0.009	0.001
1,1,1-Trichloroethane	71-55-6	0.03	0.001
1,1,2-Trichloroethane	79-00-5	0.003	0.002
Trichloroethylene	79-01-6	0.001	0.001
2,4,5-Trichlorophenol	95-95-4	0.7	0.010
2,4,6-Trichlorophenol	88-06-2	0.003	0.020
Vinyl chloride	75-01-4	0.00008	0.005
Xylenes (Total)	1330-20-7	0.04	0.002
m&p-Xylenes	NA	NA	0.002
o-Xylene	NA	NA	0.001
Zinc	7440-66-6	5.0	0.030
Microbiological criteria[m], Radionuclides & Turbidity	prevailing Safe Drinking Water Act Regulations (N.J.A.C. 7:10-1 et seq.)		

Definition of Terms:

- = Practical Quantitation Level as defined in N.J.A.C. 7:9-6.4

NA = not available for the constituent

f = Asbestos criterion is measured in terms of fibers/L longer than 10 micrometers (f/L > 10 um)

ug = micrograms, L = Liter, f = fibers, CU = Standard Cobalt Units

tb = Odor Threshold Number, mg = milligrams, H = Hardness

m = Pursuant to prevailing Safe Drinking Water Act Regulations any positive result for fecal coliform is in violation of the MCL and is therefore an exceedance of the ground water quality standards.

TABLE 11 (CONTINUED)

CONSTITUENT	CAS No.	GROUND WATER QUALITY CRITERIA	PRACTICAL QUANTITATION LEVELS (PQLs)
Mirex	2385-85-5	0.00001	NA
Nickel (Soluble salts)	7440-02-0	0.1	0.010
Nitrate (as N)	14797-55-8	10.0	0.400
Nitrate and Nitrite (as N)	-	10.0	NA
Nitrite (as N)	14797-65-0	1.0	0.400
Nitrobenzene	98-95-3	0.003	0.010
N-Nitrosomethylamine	62-75-9	0.0000007	0.020
N-Nitrosodiphenylamine	86-30-6	0.007	0.020
N-Nitrosodi-n-propylamine	621-64-7	0.000005	0.020
Odor	-	3[b]	NA
Oil & Grease and Petroleum Hydrocarbons (PHC)	-	None Noticeable	NA
Oxamyl	23135-22-0	0.2	0.020
PCBs (Polychlorinated biphenyls)	1336-36-3	0.00002	0.0005
Pentachlorophenol	87-86-5	0.0003	0.001
pH	-	6.5-8.5	NA
Phenanthrene	85-01-8	NA	0.010
Phenol	103-95-2	4.0	0.010
Picloram	1918-02-1	0.50	0.001
Pyrene	129-00-0	0.20	0.020
Selenium (Total)	7782-49-2	0.05	0.010
Silver	7440-22-4	NA	0.002
Simazine	122-34-9	0.001	0.0008
Sodium	7440-23-5	50.0	0.400
Styrene	100-42-5	0.1	0.005

TABLE 11 (CONTINUED)

CONSTITUENT	CAS No.	GROUND WATER QUALITY CRITERIA	PRACTICAL QUANTITATION LEVELS (PQLs)
Fluorene	86-73-7	0.3	0.010
Fluoride	16984-48-8	2.0	0.500
Foaming agents (ABS/LAS)	-	0.5	0.0005
Glyphosate	1071-83-6	0.7	NA
Hardness (as $CaCO^3$)	-	250mg/l	10mg/l
Heptachlor	76-44-8	0.000008	0.0004
Heptachlor epoxide	1024-57-3	0.000004	0.0002
Hexachlorobenzene	118-74-1	0.00002	0.010
Hexachlorobutadiene	87-68-3	0.001	0.001
Hexachlorocyclopentadiene	77-47-4	0.05	0.010
Hexachloroethane	67-72-1	0.0007	0.010
Hydrogen sulfide	7783-06-4	0.02	NA
Indeno(1,2,3-cd)pyrene	193-39-5	NA	0.02
Iron	7439-89-6	0.3	0.10
Isophorone	78-59-1	0.1	0.010
Lead (Total)	7439-92-1	0.005	0.010
Malathion	121-75-5	0.2	0.005
Manganese	7439-96-5	0.050	0.006
Mercury (Total)	7439-97-6	0.002	0.005
Methoxychlor	72-43-5	0.04	0.010
Methyl bromide (bromomethane)	74-83-9	0.01	0.002
Methyl chloride (chloromethane)	74-87-3	0.03	0.002
Methyl ethyl ketone	78-93-3	0.3	NA
3-Methyl-4-chlorophenol	59-50-7	NA	0.020
Methylene chloride	75-09-2	0.002	0.002
4-Methyl-2-pentanone (MIBK)	108-10-1	0.4	NA

TABLE 11 (CONTINUED)

CONSTITUENT	CAS No.	GROUND WATER QUALITY CRITERIA	PRACTICAL QUANTITATION LEVELS (PQLs)
trans-1,3-Dichloropropene	10061-02-6	NA	0.007
1,3-Dichloropropene (cis and trans)	542-75-6	0.0002	NA
Dieldrin	60-57-1	0.000002	0.00003
Diethyl phthalate	84-66-2	5.0	0.010
2,4-Dimethylphenol	105-67-9	0.1	0.020
Dimethyl phthalate	131-11-3	-	0.010
4,6-Dinitro-o-cresol	534-52-1	NA	0.060
2,4-Dinitrophenol	51-28-5	0.010	0.040
2,4-Dinitrotoluene/2,6-Dinitrotoluene mixture	121-14-2	0.00005	0.010
2,6-Dinitrotoluene	606-20-2	NA	0.010
Di-n-octyl phthalate	117-84-0	0.1	NA
Dinoseb	88-85-7	0.007	0.002
1,2-Diphenylhydrazine	122-66-7	0.00004	NA
Diquat	85-00-7	0.02	NA
Endosulfan	115-29-7	0.0004	NA
alpha-Endosulfan (Endosulfan I)	959-98-8	0.0004	0.00002
beta-Endosulfan (Endosulfan II)	33213-65-9	0.0004	0.00004
Endosulfan sulfate	1031-07-8	0.0004	0.00008
Endothall	145-73-3	0.1	NA
Endrin	72-20-8	0.002	0.00004
Epichlorohydrin	106-89-8	0.004	NA
Ethylbenzene	100-41-4	0.7	0.005
Ethylene dibromide	106-93-4	0.0000004	0.00005
Fluoranthene	206-44-0	0.3	0.010

TABLE 11 (CONTINUED)

CONSTITUENT	CAS No.	GROUND WATER QUALITY CRITERIA	PRACTICAL QUANTITATION LEVELS (PQLs)
Chrysene	218-01-9	NA	0.020
Color	-	10 CU	20 CU
Copper	7440-50-8	1.0	1.0
Cyanide	57-12-5	0.2	0.040
2,4-D	94-75-7	0.07	0.005
Dalapon	75-99-0	0.2	0.010
4,4'-DDD (p,p'-TDE)	72-54-8	0.0001	0.00004
4,4'-DDE	72-55-9	0.0001	0.00004
4,4'-DDT	50-29-3	0.0001	0.00006
Demeton	8065-48-3	0.0003	NA
Dibenz(a,h)anthracene	53-70-3	NA	0.020
Dibromochloromethane 'orodibromomethane)	124-48-1	0.01	0.001
1,2-Dibromo-3-chloropropane(DBCP)	96-12-8	NA	0.002
Di-n-butyl phthalate	84-74-2	0.9	0.020
1,2-Dichlorobenzene	95-50-1	0.6	0.005
1,3-Dichlorobenzene	541-73-1	0.6	0.005
1,4-Dichlorobenzene	106-46-7	0.075	0.005
3,3'-Dichlorobenzidine	91-94-1	0.00008	0.060
1,1-Dichloroethane	75-34-3	0.07	NA
1,2-Dichloroethane	107-06-2	0.0003	0.002
1,1-Dichloroethylene	75-35-4	0.001	0.002
cis-1,2-Dichloroethylene	156-59-2	0.01	0.002
trans-1,2-Dichloroethylene	156-60-5	0.1	0.002
2,4-Dichlorophenol	120-83-2	0.02	0.010
1,2-Dichloropropene	78-87-5	0.0005	0.001
cis-1,3-Dichloropropene	10061-01-5	NA	0.005

TABLE 11 (CONTINUED)

CONSTITUENT	CAS No.	GROUND WATER QUALITY CRITERIA	PRACTICAL QUANTITATION LEVELS (PQLs)
3,4-Benzofluoranthene (Benzo(b)fluoranthene)	205-99-2	NA	0.010
Benzo(ghi)perylene	191-24-2	NA	0.020
Benzo(k)fluoranthene	207-08-9	NA	0.002
Beryllium	7440-41-7	0.000008	0.020
alpha-BHC (alpha-HCH)	319-84-6	0.000006	0.00002
beta-BHC (beta-HCH)	319-85-7	0.0002	0.00004
gamma-BHC (gamma-HCH/Lindane)	58-89-9	0.0002	0.0002
Bis(2-chloroethyl) ether	111-44-4	0.00003	0.010
Bis(2-chloroisopropyl) ether	36638-32-9	0.3	0.010
Bis(2-ethylhexyl) phthalate	117-81-7	0.003	0.030
Bromodichloromethane (Dichlorobromomethane)	75-27-4	0.0003	0.001
Bromoform	75-25-2	0.004	0.0008
Butylbenzyl phthalate	85-68-7	0.1	0.020
Cadmium	7440-43-9	0.004	0.002
Carbofuran	1563-66-2	0.04	0.007
Carbon tetrachloride	56-23-5	0.0004	0.002
Chlorobenzene	108-90-7	0.004	0.002
Chlordane	57-74-9	0.00001	0.0005
Chloride	16887-00-6	250.0	2.0
Chloroform	67-66-3	0.006	0.001
4-Chloro-3-methyl (o-chloro-m-cresol)	59-50-7	NA	0.020
2-Chlorophenol	95-57-8	0.04	0.020
Chlorpyrifos	2912-88-2	0.02	0.0002
Chromium (Total)	7440-47-3	0.1	0.010

TABLE 11
NJ SPECIFIC GROUND WATER QUALITY CRITERIA
CLASS II-A & PRACTICAL QUANTITATION LEVELS
(N.J.A.C. 7:9-6, 1993)
All units are milligrams per liter (mg/l)

CONSTITUENT	CAS No.	GROUND WATER QUALITY CRITERIA	PRACTICAL QUANTITATION LEVELS (PQLs)
Acenaphthene	83-32-9	0.40	0.010
Acenapthylene	208-96-8	NA	0.010
Acetone	67-64-1	0.70	NA
Acrolein	107-02-8	NA	0.050
Acrylamide	79-06-1	0.000008	NA
Acrylonitrile	107-13-1	0.000060	0.050
Adipates (Di(ethylhexyl)adipate)	103-23-1	NA	0.006
Alachlor	15972-60-8	0.00043	0.002
carb sulfone	1646-88-4	0.0020	0.003
Aldrin	309-00-2	0.000002	0.00004
Aluminum	7429-90-5	0.200	0.200
Ammonia	7664-41-7	0.500	0.200
Anthracene	120-12-7	2.0	0.010
Antimony	7440-36-0	0.002	0.020
Arsenic (Total)	7440-38-2	0.00002	0.008
Asbestos	1332-21-4	$7X10^6$f/L>10um	10^5f/L>10um
Atrazine	1912-24-9	0.003	0.001
Barium	7440-39-3	2.0	0.200
Benzo(a)anthracene	56-55-3	NA	0.010
Benzene	71-43-2	0.0002	0.001
Benzidine	92-87-5	0.0000002	0.050
Benzyl Alcohol	100-51-6	2.0	NA
Benzo(a)pyrene (BaP)	50-32-8	NA	0.020

TABLE 10
NEW JERSEY SECONDARY DRINKING WATER STANDARDS
(N.J.A.C. 7:10-1 through 16.12, 1989)
All units are milligrams per liter (mg/l), unless noted otherwise

CONTAMINANT	SMCL
Aluminum	0.05-0.2
ABS/LAS (Foaming Agents)	0.5
Chloride	250.0
Color	10 color units (Standard Cobalt Scale)
Corrosivity	Within ± 1.0 of the optimum pH as determined by the Langelier Index; or by another method acceptable to the NJDEPE
Fluoride	2.0
Hardness (as CaCO)	250 upper limit 50 lower limit
Iron	0.3
Manganese	0.05
Odor	3 Threshold odor number (TON)
pH	6.5 - 8.5
Silver	0.1
Sodium	50.0
Sulfate	250.0
Taste	No objectionable taste
Total Dissolved Solids (TDS)	500.0
Zinc	5.0

TABLE 8
NEW JERSEY DRINKING WATER STANDARDS
(N.J.A.C. 7:10-1 through 16.12, 1989)
RADIONUCLIDES
All units are picocuries per liter (pCi/l), unless noted otherwise

CONTAMINANT	CURRENT MCL	PROPOSED MCL
Gross alpha activity	15	15
Radium 226	-	20
Radium 228	-	20
Radium 226/228	5	-
Beta particle and photon radioactivity	4 millirem/year	4 mrem ede/yr
Uranium	-	30
Radon 222	-	300

TABLE 9
NEW JERSEY DRINKING WATER STANDARDS
(N.J.A.C. 7:10-1 through 16.12, 1989)
MICROBIOLOGICAL & TURBIDITY

CONTAMINANT	MCL
Coliform Bacteria For private home wells	Absence of bacteria/100 ml
For public water systems[2]	Presence or absence of Coliform bacteria based on system size
Turbidity	1 Turbidity Unit

[2] See 40 CFR (Code of Federal Regulations) for details.

TABLE 7
NEW JERSEY DRINKING WATER STANDARDS
(N.J.A.C. 7:10-1 through 16.12, 1989)
INORGANIC CHEMICALS
All units are milligrams per liter (mg/l)

CHEMICAL	CAS No.	MCL
Antimony	7440-36-0	0.006
Arsenic	7440-36-0	0.05
Asbestos	1332-21-4	7 MFL
Barium	7440-39-3	2.0
Beryllium	7440-41-7	0.004
Cadmium	7440-43-9	0.005
Chromium (total)	7440-47-3	0.1
Copper	7440-50-8	1.3 AL
Cyanide	57-12-5	0.2
Fluoride	-	4.0
Lead[1]	7439-92-1	0.015 AL
Mercury	7439-97-6	0.002
Nickel	7440-02-0	0.1
Nitrate (as N)	-	10.0
Nitrite (as N)	-	1.0
Total Nitrate/Nitrite (as N)	14797-55-8	10.0
Selenium	7782-49-2	0.05
Sulfate	-	deferred
Thallium	7440-28-0	0.002

Note: MFL Million Fibers per Liter with fiber length > 10 microns
AL Action Level requiring corrective measures

[1] Effective 12/7/92.

TABLE 6 (CONTINUED)

SYNTHETIC ORGANIC CHEMICALS

CHEMICAL	CAS No.	MCL
Benzo(a)pyrene	50-32-8	0.0002
Di(2-ethylhexyl)adipate	103-23-1	0.5
Di(2-ethylhexyl)phthalate	117-81-7	0.004
Hexachlorobenzene	118-74-1	0.001
Hexachlorocyclopentadiene (HEX)	77-47-4	0.05
PCBs	1336-36-3	0.5
2,3,7,8-TCDD (Dioxin)	1746-01-6	0.005

TREATMENT TECHNIQUES

CHEMICAL	CAS No.	MCL
Acrylamide	79-06-1	0.005% dosed at 1 mg/l
Epichlorohydrin	106-89-8	0.01% dosed at 20 mg/l

DISINFECTION BY-PRODUCTS

CHEMICAL	MCL	MCLG
Total Trihalomethanes (TTHMs)	0.10	-

TABLE 6 (CONTINUED)

PESTICIDES

CHEMICAL	CAS No.	MCL
Alachlor	15972-60-8	0.002
Aldicarb	116-06-3	0.010
Aldicarb sulfone	1646-88-4	0.002
Aldicarb sulfoxide	1646-87-3	0.004
Atrazine	1912-24-9	0.003
Carbofuran	1563-66-2	0.040
Chlordane	57-74-9	0.0005
Dalapon	75-99-0	0.200
Dibromochloropropane (DBCP)	96-12-8	0.0002
Dinoseb	88-85-7	0.007
Diquat	85-00-7	0.02
Endothall	145-73-3	0.1
Endrin	72-20-8	0.0002
Ethylene dibromide (EDB)	106-93-4	0.00005
Glyphosate	1071-83-6	0.7
Heptachlor	76-44-8	0.0004
Heptachlor epoxide	1024-57-3	0.0002
Lindane	58-89-9	0.0002
Methoxychlor	72-43-5	0.04
Oxamyl	23135-22-0	0.2
Pentachlorophenol	87-86-5	0.001
Picloram	1918-02-1	0.5
Simazine	122-34-9	0.001
Toxaphene	8001-35-2	0.003
2,4-D (2,4-Dichlorophenoxyacetic acid)	94-75-7	0.070
2,4,5-TP (Silvex)	93-72-1	0.050

TABLE 6
NEW JERSEY DRINKING WATER STANDARDS
(N.J.A.C. 7:10-1 through 16.12, 1989)
ORGANIC CHEMICALS
All units are milligrams per liter (mg/l)

VOLATILE ORGANIC CHEMICALS

CHEMICAL	CAS No.	MCL
Benzene	71-43-2	0.001
Carbon tetrachloride	56-23-5	0.002
meta-Dichlorobenzene (1,3)	541-73-1	0.600
ortho-Dichlorobenzene (1,2)	95-50-1	0.600
para-Dichlorobenzene (1,4)	106-46-7	0.075
1,2-Dichloroethane	107-06-2	0.002
1,1-Dichloroethylene	75-35-4	0.002
1,2-Dichloroethylene (cis)	156-59-2	0.010
1,2-Dichloroethylene (trans)	156-60-5	0.010
Dichloromethane (Methylene chloride)	75-09-2	0.002
1,2-Dichloropropane	78-87-5	0.005
Ethylbenzene	100-41-4	0.700
Monochlorobenzene	108-90-7	0.004
Styrene	100-42-5	0.100
Tetrachloroethylene (TCA)	127-18-4	0.001
Toluene	108-88-3	1.00
Trichlorobenzene(s)	120-82-1	0.008
1,1,1-Trichloroethane	71-55-6	0.026
1,1,2-Trichloroethane	79-00-5	0.005
Trichloroethylene (TCE)	79-01-6	0.001
Vinyl Chloride	75-01-4	0.002
Xylene(s)	1330-20-7	0.044

TABLE 5

NATIONAL SECONDA Y DRINKING WATER REGULATIONS

(Title 4 CFR - Part 143, 1992)

l units are in milligram: per liter (mg/l), unless noted otherwise

CONTAMINAN	SMCL
Aluminum*	0.05 to 0.2
Chloride	250.0
Color	15 color units
Copper	1.0
Corrosivity	non-corrosive
Fluoride	2.0
Foaming agents	0.5
Iron	0.3
Manganese	0.05
Odor	3 threshold odor number
pH	6.5 - 8.5 units
Silver*	0.1
Sulfate	250.0
Total Dissolved S. s (TDS)	500.0
Zinc	5.0

SMCL = Secondar laximum Contaminant Level

*Final value. Publis d in *Federal Register* Jan. 30, 1991.

NATIONAL PRIMARY DRINKING WATER REGULATIONS
(Title 40 CFR - Part 141, 1992)
RADIONUCLIDES
All units are picocuries per liter (pCi/l), unless noted otherwise

CONTAMINANT	MCL	PROPOSED MCL	PROPOSED MCLG
Radon 222‡	-	300	zero
Radium 226/228 (Total)	5	-	zero
Radium 226‡	-	20	zero
Radium 228‡	-	20	zero
Uranium‡	-	20 ug/l (30 pCi/l)	zero
Beta Particle & Photon emitters (excluding Ra-228)‡	4 mrem/yr	4 mrem ede\yr	zero
Gross Alpha‡	15	15	zero

Picocurie (pCi) - means the quantity of radioactive material producing 2.22 nuclear transformations per minute.

Rem - means the unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system. A "millirem (mrem)" is 1/1000 of a rem.

‡Proposed value. Published in *Federal Register*, July 18, 1991. Tentative date for promulgation is October 1991.

TABLE 4
NATIONAL PRIMARY DRINKING WATER REGULATIONS
(Title 40 CFR - Part 141, 1992)
MICROBIOLOGICAL CONTAMINANTS & TURBIDITY

CONTAMINANT	MCL	MCLG
Total coliforms′	The MCL is based on the presence or absence of total coliforms in a sample, rather than coliform density. For a system which collects at least 40 samples/month, if no more than 5.0 % of the samples collected during a month are total coliform-positive, the system is in compliance with the MCL for total coliform. For a system which collects fewer than 40 samples/month, if no more than one sample collected during a month is total coliform-positive, the system is in compliance with the MCL for total coliforms.	zero
Giardia lamblia, Viruses, *Legionella*, & Heterotrophic plate count bacteria′:	Treatment technique requirements in lieu of MCLs. See 40 CFR 141 Effective 12/31/90 subpart H - Filtration & Disinfection; also Federal Register Vol. 54, No. 124, Thursday June 29, 1989.	zero
Turbidity′	Performance standard 0.5 Nephelometric Turbidity Unit (NTU) -1.0 NTU	-

*f*Final value. Published in *Federal Register*, June 29, 1989.

TABLE 2
NATIONAL PRIMARY DRINKING WATER REGULATIONS
(Title 40 CFR - Part 141, 1992)
INORGANIC CHEMICALS
All units are milligrams per liter (mg/l)

CHEMICAL	CAS #	MCL	MCLG
Antimony*	7440-36-0	0.006	0.006
Arsenic+	7440-38-2	0.05	-
Asbestos# (fibers/l > 10um)	1332-21-4	7 MFL	7 MFL
Barium†	7440-39-3	2.0	2.0
Beryllium*	7440-41-7	0.004	0.004
Cadmium#	7440-43-9	0.005	0.005
Chromium (total)#	7440-47-3	0.100	0.100
Copper°	7440-50-8	TT	1.300
Cyanide*	57-12-5	0.200	0.200
Fluoride‡	-	4.0	4.0
Lead (at tap)°	7439-92-1	TT	zero
Mercury#	7439-97-6	0.002	0.002
Nickel*	7440-02-0	0.1	0.1
Nitrate (as N)#	-	10.0	10.0
Nitrite (as N)#	-	1.0	1.0
Total Nitrate+Nitrite (as N)#	14797-55-8	10.0	10.0
Selenium#	7782-49-2	0.05	0.05
Sulfate*	-	deferred	deferred
Thallium*	7440-28-0	0.002	0.0005

MFL - Million Fibers per Liter
TT - Treatment Technique - Copper - action level 1.3 mg/l
Lead - action level 0.015 mg/l

+Final value. Published in *Federal Register*, Nov. 13, 1985.
‡Final value. Published in *Federal Register*, April 2, 1986.
#Final value. Published in *Federal Register*, Jan. 30, 1991.
°Final value. Published in *Federal Register*, June 7, 1991.
†Final value. Published in *Federal Register*, July 1, 1991.
*Final value. Published in *Federal Register*, July 17, 1992.

TABLE 1 (CONTINUED)

SYNTHETIC ORGANIC CHEMICALS

CHEMICAL	CAS No.	MCL	MCLG
Benzo(a)pyrene*	50-32-8	0.0002	zero
Di(2-ethylhexyl)adipate*	103-23-1	0.4	0.4
Di(2-ethylhexyl)phthalate*	117-81-7	0.006	zero
Hexachlorobenzene*	118-74-1	0.001	zero
Hexachlorocyclopentadiene (HEX)*	77-47-4	0.05	0.05
PCBs (as decachlorobiphenyl)#	1336-36-3	0.0005	zero
2,3,7,8-TCDD (Dioxin)*	1746-01-6	3E-08	zero

TREATMENT TECHNIQUES

CHEMICAL	CAS No.	MCL	MCLG
Acrylamide#	79-06-1	TT	zero
Epichlorohydrin#	106-89-8	TT	zero

DISINFECTION BY-PRODUCTS

CHEMICAL	MCL	MCLG
Total Trihalomethanes (TTHMs)‡	0.10	-

TT - Treatment Technique
Total Trihalomethanes (TTHMs) - the sum of the concentrations of bromodichloromethane, tribromomethane (bromoform), dibromochloromethane, and trichloromethane (chloroform).
‡Final value. Published in *Federal Register*, Nov. 29, 1979.
+Final value. Published in *Federal Register*, July 8, 1987.
#Final value. Published in *Federal Register*, Jan. 30, 1991.
†Final value. Published in *Federal Register*, July 1, 1991.
*Final value. Published in *Federal Register*, July 17, 1992.

TABLE 1 (CONTINUED)

PESTICIDES

CHEMICAL	CAS No.	MCL	MCLG
Alachlor*	15972-60-8	0.002	zero
Aldicarb†	116-06-3	0.003	0.001
Aldicarb sulfone†	1646-88-4	0.002	0.001
Aldicarb sulfoxide†	1646-87-3	0.004	0.001
Atrazine*	1912-24-9	0.003	0.003
Carbofuran*	1563-66-2	0.04	0.04
Chlordane*	57-74-9	0.002	zero
Dalapon*	75-99-0	0.2	0.2
Dibromochloropropane(DBCP)*	96-12-8	0.0002	zero
Dinoseb*	88-85-7	0.007	0.007
Diquat*	85-00-7	0.020	0.02
Endothall*	145-73-3	0.1	0.1
Endrin*	72-20-8	0.002	0.002
Ethylene dibromide(EDB)*	106-93-4	0.00005	zero
Glyphosate*	1071-83-6	0.7	0.7
Heptachlor*	76-44-8	0.0004	zero
Heptachlor epoxide*	1024-57-3	0.0002	zero
Lindane*	58-89-9	0.0002	0.0002
Methoxychlor*	72-43-5	0.04	0.04
Oxamyl(Vydate)*	23135-22-0	0.2	0.2
Pentachlorophenol†	87-86-5	0.001	zero
Picloram*	1918-02-1	0.5	0.5
Simazine*	122-34-9	0.004	0.004
Toxaphene*	8001-35-2	0.003	zero
2,4-Dichlorophenoxypropionic acid*	94-75-7	0.07	0.07
2,4,5-TP(Silvex)*	93-72-1	0.05	0.05

TABLE 1

NATIONAL PRIMARY DRINKING WATER REGULATIONS
(Title 40 CFR - Part 141, 1992)
ORGANIC CHEMICALS
All units are milligrams per liter (mg/l)

VOLATILE ORGANIC CHEMICALS

CHEMICAL	CAS No.	MCL	MCLG
Benzene*	71-43-2	0.005	zero
Carbon tetrachloride*	56-23-5	0.005	zero
ortho-Dichlorobenzene (1,2)#	95-50-1	0.6	0.6
para-Dichlorobenzene (1,4)*	106-46-7	0.075	0.075
1,2-Dichloroethane*	107-06-2	0.005	zero
1,1-Dichloroethylene*	75-35-4	0.007	0.007
cis-1,2-Dichloroethylene#	156-59-2	0.07	0.07
trans-1,2-Dichloroethylene#	156-60-5	0.1	0.1
Dichloromethane* (Methylene chloride)	75-09-2	0.005	zero
1,2-Dichloropropane#	78-87-5	0.005	zero
Ethylbenzene#	100-41-4	0.7	0.7
Monochlorobenzene#	108-90-7	0.100	0.1
Styrene#	100-42-5	0.1	0.1
Tetrachloroethylene# (PCE)	127-18-4	0.005	zero
Toluene#	108-88-3	1.0	1.0
1,2,4-Trichlorobenzene*	120-82-1	0.07	0.07
1,1,1-Trichloroethane*	71-55-6	0.2	0.2
1,1,2-Trichloroethane*	79-00-5	0.005	0.003
Trichloroethylene (TCE)*	79-01-6	0.005	zero
Vinyl chloride*	75-01-4	0.002	zero
Xylenes (total)#	1330-20-7	10.0	10.0

REGION II DRINKING AND GROUND WATER REGULATIONS
(As of May 1993)

LIST OF TABLES

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: JUL 20 1993

SUBJECT: Region II Drinking and Ground Water Standards Update

FROM: Dore LaPosta, Chief
Ground Water Management Section

TO: Addressees

Attached is an updated revised listing of tables of Drinking and Ground Water Standards for Region II. These tables replace the previous ones that were attached to my March 1992 memo of Federal and State MCL Tables update. In this new set of tables, we have included the New Jersey Ground Water Quality Standards, the NYSDEC Water Quality Regulations for Ground Waters, and the Commonwealth of Puerto Rico Water Quality Standards Regulation. Please note that the New Jersey Proposed Soil and Ground Water Cleanup Standards that were in the our previous tables have been removed and are no longer in use.

Please distribute this information to the appropriate people.

If you have any questions or comments, please call me or Manuel Arbizu of my staff at extension 5718. Please let us know if you would like us to put these tables in the LAN.

Attachments

Addressees

Robert McKnight
Charles Tenerella
Donald Lynch
Kim O'Connell
Janet Feldstein
Damien Duda
Joel Singerman
Dennis Santella
Pat Evangelista
Kevin Lynch
Melvin Hauptman
Robert Wing
Nicki Di Forte
Ray Basso
Doug Blazey
Delmar Karlen
Eric Schaaf
Warren Llewellyn
Ruth Izraeli
Galeena Tsoukanova
Linda Ross

cc: Walt Andrews - WMD
Paul Molinari - WMD

(c) The following maximum contaminant levels for synthetic organic contaminants apply to community water systems and non-transient, non-community water systems:

	CAS No.	Contaminant	MCL (mg/l)
(1)	15972-60-8	Alachlor	0.002
(2)	116-06-3	Aldicarb	0.003
(3)	1646-87-3	Aldicarb sulfoxide	0.004
(4)	1646-87-4	Aldicarb sulfone	0.002
(5)	1912-24-9	Atrazine	0.003
(6)	1563-66-2	Carbofuran	0.04
(7)	57-74-9	Chlordane	0.002
(8)	96-12-8	Dibromochloropropane	0.0002
(9)	94-75-7	2,4-D	0.07
(10)	106-93-4	Ethylene dibromide	0.00005
(11)	76-44-8	Heptachlor	0.0004
(12)	1024-57-3	Heptachlor epoxide	0.0002
(13)	58-89-9	Lindane	0.0002
(14)	72-43-5	Methoxychlor	0.04
(15)	1336-36-3	Polychlorinated biphenyls.	0.0005
(16)	87-86-5	Pentachlorophenol	0.001
(17)	8001-35-2	Toxaphene	0.003
(18)	93-72-1	2,4,5-TP	0.05
(19)	50-32-8	Benzo[a]pyrene	0.0002
(20)	75-99-0	Dalapon	0.2
(21)	103-23-1	Di(2-ethylhexyl) adipate.	0.4
(22)	117-81-7	Di(2-ethylhexyl) phthalate.	0.006
(23)	88-85-7	Dinoseb	0.007
(24)	85-00-7	Diquat	0.02
(25)	145-73-3	Endothall	0.1
(26)	72-20-8	Endrin	0.002
(27)	1071-53-6	Glyphosate	0.7
(28)	118-74-1	Hexacholorbenzene	0.001
(29)	77-47-4	Hexachlorocyclopentadiene.	0.05
(30)	23135-22-0	Oxamyl (Vydate)	0.2
(31)	1918-02-1	Picloram	0.5
(32)	122-34-9	Simazine	0.004
(33)	1746-01-6	2,3,7,8-TCDD (Dioxin)	3 x 10⁻⁸

[56 FR 3593, Jan. 30, 1991, as amended at 56 FR 30280, July 1, 1991; 57 FR 31846, July 17, 1992; 59 FR 34324, July 1, 1994]

BAT for Organic Contaminants Listed in Sec. 141.61 (a) and (c

CAS No.	Contaminant
15972-60-8	Alachlor
116-06-3	Aldicarb
1646-88-4	Aldicarb sulfone
1646-87-3	Aldicarb sulfoxide
1912-24-9	Atrazine
71-43-2	Benzene
50-32-8	Benzo[a]pyrene
1563-66-2	Carbofuran
56-23-5	Carbon tetrachloride
57-74-9	Chlordane
75-99-0	Dalapon
94-75-7	2,4-D
103-23-1	Di (2-ethylhexyl) adipate
117-81-7	Di (2-ethylhexyl) phthalate
96-12-8	Dibromochloropropane (DBCP)
95-50-1	o-Dichlorobenzene
106-46-7	para-Dichlorobenzene
107-06-2	1,2-Dichloroethane
75-35-4	1,1-Dichloroethylene
156-59-2	cis-1,2-Dichloroethylene
156-60-5	trans-1,2-Dichloroethylene
75-09-2	Dichloromethane
78-87-5	1,2-Dichloropropane
88-85-7	Dinoseb
85-00-7	Diquat
145-73-3	Endothall
72-20-8	Endrin
100-41-4	Ethylbenzene
106-93-4	Ethylene Dibromide (EDB)
1071-83-6	Glyphosate
76-44-8	Heptachlor
1024-57-3	Heptachlor epoxide
118-74-1	Hexachlorobenzene
77-47-3	Hexachlorocyclopentadiene
58-89-9	Lindane
72-43-5	Methoxychlor
108-90-7	Monochlorobenzene
23135-22-0	Oxamyl (Vydate)
87-86-5	Pentachlorophenol
1918-02-1	Picloram
1336-36-3	Polychlorinated biphenyls (PCB)
122-34-9	Simazine
100-42-5	Styrene
1746-01-6	2,3,7,8-TCDD (Dioxin)
127-18-4	Tetrachloroethylene
108-88-3	Toluene
8001-35-2	Toxaphene
93-72-1	2,4,5-TP (Silvex)
120-82-1	1,2,4-Trichlorobenzene
71-55-6	1,1,1-Trichloroethane
79-00-5	1,1,2-Trichloroethane
79-01-6	Trichloroethylene
75-01-4	Vinyl chloride
1330-20-7	Xylene

Electronic Code of Federal Regulations

e-CFR™

THIS DATA CURRENT AS OF THE FEDERAL REGISTER DATED JUNE 6, 2002

40 CFR - CHAPTER I - PART 141

View Part

§ 141.61 Maximum contaminant levels for organic contaminants.

(a) The following maximum contaminant levels for organic contaminants apply to community and non-transient, non-community water systems.

CAS No.	Contaminant	MCL (mg/l)
(1) 75-01-4	Vinyl chloride	0.002
(2) 71-43-2	Benzene	0.005
(3) 56-23-5	Carbon tetrachloride	0.005
(4) 107-06-2	1,2-Dichloroethane	0.005
(5) 79-01-6	Trichloroethylene	0.005
(6) 106-46-7	para-Dichlorobenzene	0.075
(7) 75-35-4	1,1-Dichloroethylene	0.007
(8) 71-55-6	1,1,1-Trichloroethane	0.2
(9) 156-59-2	cis-1,2-Dichloroethylene	0.07
(10) 78-87-5	1,2-Dichloropropane	0.005
(11) 100-41-4	Ethylbenzene	0.7
(12) 108-90-7	Monochlorobenzene	0.1
(13) 95-50-1	o-Dichlorobenzene	0.6
(14) 100-42-5	Styrene	0.1
(15) 127-18-4	Tetrachloroethylene	0.005
(16) 108-88-3	Toluene	1
(17) 156-60-5	trans-1,2-Dichloroethylene	0.1
(18) 1330-20-7	Xylenes (total)	10
(19) 75-09-2	Dichloromethane	0.005
(20) 120-82-1	1,2,4-Trichlorobenzene	.07
(21) 79-00-5	1,1,2-Trichloroethane	.005

(b) The Administrator, pursuant to section 1412 of the Act, hereby identifies as indicated in the Table below granular activated carbon (GAC), packed tower aeration (PTA), or oxidation (OX) as the best technology treatment technique, or other means available for achieving compliance with the maximum contaminant level for organic contaminants identified in paragraphs (a) and (c) of this section:

12 = Oxidation/Filtration

(d) The Administrator, pursuant to section 1412 of the Act, hereby identifies in the following table the affordable technology, treatment technique, or other means available to systems serving 10,000 persons or fewer for achieving compliance with the maximum contaminant level for arsenic:

Small System Compliance Technologies (SSCTs)\1\ for Arsenic\2\

Small system compliance technology	Affordable for listed small system categories\3\
Activated Alumina (centralized)	All size categories.
Activated Alumina (Point-of-Use)\4\	All size categories.
Coagulation/Filtration\5\	501-3,300, 3,301-10,000.
Coagulation-assisted Microfiltration	501-3,300, 3,301-10,000.
Electrodialysis reversal\6\	501-3,300, 3,301-10,000.
Enhanced coagulation/filtration	All size categories
Enhanced lime softening (pH> 10.5)	All size categories.
Ion Exchange	All size categories.
Lime Softening\5\	501-3,300, 3,301-10,000.
Oxidation/Filtration\7\	All size categories.
Reverse Osmosis (centralized)\6\	501-3,300, 3,301-10,000.
Reverse Osmosis (Point-of-Use)\4\	All size categories.

\1\Section 1412(b)(4)(E)(ii) of SDWA specifies that SSCTs must be affordable and technically feasible for small systems.

\2\SSCTs for Arsenic V. Pre-oxidation may be required to convert Arsenic III to Arsenic V.

\3\The Act (ibid.) specifies three categories of small systems: (i) those serving 25 or more, but fewer than 501, (ii) those serving more than 500, but fewer than 3,301, and (iii) those serving more than 3,300, but fewer than 10,001.

\4\When POU or POE devices are used for compliance, programs to ensure proper long-term operation, maintenance, and monitoring must be provided by the water system to ensure adequate performance.

\5\Unlikely to be installed solely for arsenic removal. May require pH adjustment to optimal range if high removals are needed.

\6\Technologies reject a large volume of water--may not be appropriate for areas where water quantity may be an issue.

\7\To obtain high removals, iron to arsenic ratio must be at least 20:1.

[56 FR 3594, Jan. 30, 1991, as amended at 56 FR 30280, July 1, 1991; 57 FR 31847, July 17, 1992; 59 FR 34325, July 1, 1994; 60 FR 33932, June 29, 1995; 66 FR 7063, Jan. 22, 2001]

BAT FOR INORGANIC COMPOUNDS LISTED IN SECTION 141.62(b)

Chemical Name	BAT(s)
Antimony	2,7
Arsenic\4\	1, 2, 5, 6, 7, 9, 12\5\
Asbestos	2,3,8
Barium	5,6,7,9
Beryllium	1,2,5,6,7
Cadmium	2,5,6,7
Chromium	2,5,6\2\,7
Cyanide	5,7,10
Mercury	2\1\,4,6\1\,7\1\
Nickel	5,6,7
Nitrate	5,7,9
Nitrite	5,7
Selenium	1,2\3\,6,7,9
Thallium	1,5

\1\BAT only if influent Hg concentrations <ls-thn-eq>10μg/1.
\2\BAT for Chromium III only.
\3\BAT for Selenium IV only.
\4\BATs for Arsenic V. Pre-oxidation may be required to convert Arsenic III to Arsenic V.
\5\To obtain high removals, iron to arsenic ratio must be at least 20:1.

Key to BATS in Table

1=Activated Alumina

2 = Coagulation/Filtration (not BAT for systems < 500 service connections)

2=Coagulation/Filtration

3=Direct and Diatomite Filtration

4=Granular Activated Carbon

5=Ion Exchange

6 = Lime Softening (not BAT for systems < 500 service connections)

7=Reverse Osmosis

8=Corrosion Control

9=Electrodialysis

10=Chlorine

11=Ultraviolet

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40 CFR - CHAPTER I - PART 141

View Part

§ 141.62 Maximum contaminant levels for inorganic contaminants.

(a) [Reserved]

(b) The maximum contaminant levels for inorganic contaminants specified in paragraphs (b) (2)-(6), (b)(10), and (b) (11)-(16) of this section apply to community water systems and non-transient, non-community water systems. The maximum contaminant level specified in paragraph (b)(1) of this section only applies to community water systems. The maximum contaminant levels specified in (b)(7), (b)(8), and (b)(9) of this section apply to community water systems; non-transient, non-community water systems; and transient non-community water systems.

Contaminant	MCL (mg/l)
(1) Fluoride	4.0
(2) Asbestos	7 Million Fibers/liter (longer than 10 μm).
(3) Barium	2
(4) Cadmium	0.005
(5) Chromium	0.1
(6) Mercury	0.002
(7) Nitrate	10 (as Nitrogen)
(8) Nitrite	1 (as Nitrogen)
(9) Total Nitrate and Nitrite	10 (as Nitrogen)
(10) Selenium	0.05
(11) Antimony	0.006
(12) Beryllium	0.004
(13) Cyanide (as free Cyanide)	0.2
(14) [Reserved]	
(15) Thallium	0.002
(16) Arsenic	0.01

(c) The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment technique, or other means available for achieving compliance with the maximum contaminant levels for inorganic contaminants identified in paragraph (b) of this section, except fluoride:

National Secondary Drinking Water Regulations

National Secondary Drinking Water Regulations (NSDWRs or secondary standards) are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. EPA recommends secondary standards to water systems but does not require systems to comply. However, states may choose to adopt them as enforceable standards. For more information, read Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals.

Contaminant	Secondary Standard
Aluminum	0.05 to 0.2 mg/L
Chloride	250 mg/L
Color	15 (color units)
Copper	1.0 mg/L
Corrosivity	noncorrosive
Fluoride	2.0 mg/L
Foaming Agents	0.5 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Odor	3 threshold odor number
pH	6.5-8.5
Silver	0.10 mg/L
Sulfate	250 mg/L
Total Dissolved Solids	500 mg/L
Zinc	5 mg/L

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Last updated on Tuesday, December 31st, 2069
URL: http://www.epa.gov/ogwdw/mcl.html URL: http://www.epa.gov/ogwdw/mcl.html

TABLE 12
NEW YORK DRINKING WATER STANDARDS
(10 NYCRR Part 5, subpart 5-1, 1992)
ORGANIC CHEMICALS
All units are milligrams per liter (mg/l)

GENERAL ORGANIC CHEMICALS

PRINCIPAL ORGANIC CHEMICAL (POC)°	CAS No.	MCL
Benzene	71-43-2	0.005
Bromobenzene	108-86-1	0.005
Bromochloromethane	74-97-5	0.005
Bromomethane	74-83-9	0.005
n-butylbenzene	104-51-8	0.005
sec-butylbenzene	135-98-8	0.005
tert-butylbenzene	98-06-6	0.005
Carbon tetrachloride	56-23-5	0.005
Chloroethane	75-00-3	0.005
2-chlorotoluene	95-49-8	0.005
4-chlorotoluene	106-43-4	0.005
Dibromomethane	74-95-3	0.005
o-Dichlorobenzene (1,2)	95-50-1	0.005
m-Dichlorobenzene (1,3)	541-73-1	0.005
p-Dichlorobenzene (1,4)	106-46-7	0.005
Dichlorodifluoromethane	75-71-8	0.005
1,1-Dichloroethane	75-34-3	0.005
1,2-Dichloroethane	107-06-2	0.005
1,1-Dichloroethylene	75-35-4	0.005
cis-1,2-Dichloroethylene	156-59-2	0.005
trans-1,2-Dichloroethylene	152-60-5	0.005
Dichloromethane (Methylene chloride)	75-09-2	0.005
1,2-Dichloropropane	78-87-5	0.005
1,3-Dichloropropane	142-28-9	0.005
2,2-Dichloropropane	594-20-7	0.005
1,1-Dichloropropene	563-58-6	0.005
cis-1,3-Dichloropropene	10061-01-5	0.005
trans-1,3-Dichloropropene	10061-02-6	0.005
Ethylbenzene	100-41-4	0.005
Hexachlorobutadiene	87-68-3	0.005
Isopropylbenzene	98-82-8	0.005

TABLE 12 (CONTINUED)

PRINCIPAL ORGANIC CONTAMINANT (POC)°	CAS No.	MCL
p-Isopropyltoluene	99-85-6	0.005
Monochlorobenzene	108-90-7	0.005
n-Propylbenzene	103-65-1	0.005
Styrene	100-42-5	0.005
1,1,1,2-Tetrachloroethane	630-20-6	0.005
1,1,2,2-Tetrachloroethane	79-34-5	0.005
Tetrachloroethylene	127-18-4	0.005
Toluene	108-88-3	0.005
1,2,3-Trichlorobenzene	87-61-6	0.005
1,2,4-Trichlorobenzene	120-82-1	0.005
1,1,1-Trichloroethane	71-55-6	0.005
1,1,2-Trichloroethane	79-00-5	0.005
Trichloroethylene (TCE)	79-01-6	0.005
Trichlorofluoromethane	75-69-4	0.005
1,2,3-Trichloropropane	96-18-4	0.005
1,2,4-Trimethylbenzene	95-63-6	0.005
1,3,5-Trimethylbenzene	108-67-8	0.005
Xylenes (total)	1330-20-7	0.005

UNSPECIFIED ORGANIC CHEMICAL (UOC)	MCL
Any organic chemical compound not otherwise specified in Chapter I of the New York Sanitary Code Part 5, Subpart 5-1.	0.05

TOTAL POCs and UOCs	MCL
. • •	0.1

TABLE 12 (CONTINUED)

SPECIFIC ORGANIC CHEMICALS

CHEMICAL	CAS No.	MCL
Alachlor	15972-60-8	0.002
Aldicarb	116-06-3	0.003
Aldicarb sulfone	1646-88-4	0.002
Aldicarb sulfoxide	1646-87-3	0.004
Atrazine	1612-24-9	0.003
Carbofuran	1563-66-2	0.015
Chlordane	57-74-9	0.002
Dibromochloropropane (DPCP)	96-12-8	0.0002
Endrin	72-20-8	0.0002
Ethylene dibromide (EDB)	106-93-4	0.00005
Heptachlor	76-44-8	0.0004
Heptachlor epoxide	1024-57-3	0.0002
Lindane	58-89-9	0.0002
Methoxychlor	72-43-5	0.04
Pentachlorophenol	87-86-5	0.001
Polychlorinated biphenyls (PCBs)	1336-36-3	0.0005
Toxaphene	8001-35-2	0.003
2,4-D	94-75-7	0.050
2,4,5-TP (Silvex)	93-72-1	0.010
Vinyl Chloride	9003-22-9	0.002

TRIHALOMETHANES

TOTAL TRIHALOMETHANES	MCL
The sum of the concentrations of bromodichloromethane, tribromomethane (bromoform), dibromochloromethane, and trichloromethane (chloroform).	0.10

°Principal organic contaminant (POC) means any organic chemical compound belonging to the following classes, except for Total Trihalomethanes, vinyl chloride, and regulated Pesticides:

1) Halogen alkane
2) Halogenated ether
3) Halobenzenes and substituted halobenzenes
4) Benzene and alkyl- or nitrogen-substituted benzenes
5) Substituted, unsaturated hydrocarbons
6) Halogenated nonaromatic cyclic hydrocarbons

TABLE 13
NEW YORK DRINKING WATER STANDARDS
(10 NYCRR Part 5, subpart 5-1, 1992)
INORGANIC CHEMICALS
All units are milligrams per liter (mg/l)

CHEMICAL	CAS No.	MCL
Arsenic	7440-38-2	0.05
Asbestos (Longer than 10 microns)	1332-21-4	7.0 MFL
Barium	7440-39-3	2.00
Cadmium	7440-43-9	0.005
Chromium	7440-47-3	0.10
Fluoride	-	2.2
Nitrate (as N)	-	10.0
Nitrite (as N)	-	1.0
Total Nitrate/Nitrite	14797-55-8	10.0
Lead	7439-92-1	0.05
Mercury	7439-97-6	0.002
Selenium	7782-49-2	0.01
Silver	7440-22-4	0.05

MFL - Million Fibers per Liter

TABLE 14
NEW YORK DRINKING WATER STANDARDS
(10 NYCRR Part 5, subpart 5-1, 1992)
RADIONUCLIDES
All units are in picocuries per liter (pCi/l), unless noted otherwise

Contaminant	MCL
Combined radium 226 and radium 228	5
Gross alpha activity (including radium 226 but excluding radon and uranium)	15
Beta particle and photon radioactivity from manmade radionuclides	Four millirems per year as the annual dose equivalent to the total body or any internal organ. The department shall determine the concentration capable of producing four millirems per year.

TABLE 15
NEW YORK DRINKING WATER STANDARDS
(10 NYCRR Part 5, subpart 5-1, 1992)
MICROBIOLOGICAL CONTAMINANTS & TURBIDITY

CONTAMINANT	MCL	DETERMINATION OF MCL VIOLATION
COLIFORM BACTERIA	Any positive sample	A violation occurs at systems collecting 40 or more samples per month when more than 5.0 percent of the total coliform samples are positive. A violation occurs at systems collecting less than 40 samples per month when two or more samples are total coliform positive.
E. coli	Any positive sample	A violation occurs when a total coliform positive sample is positive for Escherichia coli (E. coli) and a repeat total coliform sample is positive or when a total coliform positive sample is negative for Escherichia coli (E. coli) but a repeat total coliform sample is positive and the sample is also positive for Escherichia coli.
Giardia lamblia, Viruses, Legionella, & Heterotrophic plate count bacteria:	Treatment technique requirements in lieu of MCLs. New York State filtration rule in effect 3/31/91.	—
Entry point turbidity (surface water only)	1 Nephelometric Turbidity Units (NTUs) (Monthly average) 5 NTUs (Two-consecutive-day average)	A violation occurs when the average of all daily entry point analyses for the month exceeds the MCL rounded off to the nearest whole number. A violation occurs when the aberage of two consecutive daily entry point analyses exceeds the MCL rounded off to the nearest whole number.
Distribution System Turbidity	5 NTUs (Monthly average)	A violation occurs when the monthly average of the results of all distribution samples collected in any calendar month exceeds the MCL rounded off to the nearest whole number.

TABLE 16
NEW YORK SECONDARY MAXIMUM CONTAMINANT LEVELS
(10 NYCRR Part 5, subpart 5-1, 1992)
All units are milligrams per liter (mg/l), unless noted otherwise

CHEMICAL	SMCL
Chloride	250.0
Copper	1.0
Corrosivity	Noncorrosive
Iron*	0.3
Manganese*	0.3
Sodium#	No Designated Limits
Sulfate	250.0
Zinc	5.0
Color	15 units
Odor	3 units

*If iron and manganese are present, the total concentration of both should not exceed 0.5 mg/l. Higher levels may be allowed when justified by the supplier of water.

#Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.

TABLE 17
NYSDEC CLASS GA GROUND WATER QUALITY AND EFFLUENT STANDARDS
(6 NYCRR Part 703.5 and 703.6, 1991)
All units are mg/l unless stated otherwise

PARAMETER	CAS No.	WATER QUALITY STD.	EFFLUENT STD.
Alachlor	15972-60-8	0.035	0.035
Aldicarb & Methomyl	116-06-3; 16752-77-5	0.00035	0.00035
Aldrin	309-00-2	ND	ND
Aluminum	7429-90-5	-	2.0
Ametryn	834-12-8	0.050	-
Aminocresols	95-84-1; 2835-95-2; 2835-99-6	0.001	-
Ammonia and Ammonium ($NH_3 + NH_4^+$ as N)	7664-41-7; 12125-02-9	2.0	-
Arsenic	7440-38-2	0.025	0.050
Atrazine	1912-24-9	0.0075	0.0075
Azinphosmethyl	86-50-0	0.0044	0.0044
Barium	7440-39-3	1.0	2.0
Benefin	1861-40-1	0.035	0.035
Benzene	71-43-2	0.0007	0.0007
Benzo(a)pyrene	50-32-8	ND	ND
Bis(2-chloroethyl)ether	111-44-4	0.001	0.001
Bis(2-ethyhexyl)phthalate	117-81-7	0.050	4.2
Boron	7440-42-8	1.0	-
Bromacil	314-40-9	0.0044	0.0044
Butachlor	23184-66-9	0.0035	0.0035
Butylate	2008-41-5	0.050	-
Cadmium	7440-43-9	0.010	0.020
Captan	133-06-2	0.018	0.018
Carbaryl	63-25-2	0.029	0.029
Carbon tetrachloride	56-23-5	0.005	0.005
Carboxin	5234-68-4	0.050	-
Chloramben	NA	0.050[1]	0.088[1]
Chlordane	57-74-9	0.0001	0.0001

TABLE 17 (CONTINUED)

PARAMETER	CAS No.	WATER QUALITY STD.	EFFLUENT STD.
Chloride	7647-14-5	250.0	500.0
Chloroform	67-66-3	0.007	0.007
Chromium	NA	0.050	-
Chromium (hexavalent)	NA	0.050	0.1
Copper	NA	0.2	1.0
Cyanide	NA	0.1	0.4
Dalapon	NA	0.050	-
DDT, DDD, DDE	50-29-3; 72-54-8; 72-55-9	ND	ND
Diazinon	333-41-5	0.0007	0.0007
Di-n-butylphthalate	84-74-2	0.050	0.770
Dicamba	1918-00-9	0.00044	0.00044
(1,4-) and (1,2-) Dichlorobenzenes	106-46-7; 541-73-1	0.0047	0.0047
2,4-Dichlorophenoxyacetic acid	94-75-1	0.0044	0.0044
Dieldrin	60-57-1	ND	ND
Dimethyl tetrachloro-terephthalate	1861-32-1	0.050	-
Diphenamid	957-51-7	0.050	-
Diphenylhydrazines	122-66-7; 530-50-7	ND	ND
Endrin	72-20-8	ND	ND
Ethylenethiourea	96-45-7	ND	ND
Ferbam	14484-64-1	0.0042	0.0042
Fluometuron	2164-17-2	0.050	-
Fluoride	NA	1.5	3.0
Foaming Agents	NA	0.5	1.0[4]
Folpet	133-07-3	0.050	0.056
Gross Alpha Radiation	NA	15 pCi/l	-

TABLE 17 (CONTINUED)

PARAMETER	CAS No.	WATER QUALITY STD.	EFFLUENT STD.
Gross Beta Radiation	NA	1000 pCi/l	-
Heptachlor and Heptachlor epoxide	76-44-8; 1024-57-3	ND	ND
Hexachlorobenzene	118-74-1	0.00035	0.00035
Hexachlorocyclohexanes	58-89-9; 319-84-6; 319-85-7; 319-86-8; 6108-10-7;608-73-1	ND	ND
Hexachlorophene	70-30-4	-	0.007
Hexazinone	51235-04-2	0.050	-
Iron	NA	0.300	0.6
Iron and Manganese	NA	0.500	-
Kepone	143-50-0	ND	ND
Lead	NA	0.025	0.050
Malathion	121-75-5	0.0070	0.007
Mancozeb	8018-01-7	0.0018	0.0018
Maneb	12427-38-2	0.0018	0.0018
Manganese	NA	0.300	0.6[5]
Mercury	NA	0.002	0.004
Methoxychlor	72-43-5	0.035	0.035
2-Methyl-4-chlorophenoxyacetic acid	94-74-6	0.00044	0.00044
Methyl methacrylate	80-62-6	0.050	0.7
Metribuzin	21087-64-9	0.050	-
Nabam	142-59-6	0.0018	0.0018
Nickel	NA	-	2.0
Nitralin	4726-14-1	0.035	0.035
Nitrate (expressed as N)	NA	-	20.0
Nitrate and Nitrite (expressed as N)	NA	10.0	-
Nitrilotriacetic acid	NA	0.003[2]	0.003[2]
Nitrite	NA	10.0	-
Oil and Grease	NA	-	15.0

TABLE 17 (CONTINUED)

PARAMETER	CAS No.	WATER QUALITY STD.	EFFLUENT STD.
Oxamyl	23135-22-0	0.050	-
Paraquat	4685-14-7	0.0030	0.003
Parathion and Methyl parathion	56-38-2; 298-00-0	0.0015	0.0015
Pentachloronitrobenzene	82-68-8	ND	ND
Pentachlorophenol	87-86-5	0.001	-
pH	NA	-	See Note 6
Phenol	108-95-2	0.001	-
Phenolic compounds (total phenols)	NA	0.001	0.002
Phenols, total chlorinated	NA	0.001	-
Phorate and Disulfoton	298-02-2; 298-04-4	ND	ND
Picloram	NA	0.050[1]	-
Polychlorinated biphenyls	NA	0.0001	0.0001
Principal organic contaminant	NA	0.005	-
Prometon	1610-18-0	0.050	-
Propachlor	1918-16-7	0.035	0.035
Propanil	709-98-8	0.007	0.007
Propazine	139-40-2	0.016	0.016
Propham	122-42-9	0.050	-
Radium 226	NA	3 pCi/l	-
Radium 226 & 228	NA	5 pCi/l	-
Selenium	NA	0.010	0.040
Silver	NA	0.050	0.1
Simazine	122-34-9	0.050	0.075
Sodium	NA	20.0	-
Styrene	100-42-5	0.050	0.930
Sulfate	NA	250.0	500.0
Sulfide	NA	-	1.0
Tebuthiuron	34014-18-1	0.050	-

TABLE 17 (CONTINUED)

PARAMETER	CAS No.	WATER QUALITY STD.	EFFLUENT STD.
Terbacil	5902-51-2	0.050	-
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	3.5×10^{-6}	3.5×10^{-6}
Tetrachloroterephthalic acid	2136-79-0	0.050	-
Thiram	137-26-8	0.0018	0.0018
Toxaphene	8001-35-2	ND	ND
Trichloroethylene	79-01-6	-	0.010
2,4,5-Trichlorophenoxyacetic acid	93-76-5	0.035	0.035
2,4,5-Trichlorophenoxypropionic acid	93-72-1	0.00026	0.00026
Trifluralin	1582-09-8	0.035	0.035
Uranyl ion	NA	5.0	-
Vinyl chloride	75-01-4	0.002	0.005
Zinc	NA	0.3	5.0
Zineb	12122-67-7	0.0018	0.0018
Ziram	137-30-4	0.0042	0.0042

NA = Not Available

NOTES.

[1] Includes: related forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid.

[2] Includes related forms that convert to nitrilotriacetic acid upon acidification to a pH of 2.3 or less.

[3] This standard applies to any and every individual substance that is in the principal organic contaminant classes, except any substance that has a standard for class GA waters listed elsewhere in this table. A less stringent guidance value for an individual substance may be substituted for this standard. If so determined by the Commissioner of the New York State Department of Health, pursuant to 10 NYCRR section 5-1.51(g).

[4] Foaming agents determined as methylene blue active substances (MBAS) or other tests as specified by the commissioner.

[5] Combined concentration of iron and manganese shall not exceed 1000 ug/L.

[6] pH shall not be lower than 6.5 or the pH of the natural ground water, whichever is lower, nor shall be greater than 8.5 or the pH of the natural ground water, whichever is greater.

TABLE 18
PUERTO RICO GROUND WATER QUALITY STANDARDS
(1990)
All units are milligrams per liter (mg/l)

CONTAMINANT	CAS No.	STANDARD
Arsenic	7440-36-0	0.000022
Azinphos-methyl	563-12-2	0.00001
Benzene	71-43-2	0.005
Cadmium	7440-43-9	0.005
Carbon tetrachloride	56-23-5	0.005
Chlorpyrifos	2921-88-2	0.000041
Coumaphos	56-72-4	0.00001
2,4-D	94-75-7	0.1
Demeton	8065-48-3	0.0001
Dichlorobenzenes	95-50-1; 106-46-7	0.075
1,2-Dichloroethane	67905-86-6	0.005
1,1-Dichloroethylene	75-35-4	0.007
Endosulfan	115-29-7	0.000056
Endrin	72-20-8	0.0000023
Fenthion	56-38-2	0.0004
Lead	7439-92-1	0.050
Malathion	121-75-5	0.0001
Methoxychlor	72-43-5	0.000020
Mirex	67-66-3	0.000001
Naled	300-76-5	0.0004
Parathion	56-38-2	0.000013
Pentachlorophenol	87-86-5	0.00007
Perthane	72-55-9	0.00007
Phenolic substances	-	0.001
Tetrachloroethylene	127-18-4	0.005
Toxaphene	8001-35-2	0.0000002
2,4,5-TP (Silvex)	93-72-1	0.010
1,1,1-Trichloroethane	71-55-6	0.2
Trichloroethylene	79-01-6	0.005
Vinyl chloride	75-01-4	0.002

National Primary and Secondary Drinking Water Regulations: Analytical Methods for Chemical and Microbiological Contaminants and Revisions to Laboratory Certification Requirements.

Published in Federal Register: Friday, December 1, 1999 (64 FR 67450).

Effective Dates: Except for the delayed withdrawal of some EPA methods, the actions in this rule are effective on January 3, 2000. The EPA methods will be withdrawn on June 1, 2001. This delay provides a 17-month overlap between the old and the new EPA methods.

III. Summary of Final Rule

A. This rule amends the regulations at 40 CFR Part 141 to:

1. Allow use of newer versions of 25 methods published by the American Society for Testing and Materials (ASTM). The new versions are published in the 1996 Annual Book of ASTM Standards, Vols. 11.01 and 11.02.
2. Allow use of newer versions of 54 methods published by the Standard Methods Committee. The new versions are published in Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.
3. Allow use of 13 of the 14 compliance monitoring methods published by EPA in the document, Methods for the Determination of Organic Compounds in Drinking Water - Supplement III, EPA/600/R-95/131, August 1995. These 13 methods replace the previous versions of these methods. The compliance method published in Supplement III that is not approved in today's rule is EPA Method 515.1, Rev. 4.1; the previous version, Rev. 4.0, continues to be the approved version.
4. Approve a new method for the determination of lead under the Lead and Copper Rule, Palintest Method 1001.
5. Approve six new methods for the determination of magnesium, EPA Method 200.7, ASTM D-511-93 versions A and B, and SM 3500-Mg versions B, C and E under the DBP Rule.
6. Approve two additional methods for the determination acid herbicides, EPA Method 515.3 and ASTM D5317-93.
7. Replace EPA Method 549.1 for determination of Diquat with EPA Method 549.2.
8. Approve use of a new membrane filter medium, MI (4-Methylumbelliferyl-Beta-D-galactopyranoside - Indoxyl-Beta-D-glucuronide) Agar, for the simultaneous determination of the presence of total coliforms and *E. coli.* in drinking water under the Total Coliform Rule (TCR). MI Agar is also approved for the enumeration of total coliforms in source water under the Surface Water Treatment Rule (SWTR).
9. Approve two new methods, E*Colite Test and m-ColiBlue24 Test, for the simultaneous determination of the presence of total coliforms and E. coli. in drinking water under the TCR.
10. Require that microbiological samples collected for the determination of coliforms or fecal coliforms in source water under the SWTR or for determination of heterotrophic bacteria in distribution system samples be shipped and held below 10°C.
11. Reduce the minimum incubation time for reading the Colisure Test, for determination of total coliforms, from 28 hours to 24 hours in drinking water under the TCR.
12. Require that a PE sample for chemical contaminants be successfully analyzed at least once each year using each method used to report compliance monitoring results. Additional methods used for confirmation testing, however, would not require PE proficiency testing.
13. Clarify that the acceptance limits for successfully measuring chemical analytes in a PE sample apply only if that analyte has been added to the PE sample.

14. Increase the maximum holding time from 48 hours to 14 days for chlorinated, unacidified drinking water samples collected for determination of nitrate.
15. Promote safe handling of acids by clarifying that acidification of samples for determinations of metals can be conducted in the laboratory rather than in the field and allowing use of dilute (1:1) solutions of acid to preserve samples collected for the determination of metals or nitrate (including total nitrate).
16. Provide an option for field/ laboratory determinations of alkalinity, calcium, conductivity, orthophosphate and silica in drinking water samples by any person acceptable to the State to conduct these determinations. Previously a laboratory had to be certified to conduct these determinations.

B. This rule amends the regulations at 40 CFR Part 143 to:

1. Add methods for the determination of chloride to the table of methods recommended for the optional monitoring of secondary drinking water contaminants. The new recommended methods for chloride are ASTM D 512-89B and SM 4500-Cl^- B.
2. Add methods for the determination of sulfate to the table of methods recommended for the optional monitoring of secondary drinking water contaminants. The new recommended methods for sulfate are ASTM D 516-90 and SM 4500-$SO42^-$ E.

III. Summary of Final Rule

A. This rule modifies the regulations at 40 CFR Parts 141 to:

1. Allow use of newer versions of 25 methods published by the American Society for Testing and Materials (ASTM). The new versions are published in the 1996 Annual Book of ASTM Standards, Vols. 11.01 and 11.02.
2. Allow use of newer versions of 54 methods published by the Standard Methods Committee. The new versions are published in Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.
3. Allow use of 13 of the 14 compliance monitoring methods published by EPA in the document, Methods for the Determination of Organic Compounds in Drinking Water - Supplement III, EPA-600/R-95-131, August 1995. These 13 methods replace the previous versions of these methods. The compliance method published in Supplement III that is not approved in today's rule is EPA Method 515.1, Rev. 4.1; the previous version, Rev. 4.0, continues to be the approved version.
4. Approve a new method for the determination of lead under the Lead and Copper Rule, Palintest Method 1001.
5. Approve six new methods for the determination of magnesium, EPA Method 200.7, ASTM D-511-93 versions A and B, and SM 3500-Mg versions B, C and E under the DBP Rule.
6. Approve two additional methods for the determination acid herbicides, EPA Method 515.3 and ASTM D5317-93.
7. Replace EPA Method 549.1 for determination of Diquat with EPA Method 549.2.
8. Approve use of a new membrane filter medium, 4-methylumbelliferyl-beta-D-galactopyranoside indoxyl-beta-D gluconoride (MI) agar, for the simultaneous determination of total coliforms and *E. coli.* in drinking water under the Total Coliform Rule (TCR) and source water under the Surface Water Treatment Rule (SWTR).
9. Approve two new methods for determination of total coliforms, EColite™ Test and m-ColiBlue24™ Test in source water under the SWTR.
10. Require that microbiological samples collected for the determination of coliforms or fecal coliforms in source water under the SWTR or for determination of heterotrophic bacteria in distribution system samples be shipped and held below 10°C.
11. Reduce the minimum incubation time for reading the Colisure Test, for determination of total coliforms, from 28 hours to 24 hours in drinking water under the TCR.
12. Require that a PE sample for chemical contaminants be successfully analyzed at least once each year using each method used to report, not confirm, compliance monitoring results.
13. Clarify that the acceptance limits for successfully measuring chemical analytes in a PE sample apply only if that analyte has been added to the PE sample.
14. Increase the maximum holding time from 48 hours to 14 days for chlorinated, unacidified drinking water samples collected for determination of nitrate.
15. Promote safe handling of acids by clarifying that acidification of samples for determinations of metals can be conducted in the laboratory rather than in the field and allowing use of dilute (1:1) solutions of acid to preserve samples collected for the determination of metals or nitrate (including total nitrate).
16. Provide an option for field/ laboratory determinations of alkalinity, calcium, conductivity, orthophosphate and silica in drinking water samples by any person acceptable to the State to conduct these determinations. Previously a laboratory had to be certified to conduct these determinations.

United States
Environmental Protection Agency | Office of Water 4607 | EPA 815-F-99-013 December 1999

EPA

NATIONAL PRIMARY AND SECONDARY DRINKING WATER REGULATIONS: ANALYTICAL METHODS FOR CHEMICAL AND MICROBIOLOGICAL CONTAMINANTS AND REVISIONS TO LABORATORY CERTIFICATION REQUIREMENTS - FINAL RULE

Fact Sheet

Under the Safe Drinking Water Act, Environmental Protection Agency (EPA) approves analytical methods to be used in compliance monitoring of drinking water. Periodically, the Agency revises or replaces compliance methods based on user suggestions, changing regulatory needs and improvements in technology.

This rule, which was promulgated on December 1, 1999 (64 FR 67450), approves the use of updated versions of 14 EPA methods, 25 American Society for Testing and Materials (ASTM) methods, and 54 Standard Methods for Examination of Water and Wastewater (SM) for compliance with drinking water standards and monitoring requirements. Compared to the currently approved versions, the new versions contain primarily editorial, technical or other changes that make the method easier to conduct or safer. EPA will withdraw earlier versions of the 14 EPA methods on June 1, 2001. Earlier versions of approved methods published by ASTM and SM are not withdrawn and continue to be approved for compliance monitoring. In addition, EPA is approving two new methods, EPA 515.3 and ASTM D5317-93, for acid herbicides. EPA is not withdrawing approval of EPA 515.1 or 515.2 for determination of acid herbicides because these methods are not obsolete.

EPA is approving the use of a new membrane filter medium, MI Agar, for the determination of the presence of total coliforms and *E. Coli* in drinking water under the Total Coliform Rule (TCR). MI Agar is also approved for the enumeration of total coliforms in source water under the Surface Water Treatment Rule (SWTR). EPA is approving two new tests, m-ColiBlue24® and E*Colite®, for the simultaneous detection of total coliform and *E. coli* in drinking water under the TCR. The rule requires that microbiological source water samples collected under the SWTR for the determination of coliform and fecal coliform or for determination of heterotrophic bacteria in distribution system samples be held below 10°C during transit and storage.

EPA is allowing a choice of six methods (ASTM D 511-93 A and B, EPA 200.7, and SM 3111 B, SM 3120 B and 3500 Mg E) for determination of magnesium. Magnesium determinations will be required of systems that elect to use the magnesium control alternative to the total organic carbon removal requirements of the 1998 Stage One Disinfection By-Products Rule.

APPENDIX J

New York State Department of Environmental Conservation:

6 NYCRR Part 703 *Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations*

6 NYCRR Part 703

Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations

(Statutory authority: Environmental Conservation Law, §§ 3-0301[2][m], 15-0313, 17-0301, 17-0809)

[Effective Date: 1967]
[Amended last on August 1999]
[page 1 of 1]

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§703.6 Groundwater effluent limitations for discharges to Class GA waters

§703.7 Severability

Historical Note

Part (§§ 703.1-703.4) filed March 20, 1967; repealed, new filed April 28, 1972; repealed, new (§§ 703.1 -703.11) filed Aug. 2, 1978; repealed, new (§§ 703.1-703.7) filed Aug. 2, 1991; amd. filed July 16, 1999 eff. Aug. 4, 1999. Amended Part title.

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§703.1 Substance form

A water quality standard, guidance value or groundwater effluent limitation includes all (total) forms of the substance, unless indicated otherwise. Where a standard or guidance value is for a specific form of the substance, water quality-based effluent limitations for SPDES permits may include other forms of the substance to account for changes in the substance that occur in the receiving water.

Historical Note

Sec. filed March 20, 1967; repealed, new filed: April 28, 1972; Aug. 2, 1978; Aug. 2, 1991; amd. filed July 16, 1999 eff. Aug. 4, 1999.

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§703.2 Narrative water quality standards

Narrative standards for specific water classes are provided in this section. Narrative standards for classes N and AA-Special are provided in Part 701 of this Title.

Parameter	***Classes***	***Standard***
Taste-, color-, and toxic and other deleterious substances	AA, A, B, C, D, SA, SB, SC, I, SD, A-Special, GA, GSA, GSB	None in amounts that will adversely affect the taste, color or odor thereof, or impair the waters for their best usages.
Turbidity	AA, A, B, C, D, SA, SB, SC, I, SD	No increase that will cause a substantial visible contrast to natural conditions.
Suspended, colloidal and settleable solids	AA, A, B, C, D, SA, SB, SC, I, SD, A-Special	None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.
Oil and floating substances	AA, A, B, C, D, SA, SB, SC, I, SD, A-Special	No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease.
Garbage, cinders, ashes, oils, sludge and other refuse	SA, SB, SC, I, SD	None in any amounts.
Phosphorus and nitrogen	AA, A, B, C, D, SA, SB, SC, I, SD, A-Special	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters

		for their best usages.
Radioactivity	A-Special	Should be kept at the lowest practicable levels, and in any event should be controlled to the extent necessary to prevent harmful effects on health.
Thermal discharges	GA, GSA, GSB	None in amounts that will impair the waters for their best usages.
Thermal discharges	AA, A, B, C, D, SA, SB, SC, I, SD, A-Special	See Part 704 of this Title.

Historical Note

Sec. filed March 20, 1967; repealed, new filed: April 28, 1972; Aug. 2, 1978; Aug. 2, 1991 eff. 30 days after filing.

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§703.3 Water quality standards for pH, dissolved oxygen, dissolved solids, odor, color and turbidity

Standards for specific classes are provided in this section.

Parameter	***Classes***	***Standard***
pH	AA, A, B, C, AA-Special, A-Special, GA	Shall not be less than 6.5 nor more than 8.5.
	D	Shall not be less than 6.0 nor more than 9.5.
	SA, SB, SC, I, SD	The normal range shall not be extended by more than one-tenth (0.1) of a pH unit.
Dissolved oxygen (DO)	A-Special	In rivers and upper waters of lakes, not less than 6.0 mg/L at any time. In hypolimnetic waters, it should not be less than necessary for the support of fishlife, particularly cold water species.
	AA, A, B, C, AA-	For cold waters suitable for trout spawning, the DO concentration shall not be less than 7.0

	Special	mg/L from other than natural conditions. For trout waters, the minimum daily average shall not be less than 6.0 mg/L, and at no time shall the concentration be less than 5.0 mg/L. For nontrout waters, the minimum daily average shall not be less than 5.0 mg/L, and at no time shall the DO concentration be less than 4.0 mg/L.
	D, SD	Shall not be less than 3.0 mg/L at any time.
	SA, SB, SC	Shall not be less than 5.0 mg/L at any time.
	I	Shall not be less than 4.0 mg/L at any time.
Dissolved solids	A-Special AA, A, B, C, AA-Special, GA	Shall not exceed 200 mg/L. Shall be kept as low as practicable to maintain the best usage of waters but in no case shall it exceed 500 mg/L.
Odor	GA	Shall not exceed a threshold odor number of 3.
Color	GA	Shall not exceed 15 color units (platinum-cobalt method).
Turbidity	GA	Shall not exceed 5 nephelometric units.

Historical Note

Sec. filed March 20, 1967; repealed, new filed: April 28, 1972; Aug. 2, 1978; Aug. 2,1991 eff. 30 days after filing.

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§703.4 Water qualify standards for coliforms

Total and fecal coliform standards for specific classes are provided in this section.

(a)Total coliforms (number per 100 ml).

Classes	*Standard*
AA	The monthly median value and more than 20 percent of the samples, from a minimum of five examinations, shall not exceed 50 and 240, respectively.

A, B, C, D, SB, SC	The monthly median value and more than 20 percent of the samples, from a minimum of five examinations, shall not exceed 2,400 and 5,000, respectively.
SA	The median most probable number (MPN) value in any series of representative samples shall not be in excess of 70.
I	The monthly geometric mean, from a minimum of five examinations, shall not exceed 10,000.
A-Special	The geometric mean, of not less than five samples, taken over not more than a 30-day period shall not exceed 1,000.
GA	The maximum allowable limit is 50.

(b) Fecal coliforms (number per 100 ml).

Classes	*Standard*
A, B, C, D, SB, SC	The monthly geometric mean, from a minimum of five examinations, shall not exceed 200
I	The monthly geometric mean, from a minimum of five examinations, shall not exceed 2,000.
A-Special	The geometric mean, of not less than five samples, taken over not more than a 30-day period shall not exceed 200.

(c) The total and fecal coliform standards for classes B, C, D, SB, SC and I shall be met during all periods when disinfection is practiced.

Historical Note

Sec. filed March 20, 1967; repealed, new filed: April 28, 1972; Aug. 2, 1978; amd. filed Nov. 5, 1984; repealed, new filed Aug. 2, 1991; amd. filed Dec. 10, 1993 eff. 30 days after filing. Amended (a).

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§703.5 Water quality standards for taste-, color- and odor-producing, toxic and other deleterious substances

(a) Water quality standards for specific substances or groups of substances are listed in Table 1 of subdivision (f) of this section for the applicable water classes. The substance name is listed with the associated Chemical Abstract Service Registry Number (CAS No.) where applicable. For entries in Table 1 of subdivision (f) of this section that refer to chemical groups, congeners or

other expressions of multiple substances, the standard applies to the sum of the substances, unless otherwise indicated.

(b) Standards are Health (Water Source), Health (Fish Consumption), Aquatic (Chronic), Aquatic (Acute), Wildlife or Aesthetic based and are respectively designated as H(WS), H(FC), A(C), A(A), W or E in the column headed "Type." Where more than one Type of standard is listed for a water class, the most stringent applies.

(c) The "Basis Code" in Table 1 of subdivision (f) of this section provides a further description of the basis of the standard. A list of basis codes is found in Table 2 of subdivision (f) of this section.

(d) The standard is the maximum allowable concentration in micrograms per liter (ug/L), unless otherwise noted. A standard defined by the symbol "ND" means not detectable by the analytical tests specified or approved pursuant to Part 700 of this Title.

(e) Special interpretive remarks are provided as necessary.

(f) *Tables*.

Table 1 (cf. section 703.5)
WATER QUALITY STANDARDS SURFACE WATERS AND GROUNDWATER

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	TYPE	BASIS CODE
Acenaphthene (83-32-9)	A, A-S, AA, AA-S	20	E	U
Acrolein (107-02-8)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Acrylamide (79-06-1)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Acrylonitrile	GA	*	H(WS)	J

(107-13-1)				
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Alachlor (15972-60-8)	A, A-S, AA, AA-S GA	0.5 0.5	H(WS) H(WS)	A A
Aldicarb (116-06-3)	A, A-S, AA, AA-S GA	7 *	H(WS) H(WS)	B
Remark: * Refer to standards for "Aldicarb and Methomyl."				
Aldicarb and Methomyl (116-06-3; 16752-77-5)	GA	0.35*	H(WS)	F
Remark: * Applies to the sum of these substances.				
Aldrin (309-00-2)	GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, SD	ND * *	H(WS) H(FC) H(FC)	F
Remark: * Refer to standards for "Aldrin and Dieldrin."				
Aldrin and Dieldrin (309-00-2; 60-57-1)	A, A-S, AA, AA-S, B, C, D SA, SB, SC, SD	0.001 0.001	H(FC) H(FC)	
Remark: * Applies to the sum of these substances.				
Alkyldimethyl benzyl ammonium chloride	A, A-S, AA, AA-S, B, C	*	A(C)	

(68391-01-5)				
Remark: * Refer to standards for "Quaternary ammonium compounds."				
SUBSTANCE (CAS No.)	**WATER CLASSES**	**STANDARD (ug/L)**	**TYPE**	**BASIS CODE**
Allyl chloride (107-05-1)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Aluminum, ionic (CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C	100*	A(C)	
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Ametryn (834-12-8)	GA	50	H(WS)	J
4-Aminobiphenyl (92-67-1)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Aminocresols (95-84-1; 2835-95-2; 2835-99-6)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C D	* * ** **	E E E E	
Remarks: * Refer to standards for "Phenolic compounds (total phenols)." ** Refer to standards for "Phenols, total unchlorinated."				
3-Aminotoluene (108-44-1)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				

4-Aminotoluene (106-49-0)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Ammonia and Ammonium	A, A-S, AA, AA-S	2,000*	H(WS)	H
(7664-41-7; CAS No.	GA	2,000*	H(WS)	H
Not Applicable)	A, A-S, AA, AA-S, B, C	**	A(C)	
	D	**	A(A)	
Remarks: * NH3 + NH4+ as N. ** Un-ionized ammonia as NH3; tables below provide the standard in ug/L at varying pH and temperature for different classes and specifications. Linear interpolation between the listed pH values and temperatures is applicable.				

Classes A, A-S, AA, AA-S, B, C with the (T) or (TS) Specification				
pH	**0C**	**5C**	**10C**	**15-30C**
6.50	0.7	0.9	1.3	1.9
6.75	1.2	1.7	2.3	3.3
7.00	2.1	2.9	4.2	5.9
7.25	3.7	5.2	7.4	11
7.50	6.6	9.3	13	19
7.75	11	15	22	31
8.0-9.0	13	18	25	35

Classes A, A-S, AA, AA-S, B, C with the (T) or (TS) Specification					
pH	**0C**	**5C**	**10C**	**15C**	**20-30C**
6.50	0.7	0.9	1.3	1.9	2.6
6.75	1.2	1.7	2.3	3.3	4.7
7.00	2.1	2.9	4.2	5.9	8.3

7.25	3.7	5.2	7.4	11	15
7.50	6.6	9.3	13	19	26
7.75	11	15	22	31	43
8.0-9.0	13	18	25	35	50

Class D

pH	0C	5C	10C	15C	20C	25-30C
6.50	9.1	13	18	26	36	51
6.75	15	21	30	42	59	84
7.00	23	33	46	66	93	131
7.25	34	48	68	95	140	190
7.50	45	64	91	130	180	260
7.75	56	80	110	160	220	320
8.0-9.0	65	92	130	180	260	370

Table 1
(cf. section 703.5)
(Continued)
WATER QUALITY STANDARDS SURFACE WATERS AND GROUNDWATER

SUBSTANCE (CAS No.)	WATER CLASSES	STANDARD (ug/L)	TYPE	BASIS CODE
Aniline	A, A-S, AA, AA-S	5	H(WS)	I
(62-53-3)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Antimony	A, A-S, AA, AA-S	3	H(WS)	B
(CAS No. Not Applicable)	GA	3	H(WS)	B
Arsenic	A, A-S, AA, AA-S	50	H(WS)	G
(CAS No. Not Applicable)	GA	25	H(WS)	F
	A, A-S, AA, AA-S, B, C	150*	A(C)	
		340*	A(A)	

	A, A-S, AA, AA-S, B, C, D SA, SB, SC SD	63* 120*	A(C) A(A)	
Remark: * Dissolved arsenic form.				
Asbestos (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	* *	H(WS) H(WS)	G G
Remark: * 7,000,000 fibers (longer than 10 um)/L				
Atrazine (1912-24-9)	GA	7.5	H(WS)	F
Azinphosmethyl (86-50-0)	GA A, A-S, AA, AA-S, B, C SA, SB, SC	4.4 0.005* 0.01	H(WS) A(C) A(C)	F
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Azobenzene (103-33-3)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Barium (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	1,000 1,000	H(WS) H(WS)	G F
Benefin (1861-40-1)	GA	35	H(WS)	F
Benzene (71-43-2)	A, A-S, AA, AA-S GA	1 1	H(WS) H(WS)	A A

	A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD	10 10	H(FC) H(FC)	A A
Benzidine (92-87-5)	GA A, A-S, AA, AA-S, B, C D	* 0.1** 0.1**	H(WS) A(C) A(A)	J
Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance. ** For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) and (d) of this Title.				
Benzo(a)pyrene (50-32-8)	GA	ND	H(WS)	F
Beryllium (CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C	*	A(C)	
Remark: * 11 ug/L, when hardness is less than or equal to 75 ppm; 1,100 ug/L when hardness is greater than 75 ppm. * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title. Aquatic Type standards apply to acid-soluble form.				
1,1'-Biphenyl (92-52-4)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Bis(2-chloroethoxy) methane (111-91-1)	GA	*	H(WS)	J

Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Bis(2-chloroethyl) ether (111-44-4)	GA	1.0	H(WS)	F
Bis(chloromethyl)ether (542-88-1)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Bis(2-chloro-1-methylethyl)ether (108-60-1)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Bis(2-ethylhexyl) phthalate (117-81-7)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C	5 5 0.6	H(WS) H(WS) A(C)	A A
Boron (CAS No. Not Applicable)	GA A, A-S, AA, AA-S, B, C SA, SB, SC	1,000 10,000* 1,000	H(WS) A(C) A(C)	H
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title. Aquatic Type standards apply to acid-soluble form.				
Bromacil (314-40-9)	GA	4.4	H(WS)	F
Bromobenzene (108-86-1)	GA	*	H(WS)	J

Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Bromochloromethane (74-97-5)	A, A-S, AA, AA-S GA	5 *	H(WS) H(WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Bromomethane (74-83-9)	A, A-S, AA, AA-S GA	5 *	H(WS) H(WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Butachlor (23184-66-9)	GA	3.5	H(WS)	F
cis-2-Butenal (15798-64-8)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
trans-2-Butenal (123-73-9)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
cis-2-Butenenitrile (1190-76-7)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
trans-2-Butenenitrile (627-26-9)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Butylate (2008-41-5)	GA	50	H(WS)	J

n-Butylbenzene (104-51-8)	A, A-S, AA, AA-S GA	5 *	H(WS) H(WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
sec-Butylbenzene (135-98-8)	A, A-S, AA, AA-S GA	5 *	H(WS) H(WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
tert-Butylbenzene (98-06-6)	A, A-S, AA, AA-S GA	5 *	H(WS) H(WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Cadmium (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S, B, C, D SA, SB, SC, I SD	5 5 * ** 7.7 21	H(WS) H(WS) A(C) A(A) A(C) A(A)	B,G B,G
Remarks: * (0.85) exp(0.7852 [ln (ppm hardness)] - 2.715) ** (0.85) exp(1.128 [ln (ppm hardness)] - 3.6867) Aquatic Type standards apply to dissolved form.				
Captan (133-06-2)	GA	18	H(WS)	F

Carbaryl (63-25-2)	GA	29	H(WS)	F
Carbofuran (1563-66-2)	A, A-S, AA, AA-S A, A-S, AA, AA-S, B, C D	15 1.0* 10*	H(WS) A(C) A(A)	B
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) and (d) of this Title.				
Carbon tetrachloride (56-23-5)	GA	5	H(WS)	F
Carboxin (5234-68-4)	GA	50	H(WS)	J
Chloramben (CAS No. Not Applicable)	GA	50*	H(WS)	J
Remark: * Includes: related forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid.				
Chloranil (118-75-2)	GA	*	H(WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Chlordane (57-74-9)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD	0.05 0.05 2 x 10-5 2 x 10-5	H(WS) H(WS) H(FC) H(FC)	A A A A
Chloride	A, A-S, AA,	250,000	H(WS)	H

(CAS No. Not Applicable)	AA-S GA	250,000	H(WS)	H
Chlorinated dibenzo-p-	A, A-S, AA, AA-S	7 x 10-7*	H(WS)	A
dioxins and Chlorinated	GA	7 x 10-7*	H(WS)	A
dibenzofurans	A, A-S, AA, AA-S, B, C, D	6 x 10-10*	H(FC)	A
(CAS No. Not applicable)		6 x 10-10*	H(FC)	A
	SA, SB, SC, I, SD	3.1 x 10-9**	W	
	A, A-S, AA, AA-S, B, C, D	3.1 x 10-9**	W	
	SA, SB, SC, I, SD			

Remarks: * Value is for the total of the chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans that are listed in the table below as equivalents of 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD).

The 2,3,7,8-TCDD equivalent for a congener for the H(WS) standards is obtained by multiplying the concentration of that congener by its Toxicity Equivalency Factor (TEF) from the table below.

The 2,3,7,8-TCDD equivalent for a congener for the H(FC) standards is obtained by multiplying the concentration of that congener by its TEF and its Bioaccumulation Equivalency Factor (BEF) from the table below.

** Applies only to 2,3,7,8-TCDD

CONGENER	TEF	BEF
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1	1
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.5	0.9
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	0.3
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	0.1
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	0.1
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	0.1

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin		0.01	0.05	
Octachlorodibenzo-p-dioxin		0.001	0.01	
2,3,7,8-Tetrachlorodibenzofuran		0.1	0.8	
1,2,3,7,8-Pentachlorodibenzofuran		0.05	0.2	
2,3,4,7,8-Pentachlorodibenzofuran		0.5	1.6	
1,2,3,4,7,8-Hexachlorodibenzofuran		0.1	0.08	
1,2,3,6,7,8-Hexachlorodibenzofuran		0.1	0.2	
2,3,4,6,7,8-Hexachlorodibenzofuran		0.1	0.7	
1,2,3,7,8,9-Hexachlorodibenzofuran		0.1	0.6	
1,2,3,4,6,7,8-Heptachlorodibenzofuran		0.01	0.01	
1,2,3,4,7,8,9-Heptachlorodibenzofuran		0.01	0.4	
Octachlorodibenzofuran		0.001	0.02	
Chlorine, Total Residual (CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C D SA, SB, SC, I SD	5 19 7.5 13	A(C) A(A) A(C) A(A)	
2-Chloroaniline (95-51-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3-Chloroaniline (108-42-9)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4-Chloroaniline (106-47-8)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Chlorobenzene	A, A-S,	5	H	I

(108-90-7)	AA, AA-S	*	(WS)	J
	GA	400	H (WS)	B
	A, A-S, AA, AA-S, B, C, D	400	H (FC)	B
		5	H (FC)	U
	SA,SB, SC, I, SD	20	A(C)	V
		50	E	
	A, A-S, AA, AA-S, B, C		E	
	A, A-S, AA, AA-S			
	D			
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4-Chlorobenzotrifluoride (98-56-6)	A, A-S, AA, AA-S	5	H (WS)	I
	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1-Chlorobutane (109-69-3)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Chloroethane (75-00-3)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Chloroform (67-66-3)	A, A-S, AA, AA-S	7	H (WS)	A
	GA	7	H	A

			(WS)	
Chloromethyl methyl ether (107-30-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2-Chloronaphthalene (91-58-7)	A, A-S, AA, AA-S	10	E	U
2-Chloronitrobenzene (88-73-3)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3-Chloronitrobenzene (121-73-3	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4-Chloronitrobenzene (100-00-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Chloroprene (126-99-8)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Chlorothalonil (1897-45-6)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2-Chlorotoluene (95-49-8)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of				

5 ug/L (described elsewhere in this Table) applies to this substance.				
3-Chlorotoluene (108-41-8)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4-Chlorotoluene (106-43-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4-Chloro-o-toluidine (95-69-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
5-Chloro-o-toluidine (95-79-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3-Chloro-1,1,1-trifluoropropane (460-35-5)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Chromium (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C	50 50 * **	H (WS) H (WS) A(C) A(A)	G G

	A, A-S, AA, AA-S, B, C, D			
Remarks: * (0.86) exp(0.819 [ln (ppm hardness)] + 0.6848) ** (0.316) exp(0.819 [ln (ppm hardness)] + 3.7256) Aquatic Type standards apply to dissolved form and do not include hexavalent chromium.				
Chromium (hexavalent) (CAS No. Not Applicable)	GA A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S, B, C, D SA, SB, SC SD	50 11* 16* 54** 1,200**	H (WS) A(C) A(A) A(C) A(A)	F
Remarks: * Applies to dissolved form. ** Applies to acid-soluble form.				
Cobalt (CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C	5*	A(C)	
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title. Aquatic Type standards apply to acid-soluble form.				
Copper (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C A, A-S,	200 200 * ** ***	H (WS) H (WS) A(C) A(A)	H H

	AA, AA-S, B, C, D SA, SB, SC, I SA, SB, SC, I, SD	****	A(C) A(A)	
Remarks: * (0.96) exp(0.8545 [ln (ppm hardness)] - 1.702) ** (0.96) exp(0.9422 [ln (ppm hardness)] - 1.7) *** Standard is 3.4 ug/L except in New York/New Jersey Harbor where it is 5.6 ug/L. **** Standard is 4.8 ug/L except in New York/New Jersey Harbor where it is 7.9 ug/L. Aquatic Type standards apply to dissolved form.				
Cyanide (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA-S, B, C, D SA, SB, SC, I, SD A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S, B, C, D SA, SB, SC SD	200 200 9,000 9,000 5.2* 22* 1.0* 1.0*	H (WS) H (WS) H (FC) H (FC) A(C) A(A) A(C) A(A)	B B B B
Remark: * As free cyanide: the sum of HCN and CN- expressed as CN.				
Cyanogen bromide	GA	*	H (WS)	J

(506-68-3)				
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Cyanogen chloride (506-77-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Dalapon (CAS No. Not Applicable)	GA	50*	H (WS)	J
Remark: * Includes: related forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid.				
p,p'-DDD (72-54-8)	A, A-S, AA, AA-S	0.3	H (WS)	A
		0.3		A
	GA		H	
		8 x 10-5	(WS)	A
	A, A-S, AA, AA-S, B, C, D	8 x 10-5	H (FC)	A
	SA, SB, SC, I, SD	*	H (FC)	
	A, A-S, AA, AA-S, B, C, D	*	W	
			W	
	SA, SB, SC, I, SD			
Remark: * See standard for p,p'-DDT.				
p,p'-DDE (72-55-9)	A, A-S, AA, AA-S	0.2	H (WS)	A
		0.2		A
	GA		H	
		7 x 10-6	(WS)	A
	A, A-S, AA, AA-S, B, C, D	7 x 10-6	H (FC)	A

		*		
	SA, SB, SC, I, SD		H (FC)	
		*		
	A, A-S, AA, AA-S, B, C, D		W	
			W	
	SA, SB, SC, I, SD			
Remark: * See standard for p,p'-DDT.				
p,p'-DDT	A, A-S, AA, AA-S	0.2	H (WS)	A
(50-29-3)		0.2		A
	GA		H	
		1 x 10-5	(WS)	A
	A, A-S, AA, AA-S, B, C, D		H	
		1 x 10-5	(FC)	A
		1.1 x 10-5*		
	SA, SB, SC, I, SD		H (FC)	
		1.1 x 10-5*		
	A, A-S, AA, AA-S, B, C, D		W	
			W	
	SA, SB, SC, I, SD			
Remark: * Applies to the sum of p,p'-DDD, p,p'-DDE and p,p'-DDT				
Dechlorane Plus	A, A-S, AA, AA-S	5	H (WS)	I
(13560-89-9)		*		J
	GA		H (WS)	
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Demeton	A, A-S, AA, AA-S, B, C	0.1*	A(C)	
(8065-48-3; 298-03-3;126-75-0)		0.1	A(C)	

	SA, SB, SC			
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title. Standards apply to the sum of these substances.				
Diazinon (333-41-5)	GA A, A-S, AA, AA-S, B, C	0.7 0.08*	H (WS) A(C)	F
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
1,2-Dibromobenzene (583-53-9)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,3-Dibromobenzene (108-36-1)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,4-Dibromobenzene (106-37-6)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,2-Dibromo-3-chloropropane (96-12-8)	A, A-S, AA, AA-S GA	0.04 0.04	H (WS) H (WS)	A A

Dibromodichloromethane (594-18-3)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Dibromomethane (74-95-3)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Di-n-butyl phthalate (84-74-2)	GA	50	H (WS)	J
Dicamba (1918-00-9)	GA	0.44	H (WS)	F
Dichlorobenzenes (95-50-1; 541-73-1; 106-46-7)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S D	3* 3* 5** 20***/30**** 50**	H (WS) H (WS) A(C) E E	A A U V
Remarks: * Applies to each isomer (1,2-,1,3- and 1,4-dichlorobenzene) individually. ** Applies to the sum of 1,2-, 1,3- and 1,4-dichlorobenzene. For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title. *** Applies to 1,3-dichlorobenzene only. **** Applies to 1,4-dichlorobenzene only.				

3,3'-Dichlorobenzidine (91-94-1)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,4-Dichlorobenzotrifluoride (328-84-7)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
cis-1,4-Dichloro-2-butene (1476-11-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
trans-1,4-Dichloro-2-butene (110-57-6)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Dichlorodifluoromethane (75-71-8)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,1-Dichloroethane (75-34-3)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,2-Dichloroethane (107-06-2)	A, A-S, AA, AA-S GA	0.6 0.6	H (WS) H (WS)	A A
1,1-Dichloroethene	GA	*	H (WS)	J

(75-35-4)				
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
cis-1,2-Dichloroethene (156-59-2)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
trans-1,2-Dichloroethene (156-60-5)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Dichlorofluoromethane (75-43-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4-Dichlorophenol (120-83-2)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D	0.3* ** ***	E E E	U
Remarks: * Also see standards for "Phenolic compounds (total phenols)." ** Refer to standards for "Phenolic compounds (total phenols)." *** Refer to standards for "Phenols, total chlorinated."				
2,4-Dichlorophenoxyacetic acid	A, A-S, AA, AA-S GA	50 50	H (WS) H	G G

(94-75-7)			(WS)	
1,1-Dichloropropane (78-99-9)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,2-Dichloropropane (78-87-5)	A, A-S, AA, AA-S GA	1 1	H (WS) H (WS)	A A
1,3-Dichloropropane (142-28-9)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,2-Dichloropropane (594-20-7)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,3-Dichloropropene (542-75-6)	A, A-S, AA, AA-S GA	0.4* 0.4*	H (WS) H (WS)	A A
Remark: * Applies to the sum of cis- and trans-1,3-dichloropropene, CAS Nos. 10061-01-5 and 10061-02-6, respectively.				
2,3-Dichlorotoluene (32768-54-0)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J

Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4-Dichlorotoluene (95-73-8)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,5-Dichlorotoluene (19398-61-9)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,6-Dichlorotoluene (118-69-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,4-Dichlorotoluene (95-75-0)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,5-Dichlorotoluene (25186-47-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Dieldrin (60-57-1)	A, A-S, AA, AA-S GA	0.004 0.004	H (WS) H	A A

	A, A-S, AA, AA-S, B, C, D	6 x 10-7	(WS)	A
		6 x 10-7	H (FC)	A
	SA, SB, SC, I, SD	0.056	H (FC)	
		0.24	A(C)	
	A, A-S, AA, AA-S, B, C		A(A)	
	A, A-S, AA, AA-S, B, C, D			
Di(2-ethylhexyl)adipate (103-23-1)	A, A-S, AA, AA-S	20	H (WS)	A
	GA	20	H (WS)	A
1,2-Difluoro-1,1,2,2-tetrachloroethane (76-12-0)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,2-Diisopropylbenzene (577-55-9)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,3-Diisopropylbenzene (99-62-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,4-Diisopropylbenzene (100-18-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				

N,N-Dimethylaniline (121-69-7)	A, A-S, AA, AA-S GA	1 1	H (WS) H (WS)	A A
2,3-Dimethylaniline (87-59-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4-Dimethylaniline (95-68-1)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,5-Dimethylaniline (95-78-3)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,6-Dimethylaniline (87-62-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,4-Dimethylaniline (95-64-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,5-Dimethylaniline (108-69-0)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,3'-Dimethylbenzidine (119-93-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				

4,4'-Dimethylbibenzyl (538-39-6)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4,4'-Dimethyldiphenylmethane (4957-14-6)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
alpha, alpha-Dimethyl phenethylamine (122-09-8)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4-Dimethylphenol (105-67-9)	A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD A, A-S, AA, AA-S GA B, C, D	1,000 1,000 * * **	H (FC) H (FC) E E E	B B
Remarks: * Refer to standards for "Phenolic compounds (total phenols)." ** Refer to standard for "Phenols, total unchlorinated."				
Dimethyl tetrachloroterephthalate (1861-32-1)	GA	50	H (WS)	J
1,3-Dinitrobenzene (99-65-0)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				

2,4-Dinitrophenol (51-28-5)	A, A-S, AA, AA- S, B, C, D SA, SB, SC, I, SD A, A-S, AA, AA-S GA B, C, D	400 400 * * **	H (FC) H (FC) E E E	B B
Remarks: * Refer to standards for "Phenolic compounds (total phenols)." ** Refer to standards for "Phenols, total unchlorinated."				
2,3-Dinitrotoluene (602-01-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4-Dinitrotoluene (121-14-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,5-Dinitrotoluene (619-15-8)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,6-Dinitrotoluene (606-20-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,4-Dinitrotoluene (610-39-9)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of				

5 ug/L (described elsewhere in this Table) applies to this substance.				
3,5-Dinitrotoluene (618-85-9)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Diphenamid (957-51-7)	GA	50	H (WS)	J
Diphenylamine (122-39-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Diphenylhydrazines (122-66-7; 530-50-7)	GA	ND*	H (WS)	F
Remark: * Applies to the sum of 1,1- and 1,2-diphenylhydrazine, CAS Nos. 530-50-7 and 122-66-7, respectively.				
Diquat (2764-72-9)	A, A-S, AA, AA-S GA	20* 20*	H (WS) H (WS)	B B
Remark: * Applies to the concentration of diquat ion whether free or as an undissociated salt.				
Disulfoton (298-04-4)	GA	*	H (WS)	
Remark: * Refer to standards for "Phorate and Disulfoton."				
Dyphylline (479-18-5)	A, A-S, AA, AA-S	50	H (WS)	B
Endosulfan (115-29-7)	A, A-S, AA, AA-S, B, C D SA, SB, SC	0.009 0.22* 0.001 0.034	A(C) A(A) A(C) A(A)	

	SD			
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (d) of this Title.				
Endrin (72-20-8)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, SD A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S, B, C, D	0.2 ND 0.002 0.002 0.036 0.086	H (WS) H (WS) H (FC) H (FC) A(C) A(A)	G F
Endrin aldehyde (7421-93-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Endrin ketone (53494-70-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Ethylbenzene (100-41-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				

Ethylene dibromide (106-93-4)	A, A-S, AA, AA-S GA	6 x 10-4 6 x 10-4	H (WS) H (WS)	A A
Ethylenethiourea (96-45-7)	GA	ND	H (WS)	F
Ferbam (14484-64-1)	GA	4.2	H (WS)	F
Fluometuron (2164-17-2)	GA	50	H (WS)	J
Fluoride (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C D	1,500 1,500 * **	H (WS) H (WS) A(C) A(A)	H F
Remarks: * (0.02) exp(0.907 [ln (ppm hardness)] + 7.394) ** (0.1) exp(0.907 [ln (ppm hardness)] + 7.394) For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) and (d) of this Title.				
Foaming agents (CAS No. Not Applicable)	GA	500*	E	U
Remark: * Determined as methylene blue active substances (MBAS) or by other tests as specified by the Commissioner.				
Folpet (133-07-3)	GA	50	H (WS)	J
Gross alpha radiation (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	* *	H (WS)	G G

	GA		H (WS)	
Remark: * 15 picocuries per liter, excluding radon and uranium.				
Gross beta radiation (CAS No. Not Applicable)	A, AA GA	* *	H (WS) H (WS)	H H
Remark: * 1,000 picocuries per liter, excluding strontium-90 and alpha emitters.				
Heptachlor (76-44-8)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD	0.04 0.04 2 x 10-4 2 x 10-4	H (WS) H (WS) H (FC) H (FC)	A A A A
Heptachlor epoxide (1024-57-3)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD	0.03 0.03 3 x 10-4 3 x 10-4	H (WS) H (WS) H (FC) H (FC)	A A A A
Hexachlorobenzene (118-74-1)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D	0.04 0.04 3 x 10-5 3 x 10-5	H (WS) H (WS) H (FC) H (FC)	A A A A

	SA, SB, SC, I, SD		H (FC)	
Hexachlorobutadiene (87-68-3)	A, A-S, AA, AA-S	0.5	H (WS)	B
		0.5		B
	GA	0.01	H (WS)	B
	A, A-S, AA, AA-S, B, C, D	0.01	H (FC)	B
		1.0*		
	SA, SB, SC, I, SD	10*	H (FC)	
	A, A-S, AA, AA-S, B, C	0.3	A(C)	
		3.0	A(A)	
	D		A(C)	
	SA, SB, SC		A(A)	
	SD			
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) and (d) of this Title.				
alpha-Hexachlorocyclohexane (319-84-6)	A, A-S, AA, AA-S	0.01	H (WS)	A
		0.01		A
	GA	0.002	H (WS)	A
	A, A-S, AA, AA-S, B, C, D	0.002	H (FC)	A
	SA, SB, SC, I, SD		H (FC)	
beta-Hexachlorocyclohexane (319-85-7)	A, A-S, AA, AA-S	0.04	H (WS)	A
		0.04		A

	GA	0.007	H (WS)	A
	A, A-S, AA, AA-S, B, C, D	0.007	H (FC)	A
	SA, SB, SC, I, SD		H (FC)	
delta-Hexachlorocyclohexane (319-86-8)	A, A-S, AA, AA-S	0.04	H (WS)	A
	GA	0.04		A
		0.008	H (WS)	A
	A, A-S, AA, AA-S, B, C, D	0.008	H (FC)	A
	SA, SB, SC, I, SD		H (FC)	
epsilon-Hexachlorocyclohexane (6108-10-7)	A, A-S, AA, AA-S	0.04	H (WS)	A
	GA	0.04		A
		0.008	H (WS)	A
	A, A-S, AA, AA-S, B, C, D	0.008	H (FC)	A
	SA, SB, SC, I, SD		H (FC)	
gamma-Hexachlorocyclohexane (58-89-9)	A, A-S, AA, AA-S	0.05	H (WS)	A
	GA	0.05		A
		0.008	H (WS)	A
	A, A-S, AA, AA-S, B, C, D	0.008	H (FC)	A
	SA, SB, SC, I, SD	0.95	H (FC)	

	A, A-S, AA, AA-S, B, C, D		A(A)	
Hexachlorocyclopentadiene (77-47-4)	GA A, A-S, AA, AA-S, B, C D SA, SB, SC SD A, A-S, AA, AA-S	* 0.45** 4.5** 0.07 0.7 1.0	H (WS) A(C) A(A) A(C) A(A) E	J U
Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance. ** For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) and (d) of this Title.				
Hexachloroethane (67-72-1)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD	5 * 0.6 0.6	H (WS) H (WS) H (FC) H (FC)	A, I J A A
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Hexachlorophene (70-30-4)	GA A, A-S, AA, AA-S	* **	H (WS) E	

	GA B,C,D	** *** 	E E	
Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance. ** Refer to standards for "Phenolic compounds (total phenols)." *** Refer to standards for "Phenols, total chlorinated."				
Hexachloropropene (1888-71-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Hexazinone (51235-04-2)	GA	50	H (WS)	J
Hydrazine (302-01-2)	A, A-S, AA, AA-S, B, C D	* **	A(C) A(A)	
Remarks: * 5 ug/L at less than 50 ppm hardness and 10 ug/L at greater than or equal to 50 ppm hardness. ** 50 ug/L at less than 50 ppm hardness and 100 ug/L at greater than or equal to 50 ppm hardness. For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) and (d) of this Title.				
Hydrogen sulfide (7783-06-4)	A, A-S, AA, AA-S, B, C SA, SB, SC	2.0* 2.0	A(C) A(C)	
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title. Aquatic Type standards apply to undissociated form.				

Hydroquinone (123-31-9)	A, A-S, AA, AA-S, B, C D A, A-S, AA, AA-S GA	2.2** 4.4** * *	A(C) A(A) E E	
Remarks: * Refer to standards for "Phenolic compounds (total phenols)." ** For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) and (d) of this Title.				
Iron (CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C D A, A-S, AA, AA-S GA	300** 300** 300 300*	A(C) A(A) E E	G F
Remarks: * Also see standard for "Iron and Manganese." ** For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) and (d) of this Title.				
Iron and Manganese (CAS No. Not Applicable)	GA	500*	E	F
Remark: * Applies to the sum of these substances; also see individual standards for "Iron" and "Manganese."				
Isodecyl diphenyl phosphate (29761-21-5)	A, A-S, AA, AA-S, B, C D	1.7* 22*	A(C) A(A)	
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) and (d) of this Title.				

Isodrin (465-73-6)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Isopropalin (33820-53-0)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Isopropylbenzene (98-82-8)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2-Isopropyltoluene (527-84-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3-Isopropyltoluene (535-77-3)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4-Isopropyltoluene (99-87-6)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Isothiazolones, total (isothiazolinones)	A, A-S, AA, AA-S, B, C D	1* 10*	A(C) A(A)	

(includes 5-chloro-2-methyl-4-isothiazolin-3-one & 2-methyl-4-isothiazolin-3-one) (CAS No. Not Applicable)				
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) and (d) of this Title. Standards apply to the sum of these substances.				
Kepone (143-50-0)	GA	ND	H (WS)	F
Lead (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S, B, C, D SA, SB, SC, I SA, SB, SC, I, SD	50 25 * ** 8 204	H (WS) H (WS) A(C) A(A) A(C) A(A)	G F
Remark: * {1.46203 - [ln (hardness) (0.145712)]} exp (1.273 [ln (hardness)] - 4.297) ** {1.46203 - [ln (hardness) (0.145712)]} exp (1.273 [ln (hardness)] - 1.052) Aquatic Type standards apply to dissolved form.				
Linear alkyl benzene	A, A-S,	40*	A(C)	

sulfonates (LAS) (CAS No. Not Applicable)	AA, AA-S, B, C			
Remark: * LAS with side chains greater than 13 carbons only; applies to the sum of these substances. * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Magnesium (CAS No. Not Applicable)	A, A-S, AA, AA-S	35,000	H (WS)	B
Malathion (121-75-5)	GA A, A-S, AA, AA-S, B, C SA, SB, SC	7.0 0.1* 0.1	H (WS) A(C) A(C)	F
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Mancozeb (8018-01-7)	GA	1.8	H (WS)	F
Maneb (12427-38-2)	GA	1.8	H (WS)	F
Manganese (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	300 300*	E E	G F
Remark: * Also see standards for "Iron and Manganese."				
Mercury (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-	0.7 0.7 7 x 10-4*	H (WS) H (WS) H	B B B

	S, B, C, D SA, SB, SC, I, SD A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S, B, C, D A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD	7 x 10-4* 0.77* 1.4* 0.0026* 0.0026*	(FC) H (FC) A(C) A(A) W W	B
Remark * Applies to dissolved form.				
Methacrylonitrile (126-98-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Methomyl (16752-77-5)	GA	*	H (WS)	
Remark: * Refer to standard for "Aldicarb and Methomyl."				
Methoxychlor (72-43-5)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C SA, SB,	35 35 0.03* 0.03	H (WS) H (WS) A(C) A(C)	H F

	SC			
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
N-Methylaniline (100-61-8)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Methyl chloride (74-87-3)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2-Methyl-4-chloro-phenoxyacetic acid (94-74-6)	GA	0.44	H (WS)	F
4,4'-Methylene-bis-(2-chloroaniline) (101-14-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4,4'-Methylene-bis-(N-methyl)aniline (1807-55-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4,4'-Methylene-bis-(N,N'-dimethyl) aniline (101-61-1)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Methylene bisthiocyanate (6317-18-6)	A, A-S, AA, AA-S, B, C	1.0*	A(C)	

Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Methylene chloride (75-09-2)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA,SB, SC, I, SD	5 * 200 200	H (WS) H (WS) H (FC) H (FC)	I J A A
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Methyl iodide (74-88-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Methyl methacrylate (80-62-6)	GA	50	H (WS)	J
Methyl parathion (298-00-0)	GA A, A-S, AA, AA-S, B, C	* *	H (WS) A(C)	
Remark: * Refer to standards for "Parathion and Methyl parathion."				
alpha-Methylstyrene (98-83-9)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2-Methylstyrene (611-15-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H	I J

			(WS)	
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3-Methylstyrene (100-80-1)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4-Methylstyrene (622-97-9)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Metribuzin (21087-64-9)	GA	50	H (WS)	J
Mirex (2385-85-5)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD A, A-S, AA, AA-S, B, C D SA, SB, SC	0.03 0.03 1 x 10-6 1 x 10-6 0.001* 0.001* 0.001	H (WS) H (WS) H (FC) H (FC) A(C) A(A) A(C)	A A A A
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined				

under section 702.15 (c) and (d) of this Title.				
Nabam (142-59-6)	GA	1.8	H (WS)	F
Naphthalene (91-20-3)	A, A-S, AA, AA-S	10	E	U
Niacinamide (98-92-0)	A, A-S, AA, AA-S	500	H (WS)	B
Nickel (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S, B, C, D SA, SB, SC, I SA, SB, SC, I, SD	100 100 * ** 8.2 74	H (WS) H (WS) A(C) A(A) A(C) A(A)	
Remarks: * (0.997) exp (0.846 [ln (hardness)] + 0.0584)** (0.998) exp (0.846 [ln (hardness)] + 2.255) Aquatic Type standards apply to dissolved form.				
Nitralin (4726-14-1)	GA	35	H (WS)	F
Nitrate (expressed as N) (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	10,000* 10,000*	H (WS) H (WS)	G G
Remark: * Also see standards for "Nitrate and Nitrite."				

Nitrate and Nitrite (expressed as N) (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	10,000* 10,000*	H (WS) H (WS)	G G
Remark: * Applies to the sum of these substances; also see individual standards for "Nitrate" and "Nitrite."				
Nitrilotriacetic acid (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C	3* 3* 5,000**	H (WS) H (WS) A(C)	A A
Remarks: * Includes related forms that convert to nitrilotriacetic acid upon acidification to a pH of 2.3 or less. ** Applies to nitrilotriacetate. ** For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Nitrite (expressed as N) (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C	1,000* 1,000* **	H (WS) H (WS) A(C)	G G
Remarks: * Also see standards for "Nitrate and Nitrite." ** Standard is 100 ug/L for warm water fishery waters and 20 ug/L for cold water fishery waters. ** For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
2-Nitroaniline (88-74-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of				

5 ug/L (described elsewhere in this Table) applies to this substance.				
3-Nitroaniline (99-09-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4-Nitroaniline (100-01-6)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Nitrobenzene (98-95-3)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S	0.4 0.4 30	H (WS) H (WS) E	A A U
2-Nitrotoluene (88-72-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3-Nitrotoluene (99-08-1)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
4-Nitrotoluene (99-99-0)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
5-Nitro-o-toluidine (99-55-8)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Octachlorostyrene	A, A-S, AA, AA-S	0.2	H (WS)	B

(29082-74-4)	GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD	0.2 6 x 10-6 6 x 10-6	H (WS) H (FC) H (FC)	B B B
Oxamyl (23135-22-0)	GA	50	H (WS)	J
Paraquat (4685-14-7)	GA	3.0	H (WS)	F
Parathion (56-38-2)	GA A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S, B, C, D	* * 0.065	H (WS) A(C) A(A)	
Remark: * Refer to standards for "Parathion and Methyl parathion."				
Parathion and Methyl parathion (56-38-2; 298-00-0)	GA A, A-S, AA, AA-S, B, C	1.5* 0.008**	H (WS) A(C)	F
Remarks: * Applies to the sum of these substances. ** Applies to the sum of these substances. For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Pendimethalin (40487-42-1)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				

Pentachlorobenzene (608-93-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Pentachloroethane (76-01-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Pentachloronitrobenzene (82-68-8)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Pentachlorophenol (87-86-5)	A, A-S, AA, AA-S, B, C	*	A(C)	
		**	A(A)	
	A, A-S, AA, AA-S, B, C, D	***	E	
	A, A-S, AA, AA-S	***	E	
	GA	****	E	
	B, C, D			
Remarks: * exp [1.005 (pH) - 5.134] ** exp [1.005 (pH) - 4.869] *** Refer to standards for "Phenolic compounds (total phenols)." **** Refer to standards for "Phenols, total chlorinated."				
Phenol (108-95-2)	A, A-S, AA, AA-S	*	E	
	GA	*	E	
	B, C, D	**	E	
Remarks: * Refer to standards for "Phenolic compounds (total phenols)."				

** Refer to standards for "Phenols, total unchlorinated."				
Phenolic compounds (total phenols) (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	1* 1*	E E	U U
Remark: * Applies to the sum of these substances.				
Phenols, total chlorinated (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D	* * 1.0**	E E E	V
Remarks: * Refer to standards for "Phenolic compounds (total phenols)." ** Applies to the sum of these substances.				
Phenols, total unchlorinated (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D	* * 5.0**	E E E	V
Remarks: * Refer to standards for "Phenolic compounds (total phenols)." ** Applies to the sum of these substances.				
1,2-Phenylenediamine (95-54-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,3-Phenylenediamine (108-45-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				

1,4-Phenylenediamine (106-50-3)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Phenyl ether (101-84-8)	A, A-S, AA, AA-S	10	E	U
Phenylhydrazine (100-63-0)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3-Phenyl-1-propene (637-50-3)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
cis-1-Phenyl-1-propene (766-90-5)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
trans-1-Phenyl-1-propene (873-66-5)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Phorate (298-02-2)	GA	*	H (WS)	
Remark: * Refer to standards for "Phorate and Disulfoton."				

Phorate and Disulfoton (298-02-2; 298-04-4)	GA	ND*	H (WS)	F
Remark: * Applies to sum of these substances.				
Picloram (CAS No. Not Applicable)	GA	50*	H (WS)	J
Remark: * Includes: related forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid.				
Polybrominated biphenyls (CAS No. Not Applicable)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to each congener individually.				
Polychlorinated biphenyls (CAS No. Not Applicable)	A, A-S, AA, AA-S	0.09*	H (WS)	A
	GA	0.09*	H (WS)	A
	A, A-S, AA, AA-S, B, C, D	1 x 10-6*	H (FC)	A
	SA, SB, SC, I, SD	1 x 10-6*	H (FC)	A
	A, A-S, AA, AA-S, B, C,D	1.2 x 10-4*	W	
	SA, SB, SC, I, SD	1.2 x 10-4*	W	
Remark: * Applies to the sum of these substances.				
Principal organic contaminant (CAS No. Not Applicable)	GA	5	H (WS)	J
Remarks: This standard applies to any and every individual substance, whether listed in this Table or not, that is in one of the principal organic contaminant classes as defined in section 700.1 of this Title except any				

substance that has a H(WS) Type standard for class GA waters (other than 5 ug/L with Basis Code J) listed elsewhere in this Table.

For the convenience of the reader, the principal organic contaminant standard of 5 ug/L (Basis Code J), is listed in this Table for some but not all substances regulated by this standard.

A less stringent guidance value for an individual substance may be substituted for this standard if so determined by the Commissioner of the New York State Department of Health.

Prometon (1610-18-0)	GA	50	H (WS)	J
Propachlor (1918-16-7)	GA	35	H (WS)	F
Propanil (709-98-8)	GA	7.0	H (WS)	F
Propazine (139-40-2)	GA	16	H (WS)	F
Propham (122-42-9)	GA	50	H (WS)	J
n-Propylbenzene (103-65-1)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Quaternary ammonium compounds (including dimethyl benzylammonium chloride & dimethylethyl benzyl ammonium chloride) (CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C	10*	A(C)	
Remarks: * Applies to the sum of these substances. * For the waters of the Great Lakes System, the department will substitute				

a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Radium 226 (CAS No. Not Applicable)	A, AA GA	* *	H (WS) H (WS)	H H
Remark: * 3 picocuries per liter; also see standards for "Radium 226 and Radium 228."				
Radium 226 and Radium 228 (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	* *	H (WS) H (WS)	G G
Remark: * 5 picocuries per liter; Applies to the sum of these substances.				
Radium 228 (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	* *	H (WS) H (WS)	
Remark: * Refer to standards for "Radium 226 and Radium 228."				
Selenium (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C	10 10 4.6*	H (WS) H (WS) A(C)	G G
Remark: * Aquatic Type standard applies to dissolved form.				
Silver (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C D	50 50 0.1* **	H (WS) H (WS) A(C)	G F

	SD	2.3	A(A) A(A)	

Remarks: * Applies to ionic silver.

** exp (1.72 [ln (ppm hardness)] - 6.52).Standards for D and SD Classes apply to acid-soluble form.

For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) and (d) of this Title.

Simazine (122-34-9)	A, A-S, AA, AA-S GA	0.5 0.5	H (WS) H (WS)	A A
Sodium (CAS No. Not Applicable)	GA	20,000	H (WS)	H
Strontium 90 (CAS No. Not Applicable)	A, A-S, AA, AA-S	*	H (WS)	G

Remarks: * 8 picocuries per liter.

If two or more radionuclides are present, the sum of their doses shall not exceed an annual potential dose of 4 millirems per year.

Styrene (100-42-5)	GA A, A-S, AA, AA-S	* 50	H (WS) E	J U

Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.

Sulfate (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	250,000 250,000	H (WS) H (WS)	G F
Sulfite	A, A-S, AA, AA-S, B, C	200*	A(C)	

(CAS No. Not Applicable)				
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title.				
Tebuthiuron (34014-18-1)	GA	50	H (WS)	J
Terbacil (5902-51-2)	GA	50	H (WS)	J
Tetrachlorobenzenes (634-66-2; 634-90-2;95-94-3; 12408-10-5)	GA A, A-S, AA, AA-S	* 10**	H (WS) E	J U
Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to each isomer (1,2,3,4-, 1,2,3,5-, and 1,2,4,5-tetrachlorobenzene) individually. ** Applies to the sum of 1,2,3,4-, 1,2,3,5- and 1,2,4,5-tetrachlorobenzene.				
1,1,1,2-Tetrachloroethane (630-20-6)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,1,2,2-Tetrachloroethane (79-34-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Tetrachloroethene (127-18-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Tetrachloroterephthalic acid (2136-79-0)	GA	50	H (WS)	J
alpha, alpha, alpha, 4-Tetrachloro-toluene	GA	*	H (WS)	J

(5216-25-1)				
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Thallium (CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C D	8* 20	A(C) A(A)	
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title. Aquatic Type standards apply to acid-soluble form.				
Theophylline (58-55-9)	A, A-S, AA, AA-S	40	H (WS)	B
Thiram (137-26-8)	GA	1.8	H (WS)	F
Toluene (108-88-3)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD	5 * 6,000 6,000	H (WS) H (WS) H (FC) H (FC)	I J B B
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Toluene-2,4-diamine (95-80-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Toluene-2,5-diamine	GA	*	H	J

(95-70-5)			(WS)	
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Toluene-2,6-diamine (823-40-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
o-Toluidine (95-53-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Toxaphene (8001-35-2)	A, A-S, AA, AA-S	0.06	H (WS)	A
	GA	0.06		A
	A, A-S, AA, AA-S, B, C, D	6 x 10-6	H (WS)	A
		6 x 10-6	H (FC)	A
	SA, SB, SC, I, SD	0.005	H (FC)	
	A, A-S, AA, AA-S, B, C	1.6*	A(C)	
	D	0.005		
	SA, SB, SC		A(A)	
			A(C)	
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic standard if so determined under section 702.15 (d) of this Title.				
1,2,4-Tribromobenzene	A, A-S, AA, AA-S	5	H (WS)	I
(615-54-3)	GA	*		J

			H (WS)	
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4,6-Trichloroaniline (634-93-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Trichlorobenzenes (87-61-6; 120-82-1; 108-70-3; 12002-48-1)	GA A, A-S, AA, AA-S, B, C SA, SB, SC A, A-S, AA, AA-S D SD	* 5** 5** 10** 50** 50**	H (WS) A(C) A(C) E E E	J U V V
Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to each isomer (1,2,3-, 1,2,4- and 1,3,5-trichlorobenzene) individually. ** Applies to the sum of 1,2,3-, 1,2,4- and 1,3,5-trichlorobenzene. For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) of this Title				
1,1,1-Trichloroethane (71-55-6)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,1,2-Trichloroethane	A, A-S, AA, AA-S	1	H (WS)	A

(79-00-5)	GA	1	H (WS)	A
Trichloroethene (79-01-6)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA, SB, SC, I, SD	5 * 40 40	H (WS) H (WS) H (FC) H (FC)	I J A A
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Trichlorofluoromethane (75-69-4)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4,5-Trichlorophenoxy-acetic acid (93-76-5)	GA	35	H (WS)	F
2,4,5-Trichlorophenoxy-propionic acid (93-72-1)	A, A-S, AA, AA-S GA	10 0.26	H (WS) H (WS)	G F
1,1,2-Trichloropropane (598-77-6)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J

Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,2,3-Trichloropropane (96-18-4)	A, A-S, AA, AA-S GA	0.04 0.04	H (WS) H (WS)	A A
cis-1,2,3-Trichloropropene (13116-57-9)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
trans-1,2,3-Trichloropropene (13116-58-0)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
alpha,2,4-Trichlorotoluene (94-99-5)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
alpha,2,6-Trichlorotoluene (2014-83-7)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
alpha,3,4-Trichlorotoluene	A, A-S, AA, AA-S	5	H (WS)	I

(102-47-6)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
alpha,alpha,2-Trichlorotoluene (88-66-4)	A, A-S, AA, AA-S	5	H (WS)	I
	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
alpha,alpha,4-Trichlorotoluene (13940-94-8)	A, A-S, AA, AA-S	5	H (WS)	I
	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,3,4-Trichlorotoluene (7359-72-0)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,3,5-Trichlorotoluene (56961-86-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,3,6-Trichlorotoluene (2077-46-5)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4,5-Trichlorotoluene (6639-30-1)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of				

5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4,6-Trichlorotoluene (23749-65-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,1,1-Trichloro-2,2,2-trifluoroethane (354-58-5)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Trifluralin (1582-09-8)	GA	35	H (WS)	F
1,2,3-Trimethylbenzene (526-73-8)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,2,4-Trimethylbenzene (95-63-6)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				

1,3,5-Trimethylbenzene (108-67-8)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
sym-Trinitrobenzene (99-35-4)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,3,4-Trinitrotoluene (602-29-9)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,3,6-Trinitrotoluene (18292-97-2)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4,5-Trinitrotoluene (610-25-3)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
2,4,6-Trinitrotoluene (118-96-7)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
3,4,5-Trinitrotoluene (603-15-6)	GA	*	H (WS)	J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Triphenyl phosphate	A, A-S, AA, AA-	4*	A(C)	

(115-86-6)	S, B, C D	40*	A(A)	
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) and (d) of this Title.				
Tritium (CAS No. Not Applicable)	A, A-S, AA, AA-S	*	H (WS)	G
Remark: * 20,000 picocuries per liter; if two or more radionuclides are present, the sum of their annual dose equivalent to the total body or any organ shall not exceed 4 millirems per year.				
Uranyl ion (Cas No. Not Applicable)	GA	5,000	H (WS)	H
Vanadium (CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C D	14* 190*	A(C) A(A)	
Remark: * For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15 (c) and (d) of this Title. Aquatic Type standards apply to acid-soluble form.				
Vinyl chloride (75-01-4)	GA	2	H (WS)	G
1,2-Xylene (95-47-6)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,3-Xylene (108-38-3)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J

Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
1,4-Xylene (106-42-3)	A, A-S, AA, AA-S GA	5 *	H (WS) H (WS)	I J
Remark: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.				
Zinc (CAS No. Not Applicable)	A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S, B, C, D SA, SB, SC, I SD	* ** 66 95	A(C) A(A) A(C) A(A)	
Remarks: Aquatic Type standards apply to dissolved form. * exp(0.85 [ln(ppm hardness)] + 0.50) ** 0.978 exp(0.8473 [ln(ppm hardness)] + 0.884)				
Zineb (12122-67-7)	GA	1.8	H (WS)	F
Ziram (137-30-4)	GA	4.2	H (WS)	F

Table 2
BASIS OF STANDARDS
(cf.703.5)

BASIS CODE	BASIS
A	Oncogenic, Human Health
B	Non-oncogenic, Human Health

F	Former Groundwater Regulations,6 NYCRR 703.5(a)(3), Human Health or Aesthetics
G	Specific MCL, Human Health or Aesthetics
H	Former Use of or Reference to 10 NYCRR Part 170, Human Health or Aesthetics
I	Principal Organic Contaminant Classes, Human Health
J	Former Groundwater Reference to 10 NYCRR Subpart 5-1, General Standards, Human Health
U	Potable Water, Aesthetics
V	Aquatic Life, Aesthetics

Historical Note

Sec. filed March 20, 1967; repealed, new filed: April 28, 1972; Aug. 2, 1978, amd. filed Nov. 5, 1984; repealed, new filed Aug. 2, 1991; amds. filed: Dec. 10, 1993; Feb. 10, 1998; Mar. 22, 1999 eff. April 7, 1999. Amended (f), Table (1).

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§703.6 Groundwater effluent limitations for discharges to Class GA waters

(a) The groundwater effluent limitations in Table 3 of subdivision (e) of this section and effluent limitations as established by section 702.16(c)(1) of this Title apply to a discharge from a point source or outlet or any other discharge within the meaning of the Environmental Conservation Law, section 17-0501 that will or may enter the waters of the State. Unless a demonstration is made to the contrary, it shall be presumed that a discharge to the ground or unsaturated zone is a discharge to groundwater. The groundwater effluent limitation is the maximum allowable concentration in micrograms per liter (ug/L), unless otherwise noted.

(b) In addition to the chemical characteristics provided in subdivision (a) of this section, coliform or pathogenic organisms shall not be discharged in amounts sufficient to render groundwaters detrimental to public health, safety or welfare.

(c) The department may establish additional groundwater effluent limitations as set forth in Part 702 of this Title.

(d) The groundwater effluent limitations shall be incorporated in SPDES

permits (under Part 750 *et seq.* of this Title) for discharges to groundwaters, where applicable.

Tables

TABLE 3 (cf. section 703.6) GROUNDWATER EFFLUENT LIMITATIONS CLASS GA		
Substance	**CAS No.**	**Maximum Allowable Concentration (ug/L)**
Alachlor	15972-60-8	0.5
Aldicarb and Methomyl	116-06-3; 16752-77-5	0.35
Aldrin	309-00-2	Not Detectable
Aluminum	Not Applicable	2,000
Antimony	Not Applicable	6
Arsenic	Not Applicable	50
Asbestos (fibers 10um)	Not Applicable	1.4 x 107 (fibers/L)
Atrazine	1912-24-9	7.5
Azinphosmethyl	86-50-0	4.4
Barium	Not Applicable	2,000
Benefin	1861-40-1	35
Benzene	71-43-2	1
Benzo(a)pyrene	50-32-8	Not Detectable
Bis(2-chloroethyl)ether	111-44-4	1.0
bis(2-ethylhexyl)phthalate	117-81-7	5
Bromacil	314-40-9	4.4
Butachlor	23184-66-9	3.5
Cadmium	Not Applicable	10
Captan	133-06-2	18
Carbaryl	63-25-2	29
Carbon tetrachloride	56-23-5	5
Chlorinated dibenzo-p-dioxins and	Not Applicable	7×10^{-7} equivalents of 2, 3, 7, 8 - TCDD

Chlorinated dibenzofurans[7]		
Chloramben[1]	Not Applicable	50
Chlordane	57-74-9	0.05
Chloride	Not Applicable	500,000
Chloroform	67-66-3	7
Chromium (Hexavalent)	Not Applicable	100
Copper	Not Applicable	1,000
Cyanide	Not Applicable	400
p,p'-DDD	72-54-8	0.3
p,p'-DDE	72-55-9	0.2
p,p'-DDT	50-29-3	0.2
Diazinon	333-41-5	0.7
1,2-Dibromo-3-chloropropane	96-12-8	0.04
Di-n-butylphthalate	84-74-2	50
Dicamba	1918-00-9	0.44
1,2-Dichlorobenzene	95-50-1	3
1,3-Dichlorobenzene	541-73-1	3
1,4-Dichlorobenzene	106-46-7	3
1,2-Dichloroethane	107-06-2	0.6
2,4-Dichlorophenoxyacetic acid (2,4-D)	94-75-7	50
1,2-Dichloropropane	78-87-5	1
1,3-Dichloropropene (sum of cis- and trans-isomers)	542-75-6 (sum of 10061-01-5 and 10061-02-6)	0.4
Dieldrin	60-57-1	0.004
Di(2-ethylhexyl)adipate	103-23-1	20
N,N-Dimethylaniline	121-69-7	1
Diphenylhydrazine	122-66-7	Not Detectable
Diquat	2764-72-9	20
Endrin	72-20-8	Not Detectable
Ethylene dibromide	106-93-4	6 x 10-4

Ethylenethiourea	96-45-7	Not Detectable
Ferbam	14484-64-1	4.2
Fluoride	Not Applicable	3,000
Foaming agents[2]	Not Applicable	1,000
Folpet	133-07-3	50
Heptachlor	76-44-8	0.04
Heptachlor epoxide	1024-57-3	0.03
Hexachlorobenzene	118-74-1	0.04
Hexachlorobutadiene	87-68-3	0.5
alpha-Hexachlorocyclohexane	319-84-6	0.01
beta-Hexachlorocyclohexane	319-85-7	0.04
delta-Hexachlorocyclohexane	319-86-8	0.04
epsilon-Hexachlorocyclohexane	6108-10-7	0.04
gamma-Hexachlorocyclohexane	58-89-9	0.05
Hexachlorophene	70-30-4	See Note 3
Iron4	Not Applicable	600
Kepone	143-50-0	Not Detectable
Lead	Not Applicable	50
Malathion	121-75-5	7.0
Mancozeb	8018-01-7	1.8
Maneb	12427-38-2	1.8
Manganese[4]	Not Applicable	600
Mercury	Not Applicable	1.4
Methoxychlor	72-43-5	35
2-Methyl-4-chlorophenoxyacetic acid	94-74-6	0.44
Methylene chloride (Dichloromethane)	75-09-2	5
Methyl methacrylate	80-62-6	50
Mirex	2385-85-5	0.03
Nabam	142-59-6	1.8
Nickel	Not Applicable	200

Nitralin	4726-14-1	35
Nitrate (expressed as N)	Not Applicable	20,000
Nitrate and Nitrite (expressed as N)	Not Applicable	20,000
Nitrilotriacetic acid[5]	Not Applicable	3
Nitrite (expressed as N)	Not Applicable	2,000
Nitrobenzene	98-95-3	0.4
Octachlorostyrene	29082-74-4	0.2
Oil and Grease	Not Applicable	15,000
Paraquat	4685-14-7	3.0
Parathion and Methyl parathion	56-38-2; 298-00-0	1.5
Pentachloronitrobenzene	82-68-8	Not Detectable
pH	Not Applicable	See Note 6
Phenolic compounds (total phenols)	Not Applicable	2
Phorate and Disulfoton	298-02-2; 298-04-4	Not Detectable
Polychlorinated biphenyls	Not Applicable	0.09
Propachlor	1918-16-7	35
Propanil	709-98-8	7.0
Propazine	139-40-1	16
Selenium	Not Applicable	20
Silver	Not Applicable	100
Simazine	122-34-9	0.5
Styrene	100-42-5	930
Sulfate	Not Applicable	500,000
Sulfide	Not Applicable	1,000
Thiram	137-26-8	1.8
Toxaphene	8001-35-2	0.06
1,1,2-Trichloroethane	79-00-5	1
Trichloroethene	79-01-6	5
2,4,5-Trichlorophenoxyacetic acid	93-76-5	35

2,4,5-Trichlorophenoxypropionic acid	93-72-1	0.26
1,2,3-Trichloropropane	96-18-4	0.04
Trifluralin	1582-09-8	35
Vinyl chloride	75-01-4	2
Zinc	Not Applicable	5,000
Zineb	12112-67-7	1.8
Ziram	137-30-4	4.2

1. Includes related forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid.

2. Foaming agents determined as methylene blue active substances (MBAS) or other tests as specified by the commissioner.

3. Refer to groundwater effluent limitation for "Phenolic compounds (total phenols)".

4. Combined concentration of iron and manganese shall not exceed 1000 ug/L.

5. Includes related forms that convert to nitrilotriacetic acid upon acidification to a pH of 2.3 or less.

6. pH shall not be lower than 6.5 or the pH of the natural groundwater, whichever is lower, nor shall be greater than 8.5 or the pH of the natural groundwater, whichever is greater.

7. Value is for the total of the chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans as equivalents of 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) as specified by the Class GA H(WS) standard in Table 1 of section 703.5 of this Part.

In addition to the effluent limitations above, the following also apply in the counties of Nassau and Suffolk:

SUBSTANCE	**MAXIMUM ALLOWABLE CONCENTRATION IN mg/L**
(1) Dissolved solids, total	1,000
(2) Nitrogen, total (as N)	10

Historical Note

Sec. filed Aug. 2, 1978; repealed, new filed Aug. 2, 1991; amds. filed: Feb. 10, 1998; March 3, 1998; March 22, 1999 eff. April 7, 1999. Amended (e), (Table 3).

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§703.7 Severability

Historical Note

Secs. filed Aug. 2, 1978; repealed, filed Aug. 2, 1991 eff. 30 days after filing.

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APPENDIX K

H. M. QUACKENBUSH SITE TRIP REPORT

MARCH 2006

SAMPLING TRIP REPORT

Site Name: H.M. Quackenbush Inc. Site
CERCLIS ID Number: NYD002229326
Sampling Date: February 21 - 24 2006
CLP Case Number: 35114

1. Site Location:

   Herkimer, Herkimer County, New York

2. Sample Descriptions:

   Refer to Table 1

3. Laboratories Receiving Samples:

Case Number	Sample Type	Laboratory Code	Name and Address of Laboratory
35114	TCL - VOC and percent moisture, BNA SOM 1.1	LIBRTY	Liberty Analytical Corporation 501 Madison Ave. Cary, NC 27513
35114	TAL - Total Metals MAL-3	MALT	U.S. EPA DESA/HWSB Mobile Analytical Laboratory 2890 Woodbridge Ave Edison, NJ 08837
35065	TAL – Cyanide only ILM0 5.3	BONNER	Bonner Analytical Testing Company 2703 Oak Grove Road Hattiesburg, MS 39402

4. **Sample Dispatch Data:**

On February 21, a total of seventeen (17) soil samples, including one field duplicate sample, were collected from seven (7) locations below the on-site building. All samples were collected for target analyte list (TAL) total metals and cyanide analysis. Two of the seventeen samples were collected for target compound list (TCL) base neutral acid (BNA) analysis. The samples were held in a secure location, on ice overnight.

On February 22, 2006, seventeen (17) samples, including one field duplicate, were collected from five locations for TAL – total metals and cyanide analysis. Two of the samples were collected for TCL – volatile organic compound (VOC) analysis using EnCore™ samplers and three for TCL – BNA analysis. To accompany the VOC samples an additional sample jar was collected for percent moisture content which can be seen on the Generic Chain of Custody Record. In addition, two monitoring wells were sampled, including one duplicate

for TAL – total metals and cyanide analysis and TCL – BNA analysis. At 1800 on February 22, 2006, all twelve samples for organic samples from February 21 and 22, 2006, were shipped in one cooler on wet ice to Liberty Analytical under air bill number A5491379500. The Organic Chain of Custody and the Generic Chain of Custody Record can be found as Appendix A. The inorganic samples were held overnight.

On February 23, 2006, a total of forty five soil samples were collected including two field duplicate samples. On this day a total of seventeen samples were collected for TCL – BNA analysis including two duplicates. Six samples were also collected for TCL-VOC analysis including percent moisture samples. One additional monitoring well was sampled for TAL – total metals and cyanide analysis and TCL – BNA analysis. Two rinsate blank samples were also collected for TAL – total metal, cyanide and TCL-BNA analysis. Two coolers were shipped at 1800 on February 23, 2006. One cooler under air bill number A5491379484 containing the aqueous samples for TCL- BNA analysis. The other cooler under air bill number A5491379760 had all of the soil samples for TCL – VOC, BNA and percent moisture analysis. The Organic Chain of Custody and the Generic Chain of Custody Record can be found as Appendix A. The inorganic samples were held overnight.

On February 24, 2006 a total of twelve (12) soil samples including one duplicate for TAL – total metals and cyanide analysis were collected. Four of the samples were taken for TCL – BNA analysis and three samples were collected for TCL – VOC analysis including a field duplicate. At 1700 on February 24, 2006, all of the samples for Cyanide analysis were sent in two coolers to Bonner Analytical Testing under air bill numbers A5491379608 and A5491379466. The organic samples collected on February 24, 2006 were sent to Liberty Analytical at 1700 under air bill number A5491379813. The samples for TAL – total metals analysis were hand-delivered to the Mobile Laboratory staff at 1200 on February 24, 2006. The Organic Chain of Custody and the Generic Chain of Custody Record can be found as Appendix A. The inorganic Chain of Custody Records can be found as Appendix B.

5. Sampling Personnel:

Name	Organization	Site Duties
Diane Salkie	USEPA Region II DESA/HWSB Superfund Contract Support Team	Project Manager/Sample Management
Robert Finke	USEPA Region II DESA/HWSB Superfund Contract Support Team	Field Personnel
Mark Denno	USEPA Region II DESA/HWSB Superfund Contract Support Team	Field Personnel
Pat Sheridan	USEPA Region II DESA/HWSB Superfund Contract Support Team	Quality Assurance Officer

6. Additional Comments:

The number of samples includes:

- 89 soil samples including 4 field duplicates (laboratory quality control sample) for TAL – total metals and cyanide analysis.
- 27 soil samples including 2 field duplicates for TCL – BNA analysis
- 12 soil samples including 1 field duplicate for TCL – VOC analysis and percent moisture
- 4 monitoring well samples including 1 filed duplicate for TAL – total metals and cyanide analysis and TCL – BNA analysis
- 2 rinsate blank samples for TAL – total metals and cyanide analysis and TCL – BNA analysis

The following Sample Numbers were used for laboratory and/or field quality control:

CLP Statement of Work (SOW)	Laboratory Quality Control (QC) Samples	
	Matrix Spike/ Matrix Spike Duplicate (MS/MSD)	**Field Duplicate**
Organics SOM0 1.1	--------	VOCs: B3LB6/B-26C is a duplicate of B3LB5/B-26B SVOCs: B3L73/B-14E is a duplicate of B3L72/B-14D and B3L95/B-20D is a duplicate of B3L94/B-20C B3L62/MW-6 is a duplicate of B3L61/MW-2
Inorganics ILM0 5.3 and MAL-3	MB3L46/B-7A MB3L67/B-13A MB3L86/B-18B MB3LB5/B-26B MB3L63/MW-4	MB3L42/B-6D is a duplicate of MB3L41/B-6C MB3L59/B-11D is a duplicate of MB3L57/ B-11B MB3L91/B-19D is a duplicate of MB3L89/ B-19B MB3LC0/B-27D is a duplicate of MB3LB7/ B-27A MB3L62/MW-6 is a duplicate of MB3L61/ MW-2

Report Prepared By: Diane Salkie Date 3/2/06 March 02, 2006

TABLE 1
SAMPLE DESCRIPTIONS
H.M. QUACKENBUSH INC SITE
HERKIMER, HERKIMER COUNTY, NEW YORK

Sample Location	Sample Type	Sample Collection		CLP Sample Number	Analysis Requested		Sample Container	Required Sample Volume	Sample Preservation
		Date	Time		Parameter	Fraction			
B-1A	Soil	02/21/2006	1415	MB3L29	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-1B	Soil	02/21/2006	1432	MB3L30	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-1C	Soil	02/21/2006	1442	MB3L31	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-2A	Soil	02/21/2006	1450	MB3L32	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-2B	Soil	02/21/2006	1457	MB3L33	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-3A	Soil	02/21/2006	1502	MB3L34	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-3B	Soil	02/21/2006	1510	MB3L35	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-4A	Soil	02/21/2006	1521	MB3L36	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-4B	Soil	02/21/2006	1527	MB3L37	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C

TABLE 1 - CONTINUED
SAMPLE DESCRIPTIONS
H.M. QUACKENBUSH INC SITE
HERKIMER, HERKIMER COUNTY, NEW YORK

Sample Location Identifier	Sample Type	Sample Collection		CLP Sample Number	Analysis Requested		Sample Container	Required Sample Volume	Sample Preservation
		Date	Time		Parameter	Fraction			
B-4C	Soil	02/21/2006	1541	MB3L38	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-6A	Soil	02/21/2006	1554	MB3L39	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-6B	Soil	02/21/2006	1613	MB3L40	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-6C	Soil	02/21/2006	1620	MB3L41	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-6D Duplicate of B-6C	Soil	02/21/2006	1625	MB342	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-5A	Soil	02/21/2006	1640	MB3L43	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-5B	Soil	02/21/2006	1652	B3L44	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L44	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
SS-Hole1	Soil	02/21/2006	1700	B3L45	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
					TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C

TABLE 1 - CONTINUED
SAMPLE DESCRIPTIONS
H.M. QUACKENBUSH INC SITE
HERKIMER, HERKIMER COUNTY, NEW YORK

Sample Location Identifier	Sample Type	Sample Collection		CLP Sample Number	Analysis Requested		Sample Container	Required Sample Volume	Sample Preservation
		Date	Time		Parameter	Fraction			
B-7A MS/MSD	Soil	02/22/2006	0827	MB3L46	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-7B	Soil	02/22/2006	0841	MB3L47	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-7C	Soil	02/22/2006	0850	B3L48	TCL	VOC	(3) EnCore™ samplers and (1) 4 oz. jar for percent moisture	15 g.	Cool to 4°C
				MB3L48	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
MW-5	Ground Water	02/22/2006	1200	B3L60	TCL	BNAs	(1) 1 lt. amber jars with Teflon lid	1 lt.	Cool to 4°C
				MB3L60	TAL	Total Metals	(1) 1 lt. HDPE container	1 lt.	1:1 HNO_3 to pH < 2; Cool to 4°C
					TAL	Cyanide	(1) 1 lt. HDPE container	1 lt.	1:1 NaOH to pH >12; Cool to 4°C
B-9A	Soil	02/22/2006	1345	MB3L49	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C

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Sample Location Identifier	Sample Type	Sample Collection		CLP Sample Number	Analysis Requested		Sample Container	Required Sample Volume	Sample Preservation
		Date	Time		Parameter	Fraction			
B-9B	Soil	02/22/2006	1351	MB3L50	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-9C	Soil	02/22/2006	1356	B3L51	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L51	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-9D	Soil	02/22/2006	1400	MB3L52	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-10A	Soil	02/22/2006	1408	MB3L53	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-10B	Soil	02/22/2006	1416	B3L54	TCL	VOC	(3) EnCore™ samplers and (1) 4 oz. jar for percent moisture	15 g.	Cool to 4°C
				MB3L54	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-10C	Soil	02/22/2006	1422	MB3L55	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-11A	Soil	02/22/2006	1434	B3L56	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L56	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-11B	Soil	02/22/2006	1445	MB3L57	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C

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		Date	Time		Parameter	Fraction			
B-11D Duplicate of B-11B	Soil	02/22/2006	1445 (1500)	MB3L59	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
MW-2	Ground Water	02/22/2006	1445	B3L61	TCL	BNAs	(1) 1 lt. amber jars with Teflon lid	1 lt.	Cool to 4°C
				MB3L61	TAL	Total Metals	(1) 1 lt. HDPE container	1 lt.	1:1 HNO_3 to pH < 2; Cool to 4°C
					TAL	Cyanide	(1) 1 lt. HDPE container	1 lt.	1:1 NaOH to pH >12; Cool to 4°C
MW-6 Duplicate of Mw-2	Ground Water	02/22/2006	1445 (1500)	B3L62	TCL	BNAs	(1) 1 lt. amber jars with Teflon lid	1 lt.	Cool to 4°C
				MB3L62	TAL	Total Metals	(1) 1 lt. HDPE container	1 lt.	1:1 HNO_3 to pH < 2; Cool to 4°C
					TAL	Cyanide	(1) 1 lt. HDPE container	1 lt.	1:1 NaOH to pH >12; Cool to 4°C
B-11C	Soil	02/22/2006	1453	B3L58	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L58	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-12A	Soil	02/22/2006	1515	MB3L64	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C

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		Date	Time		Parameter	Fraction			
B-12C	Soil	02/22/2006	1520	MB3L66	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-12B	Soil	02/22/2006	1525	MB3L65	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-13A MS/MSD	Soil	02/23/2006	0820	MB3L67	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-13B	Soil	02/23/2006	0833	B3L68	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L68	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-13C	Soil	02/23/2006	0838	MB3L69	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-14A	Soil	02/23/2006	0909	B3L70	TCL	VOC	(3) EnCore™ samplers and (1) 4 oz. jar for percent moisture	15 g.	Cool to 4°C
				MB3L70	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-14C	Soil	02/23/2006	0930	MB3L71	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-14D	Soil	02/23/2006	0940	B3L72	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L72	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C

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Sample Location Identifier	Sample Type	Sample Collection		CLP Sample Number	Analysis Requested		Sample Container	Required Sample Volume	Sample Preservation
		Date	Time		Parameter	Fraction			
B-14E Duplicate of B-14D	Soil	02/23/2006	0940 (0943)	B3L73	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
B-15A	Soil	02/23/2006	1019	B3L74	TCL	VOC	(3) EnCore™ samplers and (1) 4 oz. jar for percent moisture	15 g.	Cool to 4°C
				MB3L74	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-15B	Soil	02/23/2006	1030	B3L75	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L75	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-15C	Soil	02/23/2006	1037	MB3L76	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-16A	Soil	02/23/2006	1045	MB3L77	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
CSR-1A	Soil	02/23/2006	1055	MB3L78	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
CSR-1B	Soil	02/23/2006	1108	B3L79	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L79	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C

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		Date	Time		Parameter	Fraction			
CSR-2A	Soil	02/23/2006	1112	B3L80	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L80	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
CSR-2B	Soil	02/23/2006	1120	MB3L81	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-17A	Soil	02/23/2006	1130	MB3L82	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-17B	Soil	02/23/2006	1135	MB3L83	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-17C	Soil	02/23/2006	1138	B3L84	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L84	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
MW-4	Ground Water	02/23/2006	1150	B3L63	TCL	BNAs	(1) 1 lt. amber jars with Teflon lid	1 lt.	Cool to 4°C
				MB3L63	TAL	Total Metals	(1) 1 lt. HDPE container	1 lt.	1:1 HNO_3 to pH < 2; Cool to 4°C
					TAL	Cyanide	(1) 1 lt. HDPE container	1 lt.	1:1 NaOH to pH >12; Cool to 4°C

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Sample Location Identifier	Sample Type	Sample Collection		CLP Sample Number	Analysis Requested		Sample Container	Required Sample Volume	Sample Preservation
		Date	Time		Parameter	Fraction			
B-18A	Soil	02/23/2006	1150	B3L85	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L85	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-18B MS/MSD	Soil	02/23/2006	1153	MB3L86	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-18C	Soil	02/23/2006	1210	B3L87	TCL	VOC	(3) EnCore™ samplers and (1) 4 oz. jar for percent moisture	15 g.	Cool to 4°C
				MB3L87	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-19A	Soil	02/23/2006	1318	MB3L88	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-19B	Soil	02/23/2006	1323	B3L89	TCL	VOC	(3) EnCore™ samplers and (1) 4 oz. jar for percent moisture	15 g.	Cool to 4°C
				MB3L89	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-19C	Soil	02/23/2006	1330	B3L90	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L90	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-19D Duplicate of B-19B	Soil	02/23/2006	1323 (1335)	MB3L91	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C

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Sample Location Identifier	Sample Type	Sample Collection		CLP Sample Number	Analysis Requested		Sample Container	Required Sample Volume	Sample Preservation
		Date	Time		Parameter	Fraction			
B-20A	Soil	02/23/2006	1345	B3L92	TCL	VOC	(3) EnCore™ samplers and (1) 4 oz. jar for percent moisture	15 g.	Cool to 4°C
				MB3L92	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B20B	Soil	02/23/2006	1350	MB3L93	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-20C	Soil	02/23/2006	1355	B3L94	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L94	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-20D Duplicate of B-20C	Soil	02/23/2006	1355 (1358)	B3L95	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
S-3A	Soil	02/23/2006	1402	B3L96	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L96	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
S-4A	Soil	02/23/2006	1414	B3L97	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L97	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
DB-01	Soil	02/23/2006	1449	B3L98	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3L98	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C

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		Date	Time		Parameter	Fraction			
B-21A	Soil	02/23/2006	1500	MB3L99	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-21B	Soil	02/23/2006	1506	MB3LA0	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-22A	Soil	02/23/2006	1510	MB3LA1	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-22B	Soil	02/23/2006	1520	MB3LA2	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-23A	Soil	02/23/2006	1532	B3LA3	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3LA3	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-23B	Soil	02/23/2006	1538	MB3LA4	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-24A	Soil	02/23/2006	1550	MB3LA5	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-24B	Soil	02/23/2006	1555	B3LA6	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3LA6	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C

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Sample Location Identifier	Sample Type	Sample Collection		CLP Sample Number	Analysis Requested		Sample Container	Required Sample Volume	Sample Preservation
		Date	Time		Parameter	Fraction			
B-24C	Soil	02/23/2006	1600	B3LA7	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3LA7	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
RB-01	Rinsate Blank	02/23/2006	1545	B3LA8	TCL	BNAs	(1) 1 lt. amber jars with Teflon lid	1 lt.	Cool to 4°C
				MB3LA8	TAL	Total Metals	(1) 1 lt. HDPE container	1 lt.	1:1 HNO_3 to pH < 2; Cool to 4°C
					TAL	Cyanide	(1) 1 lt. HDPE container	1 lt.	1:1 NaOH to pH >12; Cool to 4°C
RB-02	Rinsate Blank	02/23/2006	1600	B3LA9	TCL	BNAs	(1) 1 lt. amber jars with Teflon lid	1 lt.	Cool to 4°C
				MB3LA9	TAL	Total Metals	(1) 1 lt. HDPE container	1 lt.	1:1 HNO_3 to pH < 2; Cool to 4°C
					TAL	Cyanide	(1) 1 lt. HDPE container	1 lt.	1:1 NaOH to pH >12; Cool to 4°C
B-25A	Soil	02/23/2006	1610	B3LB0	TCL	VOC	(3) EnCore™ samplers and (1) 4 oz. jar for percent moisture	15 g.	Cool to 4°C
				MB3LB0	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-25B	Soil	02/23/2006	1615	MB3LB1	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C

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		Date	Time		Parameter	Fraction			
DB-2A	Soil	02/23/2006	1620	B3LB2	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3LB2	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
DB-2B	Soil	02/23/2006	1630	B3LB3	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3LB3	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-26A	Soil	02/24/2006	0840	MB3LB4	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-26B MS/MSD	Soil	02/24/2006	0845	B3LB5	TCL	VOC	(3) EnCore™ samplers and (1) 4 oz. jar for percent moisture	15 g.	Cool to 4°C
				MB3LB5	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-26C Duplicate of B-26B	Soil	02/24/2006	0845 (0848)	B3LB6	TCL	VOC	(3) EnCore™ samplers and (1) 4 oz. jar for percent moisture	15 g.	Cool to 4°C
B-27A	Soil	02/24/2006	0850	MB3LB7	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-27B	Soil	02/24/2006	0900	MB3LB8	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
B-27C	Soil	02/24/2006	0910	MB3LB9	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C

TABLE 1 - CONTINUED
SAMPLE DESCRIPTIONS
H.M. QUACKENBUSH INC SITE
HERKIMER, HERKIMER COUNTY, NEW YORK

Sample Location Identifier	Sample Type	Sample Collection		CLP Sample Number	Analysis Requested		Sample Container	Required Sample Volume	Sample Preservation
		Date	Time		Parameter	Fraction			
B-27D Duplicate of B-27A	Soil	02/24/2006	0850 (0912)	MB3LC0	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
BG-1A	Soil	02/24/2006	0945	B3LC1	TCL	VOC	(3) EnCore™ samplers and (1) 4 oz. jar for percent moisture	15 g.	Cool to 4°C
						BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3LC1	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
BG-1B	Soil	02/24/2006	0950	B3LC2	TCL	VOC	(3) EnCore™ samplers and (1) 4 oz. jar for percent moisture	15 g.	Cool to 4°C
						BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3LC2	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
S-3B	Soil	02/24/2006	1003	B3LC3	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3LC3	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
S-4B	Soil	02/24/2006	1006	B3LC4	TCL	BNAs	(1) 8 oz. jar with Teflon lid	8 oz.	Cool to 4°C
				MB3LC4	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C
DB-3A	Soil	02/24/2006	1030	MB3LC5	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C

TABLE 1 - CONTINUED
SAMPLE DESCRIPTIONS
H.M. QUACKENBUSH INC SITE
HERKIMER, HERKIMER COUNTY, NEW YORK

Sample Location Identifier	Sample Type	Sample Collection		CLP Sample Number	Analysis Requested		Sample Container	Required Sample Volume	Sample Preservation
		Date	Time		Parameter	Fraction			
DB-3B	Soil	02/24/2006	1040	MB3LC6	TAL	Total Metals	(1) 2 oz. jar with Teflon lid	2 oz.	Cool to 4°C
					TAL	Cyanide	(1) 4 oz. jar with Teflon lid	4 oz.	Cool to 4°C

APPENDIX A

ORGANIC AND GENERIC TRAFFIC REPORT & CHAIN OF CUSTODY RECORDS

(TCL ANALYSIS)

APPENDIX B

INORGANIC TRAFFIC REPORT & CHAIN OF CUSTODY RECORDS

(TAL ANALYSIS)

USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Re

Case No: 35114
DAS No:

R

Region:	2
Project Code:	
Account Code:	
CERCLIS ID:	NYD002229326
Spill ID:	02XB
Site Name/State:	H.M. Quackenbush, Inc./NY
Project Leader:	Diane Salkie
Action:	Removal Action
Sampling Co:	U.S. EPA

Date Shipped:	2/22/2006
Carrier Name:	UPS
Airbill:	A5491379500
Shipped to:	Liberty Analytical Corporation 501 Madison Avenue Cary NC 27513 (919) 379-4100

Chain of Custody Record

Sampler Signature:

	Relinquished By (Date / Time)	Received By (Date / Time)
1	2/22/06 1826	UPS A5491379500 2/22/06 1826
2		
3		
4		

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
B3L44	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-5B	S: 2/21/2006	16:52	MB3L44	--
B3L45	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	SS-Hole1	S: 2/21/2006	17:00	MB3L45	--
B3L48	Soil/Sediment/ Diane Salkie	L/G	VOA (21)	(Ice Only) (3)	B-7C	S: 2/22/2006	8:50	MB3L48	--
B3L51	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-9C	S: 2/22/2006	13:56	MB3L51	--
B3L54	Soil/Sediment/ Diane Salkie	L/G	VOA (21)	(Ice Only) (3)	B-10B	S: 2/22/2006	14:16	MB3L54	--
B3L56	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-11A	S: 2/22/2006	14:34	MB3L56	--
B3L58	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-11C	S: 2/22/2006	14:53	MB3L58	--
B3L60	Ground Water/ Diane Salkie	L/G	BNA (21)	(Ice Only) (2)	MW-5	S: 2/22/2006	12:00	MB3L60	--
B3L61	Ground Water/ Diane Salkie	L/G	BNA (21)	(Ice Only) (2)	MW-2	S: 2/22/2006	14:45	MB3L61	--
B3L62	Ground Water/ Diane Salkie	L/G	BNA (21)	(Ice Only) (2)	MW-6	S: 2/22/2006	15:00	MB3L62	Field Duplicate

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

BNA = CLP TCL Semivolatiles, VOA = CLP TCL Volatiles

TR Number: 2-043013577-022206-0001

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: 35114
Client No:

R

Region:	2	**Date Shipped:**	2/22/2006	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	UPS	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:		**Airbill:**	A5491379500	1 2/22/06 1500	UPS A5491379500 2/22/06 1500
CERCLIS ID:	NYD002229326	**Shipped to:**	Liberty Analytical Corporation 501 Madison Avenue Cary NC 27513 (919) 379-4100	2	
Spill ID:	02XB			3	
Site Name/State:	H.M. Quackenbush, Inc./NY			4	
Project Leader:	Diane Salkie				
Action:	Removal Action				
Sampling Co:	U.S. EPA				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	QC Type
B3L48	Soil/Sediment/ Diane Salkie	L/G	PercMois (21)	(Ice Only) (1)	B-7C	S: 2/22/2006 8:50	--
B3L54	Soil/Sediment/ Diane Salkie	L/G	PercMois (21)	(Ice Only) (1)	B-10B	S: 2/22/2006 14:16	--

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____
PercMois = Percent Moisture			

TR Number: 2-043013577-022206-0002

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody R( )

Case No: 35114 (R
DAS No:

Region:	2
Project Code:	
Account Code:	
CERCLIS ID:	NYD002229326
Spill ID:	02XB
Site Name/State:	H.M. Quackenbush, Inc./NY
Project Leader:	Diane Salkie
Action:	Removal Action
Sampling Co:	U.S. EPA

Date Shipped:	2/23/2006
Carrier Name:	UPS
Airbill:	A5491379760
Shipped to:	Liberty Analytical Corporation 501 Madison Avenue Cary NC 27513 (919) 379-4100

Chain of Custody Record

Sampler Signature:

	Relinquished By (Date / Time)	Received By (Date / Time)
1	2/23/06 1800	UPS A5491379760 2/23/06 1800
2		
3		
4		

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
B3L68	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-13B	S: 2/23/2006	8:33	MB3L68	--
B3L70	Soil/Sediment/ Diane Salkie	L/G	VOA (21)	(Ice Only) (3)	B-14A	S: 2/23/2006	9:09	MB3L70	--
B3L72	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-14D	S: 2/23/2006	9:40	MB3L72	--
B3L73	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-14E	S: 2/23/2006	9:43		Field Duplicate
B3L74	Soil/Sediment/ Diane Salkie	L/G	VOA (21)	(Ice Only) (3)	B-15A	S: 2/23/2006	10:19	MB3L74	--
B3L75	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-15B	S: 2/23/2006	10:30	MB3L75	--
B3L79	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	CSR-1B	S: 2/23/2006	11:08	MB3L79	--
B3L80	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	CSR-2A	S: 2/23/2006	11:12	MB3L80	--
B3L84	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-17C	S: 2/23/2006	11:38	MB3L84	--
B3L85	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-18A	S: 2/23/2006	11:50	MB3L85	--
B3L87	Soil/Sediment/ Diane Salkie	L/G	VOA (21)	(Ice Only) (3)	B-18C	S: 2/23/2006	12:10	MB3L87	--

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

BNA = CLP TCL Semivolatiles, VOA = CLP TCL Volatiles

TR Number: 2-043013577-022306-0004

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 35114 **R**
DAS No:

Region:	2
Project Code:	
Account Code:	
CERCLIS ID:	NYD002229326
Spill ID:	02XB
Site Name/State:	H.M. Quackenbush, Inc./NY
Project Leader:	Diane Salkie
Action:	Removal Action
Sampling Co:	U.S. EPA

Date Shipped:	2/23/2006
Carrier Name:	UPS
Airbill:	A5491379760
Shipped to:	Liberty Analytical Corporation 501 Madison Avenue Cary NC 27513 (919) 379-4100

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1	2/23/06 1800	UPS A5491379760	2/23/06 1800
2			
3			
4			

Sampler Signature:

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
B3L89	Soil/Sediment/ Diane Salkie	L/G	VOA (21)	(Ice Only) (3)	B-19B	S: 2/23/2006	13:23	MB3L89	--
B3L90	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-19C	S: 2/23/2006	13:30	MB3L90	--
B3L92	Soil/Sediment/ Diane Salkie	L/G	VOA (21)	(Ice Only) (3)	B-20A	S: 2/23/2006	13:45	MB3L92	--
B3L94	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-20C	S: 2/23/2006	13:55	MB3L94	--
B3L95	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-20D	S: 2/23/2006	13:58		Field Duplicate
B3L96	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	S-3A	S: 2/23/2006	14:02	MB3L96	--
B3L97	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	S-4A	S: 2/23/2006	14:14	MB3L97	--
B3L98	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	DB-1	S: 2/23/2006	14:49	MB3L98	--
B3LA3	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-23A	S: 2/23/2006	15:32	MB3LA3	--
B3LA6	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-24B	S: 2/23/2006	15:55	MB3LA6	--
B3LA7	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	B-24C	S: 2/23/2006	16:00	MB3LA7	--

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

BNA = CLP TCL Semivolatiles, VOA = CLP TCL Volatiles

TR Number: 2-043013577-022306-0004

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody R(I

Case No: 35114 **R**
DAS No:

Region:	2	**Date Shipped:**	2/23/2006	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	UPS	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:		**Airbill:**	A5491379760	1 2/23/06 1800	UPS A5491379760 2/23/06 1800
CERCLIS ID:	NYD002229326	**Shipped to:**	Liberty Analytical Corporation 501 Madison Avenue Cary NC 27513 (919) 379-4100	2	
Spill ID:	02XB			3	
Site Name/State:	H.M. Quackenbush, Inc./NY			4	
Project Leader:	Diane Salkie				
Action:	Removal Action				
Sampling Co:	U.S. EPA				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
B3LB0	Soil/Sediment/ Diane Salkie	L/G	VOA (21)	(Ice Only) (3)	B-25A	S: 2/23/2006	16:10	MB3LB0	--
B3LB2	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	DB-2A	S: 2/23/2006	16:20	MB3LB2	--
B3LB3	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	DB-2B	S: 2/23/2006	16:30	MB3LB3	--

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**
BNA = CLP TCL Semivolatiles, VOA = CLP TCL Volatiles			

TR Number: 2-043013577-022306-0004

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: 35114 R
Client No:

Region:	2	**Date Shipped:**	2/23/2006	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	UPS	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:		**Airbill:**	A5491379760	1 2/23/06 1800	UPS A5491379760 2/23/06 1800
CERCLIS ID:	NYD002229326	**Shipped to:**	Liberty Analytical Corporation 501 Madison Avenue Cary NC 27513 (919) 379-4100	2	
Spill ID:	02XB			3	
Site Name/State:	H.M. Quackenbush, Inc./NY			4	
Project Leader:	Diane Salkie				
Action:	Removal Action				
Sampling Co:	U.S. EPA				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	QC Type
B3L70	Soil/Sediment/ Diane Salkie	L/G	PercMois (21)	(Ice Only) (1)	B-14A	S: 2/23/2006 9:09	--
B3L74	Soil/Sediment/ Diane Salkie	L/G	PercMois (21)	(Ice Only) (1)	B-15A	S: 2/23/2006 10:19	--
B3L87	Soil/Sediment/ Diane Salkie	L/G	PercMois (21)	(Ice Only) (1)	B-18C	S: 2/23/2006 12:10	--
B3L89	Soil/Sediment/ Diane Salkie	L/G	PercMois (21)	(Ice Only) (1)	B-19B	S: 2/23/2006 13:23	--
B3L92	Soil/Sediment/ Diane Salkie	L/G	PercMois (21)	(Ice Only) (1)	B-20A	S: 2/23/2006 13:45	--
B3LB0	Soil/Sediment/ Diane Salkie	L/G	PercMois (21)	(Ice Only) (1)	B-25A	S: 2/23/2006 16:10	--

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____
PercMois = Percent Moisture			

TR Number: 2-043013577-022306-0005

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Re

Case No: 35114
DAS No:
R

Region:	2
Project Code:	
Account Code:	
CERCLIS ID:	NYD002229326
Spill ID:	02XB
Site Name/State:	H.M. Quackenbush, Inc./NY
Project Leader:	Diane Salkie
Action:	Removal Action
Sampling Co:	U.S. EPA

Date Shipped:	2/23/2006
Carrier Name:	UPS
Airbill:	A5491379484
Shipped to:	Liberty Analytical Corporation 501 Madison Avenue Cary NC 27513 (919) 379-4100

Chain of Custody Record

Sampler Signature:

	Relinquished By (Date / Time)	Received By (Date / Time)
1	2/23/06 1800	UPS A5491379484 2/23/06 1800
2		
3		
4		

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
B3L63	Ground Water/ Diane Salkie	L/G	BNA (21)	(Ice Only) (2)	MW-4	S: 2/23/2006	11:50	MB3L63	Spike
B3LA8	Field QC/ Diane Salkie	L/G	BNA (21)	(Ice Only) (2)	rb-01	S: 2/23/2006	15:45	MB3LA8	Rinsate
B3LA9	Field QC/ Diane Salkie	L/G	BNA (21)	(Ice Only) (2)	rb-02	S: 2/23/2006	16:00	MB3LA9	Rinsate

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: BNA = CLP TCL Semivolatiles	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

TR Number: 2-043013577-022306-0003

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114 **R**
DAS No:

Region:	2
Project Code:	
Account Code:	
CERCLIS ID:	NYD002229326
Spill ID:	02XB
Site Name/State:	H.M. Quackenbush, Inc./NY
Project Leader:	Diane Salkie
Action:	Removal Action
Sampling Co:	U.S. EPA

Date Shipped:	2/24/2006
Carrier Name:	UPS
Airbill:	A5491379466
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Rd Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

Sampler Signature:

Relinquished By	(Date / Time)	Received By	(Date / Time)
1	2/24/06 1700	A5491379466	2/24/06 1700
2			
3			
4			

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MB3L64	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-12A	S: 2/22/2006 15:15		--
MB3L65	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-12B	S: 2/22/2006 15:25		--
MB3L66	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-12C	S: 2/22/2006 15:20		--
MB3L67	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-13A	S: 2/23/2006 8:20		Spike
MB3L68	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-13B	S: 2/23/2006 8:33	B3L68	--
MB3L69	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-13C	S: 2/23/2006 8:38		--
MB3L70	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-14A	S: 2/23/2006 9:09	B3L70	--
MB3L71	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-14C	S: 2/23/2006 9:30		--
MB3L72	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-14D	S: 2/23/2006 9:40	B3L72	--
MB3L74	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-15A	S: 2/23/2006 10:19	B3L74	--
MB3L75	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-15B	S: 2/23/2006 10:30	B3L75	--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L67, MB3L86, MB3LB5	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: CN = Cyanide	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

TR Number: 2-043013577-022406-0005

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody (rd

Case No: 35114 (R
DAS No:

Region:	2
Project Code:	
Account Code:	
CERCLIS ID:	NYD002229326
Spill ID:	02XB
Site Name/State:	H.M. Quackenbush, Inc./NY
Project Leader:	Diane Salkie
Action:	Removal Action
Sampling Co:	U.S. EPA

Date Shipped:	2/24/2006
Carrier Name:	UPS
Airbill:	A5491379466
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Rd Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

Sampler Signature:

	Relinquished By (Date / Time)	Received By (Date / Time)
1	2/24/06 1700	UPS A5491379466 2/24/06 1700
2		
3		
4		

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MB3L76	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-15C	S: 2/23/2006	10:37		--
MB3L77	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-16A	S: 2/23/2006	10:45		--
MB3L78	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	CSR-1A	S: 2/23/2006	10:55		--
MB3L79	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	CSR-1B	S: 2/23/2006	11:08	B3L79	--
MB3L80	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	CSR-2A	S: 2/23/2006	11:12	B3L80	--
MB3L81	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	CSR-2B	S: 2/23/2006	11:20		--
MB3L82	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-17A	S: 2/23/2006	11:30		--
MB3L83	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-17B	S: 2/23/2006	11:35		--
MB3L84	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-17C	S: 2/23/2006	11:38	B3L84	--
MB3L85	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-18A	S: 2/23/2006	11:50	B3L85	--
MB3L86	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-18B	S: 2/23/2006	11:53		Spike

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L67, MB3L86, MB3LB5	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: CN = Cyanide	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

TR Number: 2-043013577-022406-0005

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114 **R**
DAS No:

Region:	2	**Date Shipped:**	2/24/2006	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	UPS	**Relinquished By** (Date / Time)	**Received By** (Date / Time)
Account Code:		**Airbill:**	A5491379466	1 2/24/06 1700	UPS A5491379466 2/24/06 1700
CERCLIS ID:	NYD002229326	**Shipped to:**	Bonner Analytical Testing Company 2703 Oak Grove Rd Hattiesburg MS 39402 (601) 264-2854	2	
Spill ID:	02XB			3	
Site Name/State:	H.M. Quackenbush, Inc./NY			4	
Project Leader:	Diane Salkie				
Action:	Removal Action				
Sampling Co:	U.S. EPA				

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MB3L87	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-18C	S: 2/23/2006 12:10	B3L87	--
MB3L88	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-19A	S: 2/23/2006 13:18		--
MB3L89	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-19B	S: 2/23/2006 13:23	B3L89	--
MB3L90	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-19C	S: 2/23/2006 13:30	B3L90	--
MB3L91	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-19D	S: 2/23/2006 13:35		Field Duplicate
MB3L92	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-20A	S: 2/23/2006 13:45	B3L92	--
MB3L93	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-20B	S: 2/23/2006 13:50		--
MB3L94	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-20C	S: 2/23/2006 13:55	B3L94	--
MB3L96	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	S-3A	S: 2/23/2006 14:02	B3L96	--
MB3L97	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	S-4A	S: 2/23/2006 14:14	B3L97	--
MB3L98	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	DB-1	S: 2/23/2006 14:49	B3L98	--

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
	MB3L67, MB3L86, MB3LB5		
Analysis Key: CN = Cyanide	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

TR Number: 2-043013577-022406-0005

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114 **R**
DAS No:

Region:	2	**Date Shipped:**	2/24/2006
Project Code:		**Carrier Name:**	UPS
Account Code:		**Airbill:**	A5491379466
CERCLIS ID:	NYD002229326	**Shipped to:**	Bonner Analytical Testing Company 2703 Oak Grove Rd Hattiesburg MS 39402 (601) 264-2854
Spill ID:	02XB		
Site Name/State:	H.M. Quackenbush, Inc./NY		
Project Leader:	Diane Salkie		
Action:	Removal Action		
Sampling Co:	U.S. EPA		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1	2/24/06 1701	AJ491379466	2/24/06 1700
2			
3			
4			

Sampler Signature:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MB3L99	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-21A	S: 2/23/2006	15:00		--
MB3LA0	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-21B	S: 2/23/2006	15:06		--
MB3LA1	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-22A	S: 2/23/2006	15:10		--
MB3LA2	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-22B	S: 2/23/2006	15:20		--
MB3LA3	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-23A	S: 2/23/2006	15:32	B3LA3	--
MB3LA4	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-23B	S: 2/23/2006	15:38		--
MB3LA5	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-24A	S: 2/23/2006	15:50		--
MB3LA6	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-24B	S: 2/23/2006	15:55	B3LA6	--
MB3LA7	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-24C	S: 2/23/2006	16:00	B3LA7	--
MB3LA8	Field QC/ Diane Salkie	L/G	CN (21)	(NaOH) (1)	rb-01	S: 2/23/2006	15:45	B3LA8	Rinsate
MB3LA9	Field QC/ Diane Salkie	L/G	CN (21)	(NaOH) (1)	rb-02	S: 2/23/2006	16:00	B3LA9	Rinsate

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L67, MB3L86, MB3LB5	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: CN = Cyanide	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

TR Number: 2-043013577-022406-0005

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114
DAS No:
R

Region:	2	**Date Shipped:**	2/24/2006	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	UPS	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:		**Airbill:**	A5491379466	1 2/24/06 1700	UPS A5491379466 2/24/06 1700
CERCLIS ID:	NYD002229326	**Shipped to:**	Bonner Analytical Testing Company 2703 Oak Grove Rd Hattiesburg MS 39402 (601) 264-2854	2	
Spill ID:	02XB			3	
Site Name/State:	H.M. Quackenbush, Inc./NY			4	
Project Leader:	Diane Salkie				
Action:	Removal Action				
Sampling Co:	U.S. EPA				

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MB3LB0	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-25A	S: 2/23/2006 16:10	B3LB0	--
MB3LB1	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-25B	S: 2/23/2006 16:15		--
MB3LB2	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	DB-2A	S: 2/23/2006 16:20	B3LB2	--
MB3LB3	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	DB-2B	S: 2/23/2006 16:30	B3LB3	--
MB3LB4	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-26A	S: 2/24/2006 4:00		--
MB3LB5	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-26B	S: 2/24/2006 8:45	B3LB5	Spike
MB3LB7	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-27A	S: 2/24/2006 8:50		--
MB3LB8	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-27B	S: 2/24/2006 9:00		--
MB3LB9	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-27C	S: 2/24/2006 9:10		--
MB3LC0	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-27D	S: 2/24/2006 9:12		Field Duplicate
MB3LC1	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	BG-1A	S: 2/24/2006 9:45	B3LC1	--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L67, MB3L86, MB3LB5	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: CN = Cyanide	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

TR Number: 2-043013577-022406-0005

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114 **R**
DAS No:

Region:	2
Project Code:	
Account Code:	
CERCLIS ID:	NYD002229326
Spill ID:	02XB
Site Name/State:	H.M. Quackenbush, Inc./NY
Project Leader:	Diane Salkie
Action:	Removal Action
Sampling Co:	U.S. EPA

Date Shipped:	2/24/2006
Carrier Name:	UPS
Airbill:	A5491379466
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Rd Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

Sampler Signature:

	Relinquished By (Date / Time)	Received By (Date / Time)
1	2/24/06 1700	A5491379466 2/24/06 1700
2		
3		
4		

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MB3LC2	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	BG-1B	S: 2/24/2006 9:50	B3LC2	--
MB3LC3	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	S-3B	S: 2/24/2006 10:03	B3LC3	--
MB3LC4	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	S-4B	S: 2/24/2006 10:06	B3LC4	--
MB3LC5	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	DB-3A	S: 2/24/2006 10:30		--
MB3LC6	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	DB-3B	S: 2/24/2006 10:40		--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L67, MB3L86, MB3LB5	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: CN = Cyanide	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

TR Number: 2-043013577-022406-0005

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114
DAS No:
R

Region:	2	**Date Shipped:**	2/24/2006	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	UPS	**Relinquished By** (Date / Time)	**Received By** (Date / Time)
Account Code:		**Airbill:**	A5491379608	1 2/24/06 17a	UPS A5491379608 2/24/06 17a
CERCLIS ID:	NYD002229326	**Shipped to:**	Bonner Analytical Testing Company 2703 Oak Grove Rd Hattiesburg MS 39402 (601) 264-2854	2	
Spill ID:	02XB			3	
Site Name/State:	H.M. Quackenbush, Inc./NY			4	
Project Leader:	Diane Salkie				
Action:	Removal Action				
Sampling Co:	U.S. EPA				

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MB3L29	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-1A	S: 2/21/2006 14:15		--
MB3L30	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-1B	S: 2/21/2006 14:32		--
MB3L31	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-1C	S: 2/21/2006 14:42		--
MB3L32	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-2A	S: 2/21/2006 14:50		--
MB3L33	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-2B	S: 2/21/2006 14:57		--
MB3L34	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-3A	S: 2/21/2006 15:02		--
MB3L35	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-3B	S: 2/21/2006 15:10		--
MB3L36	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-4A	S: 2/21/2006 15:21		--
MB3L37	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-4B	S: 2/21/2006 15:27		--
MB3L38	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-4C	S: 2/21/2006 15:41		--
MB3L39	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-6A	S: 2/21/2006 15:54		--

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
	MB3L61, MB3L63		
Analysis Key: CN = Cyanide	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

TR Number: 2-043013577-022406-0004

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114 **R**
DAS No:

Region:	2
Project Code:	
Account Code:	
CERCLIS ID:	NYD002229326
Spill ID:	02XB
Site Name/State:	H.M. Quackenbush, Inc./NY
Project Leader:	Diane Salkie
Action:	Removal Action
Sampling Co:	U.S. EPA

Date Shipped:	2/24/2006
Carrier Name:	UPS
Airbill:	A5491379608
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Rd Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

	Relinquished By (Date / Time)	Received By (Date / Time)
1	2/24/06 1700	UPS A5491379608 2/24/06 1700
2		
3		
4		

Sampler Signature:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MB3L40	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-6B	S: 2/21/2006 16:13		--
MB3L41	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-6C	S: 2/21/2006 16:20		--
MB3L42	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-6D	S: 2/21/2006 16:25		Field Duplicate
MB3L43	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-5A	S: 2/21/2006 16:40		--
MB3L44	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-5B	S: 2/21/2006 16:52	B3L44	--
MB3L45	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	SS-Hole1	S: 2/21/2006 17:00	B3L45	--
MB3L46	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (2)	B-7A	S: 2/22/2006 8:27		Spike
MB3L47	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-7B	S: 2/22/2006 8:41		--
MB3L48	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-7C	S: 2/22/2006 8:50	B3L48	--
MB3L49	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-9A	S: 2/22/2006 13:45		--
MB3L50	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-9B	S: 2/22/2006 13:51		--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L61, MB3L63	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: CN = Cyanide	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

TR Number: **2-043013577-022406-0004**

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

REGION COPY

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114
DAS No:
R

Region:	2
Project Code:	
Account Code:	
CERCLIS ID:	NYD002229326
Spill ID:	02XB
Site Name/State:	H.M. Quackenbush, Inc./NY
Project Leader:	Diane Salkie
Action:	Removal Action
Sampling Co:	U.S. EPA

Date Shipped:	2/24/2006
Carrier Name:	UPS
Airbill:	A5491379608
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Rd Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

Sampler Signature:

Relinquished By	(Date / Time)	Received By	(Date / Time)
1	2/24/06 1700	UPS A5491379608	2/24/06 1700
2			
3			
4			

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MB3L51	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-9C	S: 2/22/2006	13:56	B3L51	--
MB3L52	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-9D	S: 2/22/2006	14:00		--
MB3L53	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-10A	S: 2/22/2006	14:08		--
MB3L54	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-10B	S: 2/22/2006	14:16	B3L54	--
MB3L55	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-10C	S: 2/22/2006	14:22		--
MB3L56	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-11A	S: 2/22/2006	14:34	B3L56	--
MB3L57	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-11B	S: 2/22/2006	14:45		--
MB3L58	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-11C	S: 2/22/2006	14:53	B3L58	--
MB3L59	Soil/Sediment/ Diane Salkie	L/G	CN (21)	(Ice Only) (1)	B-11D	S: 2/22/2006	15:00		Field Duplicate
MB3L60	Ground Water/ Diane Salkie	L/G	CN (21)	(NaOH) (1)	MW-5	S: 2/22/2006	12:00	B3L60	--
MB3L61	Ground Water/ Diane Salkie	L/G	CN (21)	(NaOH) (1)	MW-2	S: 2/22/2006	14:45	B3L61	--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L61, MB3L63	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: CN = Cyanide	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

TR Number: 2-043013577-022406-0004

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F2V5

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody (rd

Case No: 35114
DAS No:
R

Region:	2	**Date Shipped:**	2/24/2006
Project Code:		**Carrier Name:**	UPS
Account Code:		**Airbill:**	A5491379608
CERCLIS ID:	NYD002229326	**Shipped to:**	Bonner Analytical Testing Company 2703 Oak Grove Rd Hattiesburg MS 39402 (601) 264-2854
Spill ID:	02XB		
Site Name/State:	H.M. Quackenbush, Inc./NY		
Project Leader:	Diane Salkie		
Action:	Removal Action		
Sampling Co:	U.S. EPA		

Chain of Custody Record

Sampler Signature:

	Relinquished By (Date / Time)	Received By (Date / Time)
1	2/24/06 1700	UPS A5491379608 2/24/06 1700
2		
3		
4		

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MB3L62	Ground Water/ Diane Salkie	L/G	CN (21)	(NaOH) (1)	MW-6	S: 2/22/2006	15:00	B3L62	Field Duplicate
MB3L63	Ground Water/ Diane Salkie	L/G	CN (21)	(NaOH) (1)	MW-4	S: 2/23/2006	11:50	B3L63	Spike

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L61, MB3L63	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: CN = Cyanide	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

TR Number: 2-043013577-022406-0004

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: 35114
Client No:

R

Region:	2	**Date Shipped:**	2/24/2006	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	UPS	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:		**Airbill:**	A5491379813	1 2/24/06 1200	UPS A5491379813 2/24/06 1800
CERCLIS ID:	NYD002229326	**Shipped to:**	Liberty Analytical Corporation 501 Madison Avenue Cary NC 27513 (919) 379-4100	2	
Spill ID:	02XB			3	
Site Name/State:	H.M. Quackenbush, Inc./NY			4	
Project Leader:	Diane Salkie				
Action:	Removal Action				
Sampling Co:	U.S. EPA				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		QC Type
B3LB5	Soil/Sediment/ Diane Salkie	L/G	PercMois (21)	(Not preserved) (1)	B-26B	S: 2/24/2006	8:45	Spike
B3LB6	Soil/Sediment/ Diane Salkie	L/G	PercMois (21)	(Ice Only) (1)	B-26C	S: 2/24/2006	8:48	Field Duplicate
B3LC1	Soil/Sediment/ Diane Salkie	L/G	PercMois (21)	(Ice Only) (1)	BG-1A	S: 2/24/2006	9:45	--
B3LC2	Soil/Sediment/ Diane Salkie	L/G	PercMois (21)	(Ice Only) (1)	BG-1B	S: 2/24/2006	9:50	--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____
PercMois = Percent Moisture			

TR Number: 2-043013577-022406-0002

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F2V

USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Re

Case No: 35114 **R**
DAS No:

Region:	2	**Date Shipped:**	2/24/2006
Project Code:		**Carrier Name:**	UPS
Account Code:		**Airbill:**	A5491379813
CERCLIS ID:	NYD002229326	**Shipped to:**	Liberty Analytical Corporation 501 Madison Avenue Cary NC 27513 (919) 379-4100
Spill ID:	02XB		
Site Name/State:	H.M. Quackenbush, Inc./NY		
Project Leader:	Diane Salkie		
Action:	Removal Action		
Sampling Co:	U.S. EPA		

Chain of Custody Record

Sampler Signature:

	Relinquished By (Date / Time)	Received By (Date / Time)
1	2/24/06 1700	LAS 5491379813 2/27/06 1700
2		
3		
4		

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
B3LB5	Soil/Sediment/ Diane Salkie	L/G	VOA (21)	(Ice Only) (3)	B-26B	S: 2/24/2006	8:45	MB3LB5	Spike
B3LB6	Soil/Sediment/ Diane Salkie	L/G	VOA (21)	(Ice Only) (3)	B-26C	S: 2/24/2006	8:48		Field Duplicate
B3LC1	Soil/Sediment/ Diane Salkie	L/G	BNA (21), VOA (21)	(Ice Only) (4)	BG-1A	S: 2/24/2006	9:45	MB3LC1	--
B3LC2	Soil/Sediment/ Diane Salkie	L/G	BNA (21), VOA (21)	(Ice Only) (4)	BG-1B	S: 2/24/2006	9:50	MB3LC2	--
B3LC3	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	S-3B	S: 2/24/2006	10:03	MB3LC3	--
B3LC4	Soil/Sediment/ Diane Salkie	L/G	BNA (21)	(Ice Only) (1)	S-4B	S: 2/24/2006	10:06	MB3LC4	--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

BNA = CLP TCL Semivolatiles, VOA = CLP TCL Volatiles

TR Number: 2-043013577-022406-0003

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114 **R**
DAS No:

Region:	2	**Date Shipped:**	2/24/2006
Project Code:		**Carrier Name:**	Hand-delivered
Account Code:		**Airbill:**	
CERCLIS ID:	NYD002229326	**Shipped to:**	Mobile Analytical Laboratory Trailor 2890 Woodbridge Ave. Edison NJ 08837 (908) 420-4499
Spill ID:	02XB		
Site Name/State:	H.M. Quackenbush, Inc./NY		
Project Leader:	Diane Salkie		
Action:	Removal Action		
Sampling Co:	U.S. EPA		

Chain of Custody Record

Relinquished By (Date / Time)	Received By (Date / Time)
1 2/24/06 1200	
2	
3	
4	

Sampler Signature:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MB3L29	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-1A	S: 2/21/2006 14:15		--
MB3L30	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-1B	S: 2/21/2006 14:32		--
MB3L31	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-1C	S: 2/21/2006 14:42		--
MB3L32	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-2A	S: 2/21/2006 14:50		--
MB3L33	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-2B	S: 2/21/2006 14:57		--
MB3L34	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-3A	S: 2/21/2006 15:02		--
MB3L35	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-3B	S: 2/21/2006 15:10		--
MB3L36	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-4A	S: 2/21/2006 15:21		--
MB3L37	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-4B	S: 2/21/2006 15:27		--
MB3L38	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-4C	S: 2/21/2006 15:41		--
MB3L39	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-6A	S: 2/21/2006 15:54		--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L61, MB3L63, MB3L67, MB3L86, MB3LB5	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: TM = CLP TAL Total Metals	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

TR Number: 2-043013577-022406-0001

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F2V5

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody R('d

Case No: 35114 (R
DAS No:

Region:	2
Project Code:	
Account Code:	
CERCLIS ID:	NYD002229326
Spill ID:	02XB
Site Name/State:	H.M. Quackenbush, Inc./NY
Project Leader:	Diane Salkie
Action:	Removal Action
Sampling Co:	U.S. EPA

Date Shipped:	2/24/2006
Carrier Name:	Hand-delivered
Airbill:	
Shipped to:	Mobile Analytical Laboratory Trailor 2890 Woodbridge Ave. Edison NJ 08837 (908) 420-4499

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1	2/24/06 1200		
2			
3			
4			

Sampler Signature:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MB3L40	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-6B	S: 2/21/2006 16:13		--
MB3L41	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-6C	S: 2/21/2006 16:20		--
MB3L42	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-6D	S: 2/21/2006 16:25		Field Duplicate
MB3L43	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-5A	S: 2/21/2006 16:40		--
MB3L44	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-5B	S: 2/21/2006 16:52	B3L44	--
MB3L45	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	SS-Hole1	S: 2/21/2006 17:00	B3L45	--
MB3L46	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-7A	S: 2/22/2006 8:27		Spike
MB3L47	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-7B	S: 2/22/2006 8:41		--
MB3L48	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-7C	S: 2/22/2006 8:50	B3L48	--
MB3L49	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-9A	S: 2/22/2006 13:45		--
MB3L50	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-9B	S: 2/22/2006 13:51		--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L61, MB3L63, MB3L67, MB3L86, MB3LB5	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: TM = CLP TAL Total Metals	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

TR Number: 2-043013577-022406-0001

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114 **R**
DAS No:

Region:	2	**Date Shipped:**	2/24/2006
Project Code:		**Carrier Name:**	Hand-delivered
Account Code:		**Airbill:**	
CERCLIS ID:	NYD002229326	**Shipped to:**	Mobile Analytical Laboratory Trailor 2890 Woodbridge Ave. Edison NJ 08837 (908) 420-4499
Spill ID:	02XB		
Site Name/State:	H.M. Quackenbush, Inc./NY		
Project Leader:	Diane Salkie		
Action:	Removal Action		
Sampling Co:	U.S. EPA		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1	2/24/06 1200		
2			
3			
4			

Sampler Signature:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MB3L51	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-9C	S: 2/22/2006	13:56	B3L51	--
MB3L52	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-9D	S: 2/22/2006	14:00		--
MB3L53	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-10A	S: 2/22/2006	14:08		--
MB3L54	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-10B	S: 2/22/2006	14:16	B3L54	--
MB3L55	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-10C	S: 2/22/2006	14:22		--
MB3L56	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-11A	S: 2/22/2006	14:34	B3L56	--
MB3L57	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-11B	S: 2/22/2006	14:45		--
MB3L58	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-11C	S: 2/22/2006	14:53	B3L58	--
MB3L59	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-11D	S: 2/22/2006	15:00		Field Duplicate
MB3L60	Ground Water/ Diane Salkie	L/G	TM (21)	(HNO3) (1)	MW-5	S: 2/22/2006	12:00	B3L60	--
MB3L61	Ground Water/ Diane Salkie	L/G	TM (21)	(HNO3) (1)	MW-2	S: 2/22/2006	14:45	B3L61	--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L61, MB3L63, MB3L67, MB3L86, MB3LB5	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: TM = CLP TAL Total Metals	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

TR Number: 2-043013577-022406-0001

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114 **R**
DAS No:

Region:	2	**Date Shipped:**	2/24/2006
Project Code:		**Carrier Name:**	Hand-delivered
Account Code:		**Airbill:**	
CERCLIS ID:	NYD002229326	**Shipped to:**	Mobile Analytical Laboratory Trailor 2890 Woodbridge Ave. Edison NJ 08837 (908) 420-4499
Spill ID:	02XB		
Site Name/State:	H.M. Quackenbush, Inc./NY		
Project Leader:	Diane Salkie		
Action:	Removal Action		
Sampling Co:	U.S. EPA		

Chain of Custody Record

	Relinquished By (Date / Time)	Received By (Date / Time)
1	2/24/06 1500	
2		
3		
4		

Sampler Signature:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MB3L62	Ground Water/ Diane Salkie	L/G	TM (21)	(HNO3) (1)	MW-6	S: 2/22/2006	15:00	B3L62	Field Duplicate
MB3L63	Ground Water/ Diane Salkie	L/G	TM (21)	(HNO3) (1)	MW-4	S: 2/23/2006	11:50	B3L63	Spike
MB3L64	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-12A	S: 2/22/2006	15:15		--
MB3L65	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-12B	S: 2/22/2006	15:25		--
MB3L66	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-12C	S: 2/22/2006	15:20		--
MB3L67	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-13A	S: 2/23/2006	8:20		Spike
MB3L68	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-13B	S: 2/23/2006	8:33	B3L68	--
MB3L69	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-13C	S: 2/23/2006	8:38		--
MB3L70	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-14A	S: 2/23/2006	9:09	B3L70	--
MB3L71	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-14C	S: 2/23/2006	9:30		--
MB3L72	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-14D	S: 2/23/2006	9:40	B3L72	--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L61, MB3L63, MB3L67, MB3L86, MB3LB5	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: TM = CLP TAL Total Metals	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

TR Number: 2-043013577-022406-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114 **R**
DAS No:

Region:	2	**Date Shipped:**	2/24/2006
Project Code:		**Carrier Name:**	Hand-delivered
Account Code:		**Airbill:**	
CERCLIS ID:	NYD002229326	**Shipped to:**	Mobile Analytical Laboratory Trailor 2890 Woodbridge Ave. Edison NJ 08837 (908) 420-4499
Spill ID:	02XB		
Site Name/State:	H.M. Quackenbush, Inc./NY		
Project Leader:	Diane Salkie		
Action:	Removal Action		
Sampling Co:	U.S. EPA		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1	2/24/06 1200		
2			
3			
4			

Sampler Signature:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MB3L74	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-15A	S: 2/23/2006	10:19	B3L74	--
MB3L75	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-15B	S: 2/23/2006	10:30	B3L75	--
MB3L76	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-15C	S: 2/23/2006	10:37		--
MB3L77	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-16A	S: 2/23/2006	10:45		--
MB3L78	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	CSR-1A	S: 2/23/2006	10:55		--
MB3L79	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	CSR-1B	S: 2/23/2006	11:08	B3L79	--
MB3L80	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	CSR-2A	S: 2/23/2006	11:12	B3L80	--
MB3L81	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	CSR-2B	S: 2/23/2006	11:20		--
MB3L82	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-17A	S: 2/23/2006	11:30		--
MB3L83	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-17B	S: 2/23/2006	11:35		--
MB3L84	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-17C	S: 2/23/2006	11:38	B3L84	--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L61, MB3L63, MB3L67, MB3L86, MB3LB5	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____
TM = CLP TAL Total Metals			

TR Number: 2-043013577-022406-0001

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114 **R**
DAS No:

Region:	2	**Date Shipped:**	2/24/2006	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	Hand-delivered	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:		**Airbill:**		1 2/24/06 1200	
CERCLIS ID:	NYD002229326	**Shipped to:**	Mobile Analytical Laboratory Trailor 2890 Woodbridge Ave. Edison NJ 08837 (908) 420-4499	2	
Spill ID:	02XB			3	
Site Name/State:	H.M. Quackenbush, Inc./NY			4	
Project Leader:	Diane Salkie				
Action:	Removal Action				
Sampling Co:	U.S. EPA				

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MB3L85	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-18A	S: 2/23/2006	11:50	B3L85	--
MB3L86	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-18B	S: 2/23/2006	11:53		Spike
MB3L87	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-18C	S: 2/23/2006	12:10	B3L87	--
MB3L88	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-19A	S: 2/23/2006	13:18		--
MB3L89	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-19B	S: 2/23/2006	13:23	B3L89	--
MB3L90	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-19C	S: 2/23/2006	13:30	B3L90	--
MB3L91	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-19D	S: 2/23/2006	13:35		Field Duplicate
MB3L92	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-20A	S: 2/23/2006	13:45	B3L92	--
MB3L93	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-20B	S: 2/23/2006	13:50		--
MB3L94	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-20C	S: 2/23/2006	13:55	B3L94	--
MB3L96	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	S-3A	S: 2/23/2006	14:02	B3L96	--

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
	MB3L61, MB3L63, MB3L67, MB3L86, MB3LB5		
Analysis Key: TM = CLP TAL Total Metals	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?**

TR Number: 2-043013577-022406-0001

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114 **R**
DAS No:

Region:	2
Project Code:	
Account Code:	
CERCLIS ID:	NYD002229326
Spill ID:	02XB
Site Name/State:	H.M. Quackenbush, Inc./NY
Project Leader:	Diane Salkie
Action:	Removal Action
Sampling Co:	U.S. EPA

Date Shipped:	2/24/2006
Carrier Name:	Hand-delivered
Airbill:	
Shipped to:	Mobile Analytical Laboratory Trailor 2890 Woodbridge Ave. Edison NJ 08837 (908) 420-4499

Chain of Custody Record

Sampler Signature:

	Relinquished By (Date / Time)	Received By (Date / Time)
1	2/24/06 1000	
2		
3		
4		

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MB3L97	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	S-4A	S: 2/23/2006	14:14	B3L97	--
MB3L98	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	DB-1	S: 2/23/2006	14:49	B3L98	--
MB3L99	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-21A	S: 2/23/2006	15:00		--
MB3LA0	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-21B	S: 2/23/2006	15:06		--
MB3LA1	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-22A	S: 2/23/2006	15:10		--
MB3LA2	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-22B	S: 2/23/2006	15:20		--
MB3LA3	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-23A	S: 2/23/2006	15:32	B3LA3	--
MB3LA4	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-23B	S: 2/23/2006	15:38		--
MB3LA5	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-24A	S: 2/23/2006	15:50		--
MB3LA6	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-24B	S: 2/23/2006	15:55	B3LA6	--
MB3LA7	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-24C	S: 2/23/2006	16:00	B3LA7	--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L61, MB3L63, MB3L67, MB3L86, MB3LB5	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: TM = CLP TAL Total Metals	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

TR Number: 2-043013577-022406-0001

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody R(d

Case No: 35114 (R
DAS No:

Region:	2	**Date Shipped:**	2/24/2006	**Chain of Custody Record**	**Sampler Signature:**
Project Code:		**Carrier Name:**	Hand-delivered	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:		**Airbill:**		1 2/24/06 1200	
CERCLIS ID:	NYD002229326	**Shipped to:**	Mobile Analytical Laboratory Trailor 2890 Woodbridge Ave. Edison NJ 08837 (908) 420-4499	2	
Spill ID:	02XB			3	
Site Name/State:	H.M. Quackenbush, Inc./NY			4	
Project Leader:	Diane Salkie				
Action:	Removal Action				
Sampling Co:	U.S. EPA				

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MB3LA8	Field QC/ Diane Salkie	L/G	TM (21)	(HNO3) (1)	rb-01	S: 2/23/2006	15:45	B3LA8	Rinsate
MB3LA9	Field QC/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	rb-02	S: 2/23/2006	16:00	B3LA9	Rinsate
MB3LB0	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-25A	S: 2/23/2006	16:10	B3LB0	--
MB3LB1	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-25B	S: 2/23/2006	16:15		--
MB3LB2	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	DB-2A	S: 2/23/2006	16:20	B3LB2	--
MB3LB3	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	DB-2B	S: 2/23/2006	16:30	B3LB3	--
MB3LB4	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-26A	S: 2/24/2006	4:00		--
MB3LB5	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-26B	S: 2/24/2006	8:45	B3LB5	Spike
MB3LB7	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-27A	S: 2/24/2006	8:50		--
MB3LB8	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-27B	S: 2/24/2006	9:00		--
MB3LB9	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-27C	S: 2/24/2006	9:10		--

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
	MB3L61, MB3L63, MB3L67, MB3L86, MB3LB5		
Analysis Key: TM = CLP TAL Total Metals	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

TR Number: 2-043013577-022406-0001

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USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 35114 **R**
DAS No:

Region:	2	**Date Shipped:**	2/24/2006
Project Code:		**Carrier Name:**	Hand-delivered
Account Code:		**Airbill:**	
CERCLIS ID:	NYD002229326	**Shipped to:**	Mobile Analytical Laboratory Trailor 2890 Woodbridge Ave. Edison NJ 08837 (908) 420-4499
Spill ID:	02XB		
Site Name/State:	H.M. Quackenbush, Inc./NY		
Project Leader:	Diane Salkie		
Action:	Removal Action		
Sampling Co:	U.S. EPA		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1	2/24/06 12:00		
2			
3			
4			

Sampler Signature:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	QC Type
MB3LC0	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	B-27D	S: 2/24/2006	9:12		Field Duplicate
MB3LC1	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	BG-1A	S: 2/24/2006	9:45	B3LC1	--
MB3LC2	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	BG-1B	S: 2/24/2006	9:50	B3LC2	--
MB3LC3	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	S-3B	S: 2/24/2006	10:03	B3LC3	--
MB3LC4	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	S-4B	S: 2/24/2006	10:06	B3LC4	--
MB3LC5	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	DB-3A	S: 2/24/2006	10:30		--
MB3LC6	Soil/Sediment/ Diane Salkie	L/G	TM (21)	(Ice Only) (1)	DB-3B	S: 2/24/2006	10:40		--

Shipment for Case Complete? Y	**Sample(s) to be used for laboratory QC:** MB3L61, MB3L63, MB3L67, MB3L86, MB3LB5	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key: TM = CLP TAL Total Metals	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

TR Number: 2-043013577-022406-0001

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