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August 2006 Sampling Report

Carroll and Dubies Superfund Site
Town of Deerpark, Orange County, New York

Prepared for:

Kolmar Laboratories, Inc.
Jonathan A. Murphy, Esq.

and

Wickhen Products, Inc.
Robert J. Glasser, Esq.

Prepared by:

Cardinal Resources LLC
4326 Northern Pike
Monroeville, Pennsylvania 15146

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1.0 Introduction

This report summarizes the methods and results of a field sampling program performed in August 2006 at the Carroll and Dubies Superfund Site (Site), Town of Deerpark, Orange County, New York. The work followed the August 2005 *Supplemental Sampling Work Plan* (work plan) approved by the United States Environmental Protection Agency (U.S. EPA). The August 2006 sampling and analysis event included 18 wells comprising the Series A monitoring well network; MW-1, MW-4, OW-2, OW-5, OW-6, OW-8, OW-10R, OW-13R, OW-15, OW-16, OW-17, OW-18, OW-19, OW-21, OW-22, OW-23, OW-24, and OW-25. The purpose of this sampling program was to continue to document that the southeastern extent of the volatile organic compound (VOC) plume in the vicinity of OW-2, OW-5, and OW-6 is limited, and does not extend to OW-24 and OW-25.

1.1 Site Setting

The three-acre Site is located in the Town of Deerpark in Orange County, New York, which is approximately 3,000 feet northeast of the City of Port Jervis, New York (Figure 1). The Site is situated on the northwestern flank of the Neversink Valley. Gold Creek lies approximately 1,500 feet to the east, and the Neversink River is located approximately 2,000 feet beyond Gold Creek.

The Site is underlain by sand and gravel deposits of glacial and glaciofluvial origin. Groundwater monitoring wells on the Site have been completed in the outwash unit, found above a low-permeability till zone that functions as an aquitard. The outwash unit consists of fine to coarse sand with fine to coarse gravel. The direction of groundwater flow is generally toward the southeast.

1.2 Land and Resource Use

The immediate surrounding area includes undeveloped woodlands to the north; undeveloped woodlands and a sand and gravel quarry pit to the northeast; the closed City of Port Jervis landfill, the Orange County Transfer Station, and a concrete products fabrication company to the south; and a sparsely vegetated, shale bedrock hillside to the west. In 2004, the City of Port Jervis began a small sand and gravel operation on land it owns, immediately to the southeast of the former lagoons, in the vicinity of OW-5 and OW-6.

1.3 History of Waste Disposal and Contamination

In 1971, the three-acre Carroll and Dubies Site began operating as a disposal facility consisting of a series of lagoons. The majority of wastes disposed in the lagoons were septic waste, municipal sewage sludge, and solid waste. The Site also received liquid industrial wastes from approximately 1971 to 1979.

Over time, waste constituents in the lagoons leached into groundwater and affected the outwash aquifer. VOCs were of particular concern because of their dispersion in the aquifer and relative risk. Benzene, vinyl chloride, and other VOCs were found through a series of investigations to exceed Applicable or Relevant and Appropriate Requirements (ARARs) in Site wells.

1.4 Overview of Remedies

The remedies selected for the Site were defined by two operable units, the waste lagoons themselves, and the impacted groundwater. Remedies were selected and executed to remove wastes from the lagoons, restore the Site to a safe and stable condition, and promote and track improvements in groundwater quality.

1.4.1 OU1 Remedy

The goals of the OU1 remedy conducted in 1999 were to prevent further leaching of contaminants into groundwater, and to reduce the risks to potential future workers at the Site who could come in contact with lagoon wastes. The steps in this process were:

- Excavation of all wastes from Lagoons 1, 2, 3, 4, 6, 7, and 8, along with surrounding soils that exceeded specified levels for indicator chemicals.
- Appropriate management of all excavated wastes and soils.
- Placement of imported clean fill in the excavations, followed by grading for drainage control and vegetation.

1.4.2 OU2 Remedy

The goals of the ongoing OU2 remedy, which was initiated in 1999, have been to use natural attenuation to reduce or eliminate the risks associated with the ingestion of Site groundwater for future Site workers and to protect Gold Creek from Site-related impacts. The steps in the program are:

- Execution of a groundwater monitoring program in accordance with Work Plans and other documents prepared for the project and approved by the U.S. EPA.
- With each sampling round, a report is prepared for U.S. EPA that documents the progress made in achieving the remedial goals.

1.5 Overview of February 2006 Field Program

A supplemental sampling program was initiated in February 2006 in response to the five-year review. Part of the program was to install two new monitoring wells, OW-24 and OW-25, east and south of OW-2, OW-5, and OW-6 (Figure 2), to determine the extent of the chlorinated VOC plume in the vicinity of OW-2, OW-5, and OW-6. Two existing monitoring wells that were not part of the ongoing groundwater monitoring network, OW-17 and OW-23, downgradient and to the west of OW-2, OW-5 and OW-6, were also redeveloped and sampled. The February 2006 sampling program found that the chlorinated VOC plume did not extend to OW-17, OW-24, or OW-25, and that the low detections in OW-23 did not exceed state or federal groundwater criteria.

Detailed results and analysis of the February 2006 program are provided in *February 2006 Sampling Report, Carroll and Dubies Superfund Site, Town of Deerpark, Orange County, New York* (Cardinal Resources LLC [Cardinal Resources], April 2006).

1.6 Overview of May 2006 Field Program

A subset of Site wells, or B Series wells (OW-2, OW-5, OW-6, OW-17, OW-23, OW-24, and OW-25), were sampled in May 2006 to continue to evaluate trends through the hydrologic cycle. The May 2006 sampling program showed that the VOC plume in the area of OW-2, OW-5, and OW-6 remained localized and did not extend further to the southeast beyond this area.

Detailed results and analysis of the May 2006 program are provided in *May 2006 Sampling Report, Carroll and Dubies Superfund Site, Town of Deerpark, Orange County, New York* (Cardinal Resources, July 2006).

2.0 Groundwater Sample Collection

This section describes methods used to collect groundwater samples for analysis. The results of the groundwater sampling and analysis program are provided in Section 3.0.

2.1 Groundwater Elevations

Before sampling began, groundwater elevations for all site wells were determined from measured depths to water from the reference point elevations. The depth to ground-water was measured using a Solinst® electronic water-level meter and recorded in the field logbook to the 1/100th of a foot.

2.2 Equipment

Dedicated low-flow bladder pumps were used to purge and sample all of the Series A monitoring wells, with the exception of wells OW-13R, OW-17, OW-23, OW-24, and OW-25. These wells were sampled using a downhole bladder pump that was decontaminated initially and after sampling each well by:

- Washing with low phosphate detergent and tap water
- Rinsing with tap water
- Rinsing with deionized water
- Rinsing with hexane
- Final rinse with deionized water
- Air drying

Clean disposable tubing and a clean disposable bladder were used for each well sampled with the reusable bladder pump.

2.3 Well Purging and Sampling

All wells were purged using low-flow (100 to 200 milliliters per minute [mL/min]) techniques. During purging of each monitoring well, temperature, dissolved oxygen (DO), redox potential, specific conductance, pH, and turbidity were monitored and recorded on field forms in average intervals of 5 minutes. Groundwater field parameters were measured with a YSI Model 556 MPS-10 multi-parameter unit equipped with a flow-through cell and a Lamotte Turbidity Meter Model 2020, which were calibrated prior to sampling activities. The goal was to obtain three consecutive readings of the field parameters within the following ranges:

- ±1.0 degree centigrade (°C) for temperature
- ±10% or ±0.3 milligrams per liter (mg/L) for DO (whichever is greater)
- ±10 millivolts (mV) for redox potential (redox)
- ±3% for specific conductance (conductivity)
- ±0.1 for pH
- ±10% or ±2 NTUs for turbidity (whichever is greater)

The final stabilized readings prior to sample collection for each of the monitoring wells are provided in Table 1. Groundwater purged from the monitoring wells was generally clear and contained little suspended sediment. When purging was complete, groundwater samples were collected at a flow rate of between 100 and 200 mL/min directly from the pump tubing. Samples were placed immediately on ice for overnight shipment to Severn Trent Laboratories (STL), North Canton, Ohio.

3.0 Groundwater Results

This section describes the results of the August 2006 sampling event and presents a discussion of site-wide groundwater conditions.

3.1 Groundwater Elevations

The groundwater elevations for this sampling round are presented in Table 2. Associated groundwater elevation contours are shown in Figure 2.

The groundwater elevations in individual wells were in almost all cases lower than observed in February or May 2006; however, the direction of groundwater flow and gradient were about the same. The groundwater flow direction on site is toward the southeast in the direction of Gold Creek. The groundwater gradient across the former lagoon site is approximately 0.080. This gradient transitions to a lower gradient, at about the location of the towpath. From the towpath to Gold Creek, the gradient is very shallow, approximately 0.007. The steeper gradient on the western side of the site is due to the depth to bedrock along the valley wall. As the depth to bedrock increases towards the valley floor, the thickness of the alluvial fill increases and the groundwater gradient flattens.

3.2 Summary of Groundwater Quality Results

Detected groundwater VOC analytes from the August 2006 sampling event are presented in Table 3. Laboratory analytical reports, including marked Form Is from the data validation process, are included in Appendix A in hard copy. An electronic copy of the entire data package is also provided. Historical data of detected organic compounds have been combined with the most recent data and are presented in Appendix B (Table B-1). In tables, graphs, and discussion, the qualifier J with a reported concentration means an estimated result, with the analyte positively identified but the numerical value an approximate concentration. The qualifier U means that the analyte was not detected above the reported quantitation limit.

A variety of monitored natural attenuation (MNA) field and laboratory parameters were analyzed in groundwater (Table 4). These parameters are general indicators of geochemical conditions conducive to degradation of chlorinated and other VOCs. Patterns of MNA indicators by area were discussed in detail in the *Supporting Documentation for Five-Year Review* (Cardinal Resources, March 2005), along with an

evaluation of how those patterns may relate to contaminant distribution within the groundwater plume.

Thirteen VOCs were detected in various wells during this sampling event, of which six exceeded regulatory limits. The VOCs that exceeded regulatory limits are benzene, chlorobenzene, 1,2-dichloroethene (total), tetrachloroethene, trichloroethene, and vinyl chloride (Table 5). The VOC that most frequently exceeded regulatory limits was benzene (in seven wells), followed by 1,2-dichloroethene, tetrachloroethene, chlorobenzene (in 4 wells each), trichloroethene (2 wells), and vinyl chloride (1 well). Regulatory exceedances of VOCs in groundwater are plotted in Figure 3.

VOC concentrations in monitoring wells in August 2006 are within the ranges seen in February 2006, with somewhat lower concentrations in about half of the wells compared to 2004. In the remainder of this section, specific groundwater trends and conditions are discussed in greater detail, including:

- VOC results for supplemental monitoring wells OW-17, OW-23, OW-24, and OW-25
- Concentration trends for benzene
- Concentration trends for chlorinated VOCs
- Achievement of regulatory limits in monitoring wells
- MNA trends

3.3 Supplemental Wells OW-17 and OW-23

Two existing wells that were not historically part of the OU2 monitoring network, OW-17 and OW-23, were added to the monitoring network and sampled in February, May, and August of 2006. The results from OW-17 and OW-23 (Table 3) continue to confirm the findings of the remedial investigation, and show why OW-18 and OW-19 were selected as part of the OU2 monitoring network instead of OW-17 and OW-23.

OW-17 was not originally selected to be part of the OU2 monitoring network because:

- It had nondetectable concentrations of VOCs during the RI sampling
- It was found to be outside of the maximum extent of impacted groundwater
- Upgradient OW-16 contained very low to nondetectable concentrations of VOCs

OW-17 was nondetect for VOCs in February and May. In August 2006, a low estimated concentration of tetrachloroethene (0.20 J micrograms per liter [ug/L]), five times lower

than the reporting limit of 1 ug/L, was detected in OW-17. Sampling events and upgradient OW-16 continues to show only low to nondetectable concentrations.

OW-23 was originally installed to test for vertical dispersion and hydraulic gradient. It was completed adjacent to OW-18, but about 20 feet deeper, down to bedrock. OW-18 was selected over OW-23 as a better sentinel well based on its completion depth and higher VOC concentrations. A comparison of results between OW-18 and OW-23 confirms that OW-18 exhibits substantially higher concentrations and more detected VOCs, and therefore is a more conservative indicator of groundwater impact:

Detected VOCs in OW-18 and OW-23, August 2006

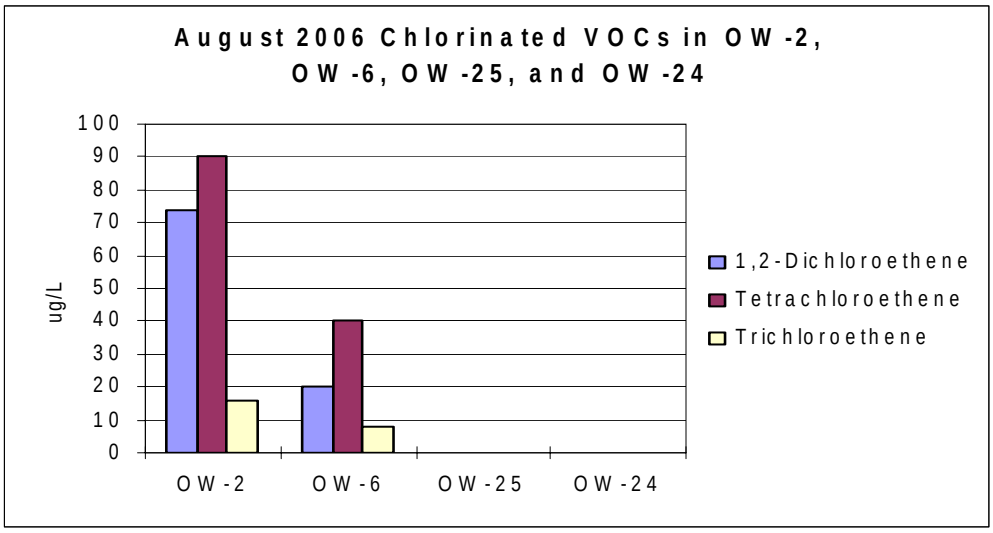
Compound	OW-18	OW-23
	Aug 30, 2006	Aug 31, 2006
Benzene	3.7	1.0 U
Chlorobenzene	7.8	1.0 U
Chloroethane	0.91 J	2.0 U
Vinyl Chloride	2.0 U	0.42 J

U = Analyte not detected at reporting limit
J = Analyte detected but concentration estimated

3.4 Monitoring Wells OW-24 and OW-25

Monitoring wells OW-24 and OW-25 were installed in February 2006 to evaluate groundwater conditions east and south of OW-2, OW-5, and OW-6 (Figure 2). While VOC concentrations in most monitoring wells in the OU2 monitoring network have declined over time, chlorinated VOC concentrations in OW-2, OW-5, and OW-6 have been relatively stable (Appendix B). Even though VOC concentrations were nondetectable in OW-8, directly east of OW-2 and OW-6, there was concern that the chlorinated VOCs detected in this area could extend downgradient to the south and southeast.

The results (Table 3) show that impacts at OW-2, OW-5, and OW-6 are localized and do not extend southeast to OW-24 or OW-25. 1,2-Dichloroethene, trichloroethene, and tetrachloroethene, the three primary chlorinated VOCs in OW-2, OW-5, and OW-6, were not detected in OW-24 or OW-25. In fact, no VOC constituents were detected in OW-24 and OW-25 during the May and August 2006 sampling rounds. The following graph illustrates the decline in chlorinated VOCs along the groundwater flow line from OW-2 to OW-24.



3.5 Benzene Concentration Trends

As was reviewed in detail in the *Supporting Documentation for Five-Year Review* (Cardinal Resources, 2005), different VOCs have predominated in different areas downgradient of the former lagoons. Benzene has predominated in several monitoring wells in the southwestern areas of the Site, with the highest concentrations observed in OW-10R, OW-13 (replaced in February 2006 with OW-13R), and OW-22, with relatively lower concentrations in MW-4, OW-18, OW-19, and OW-21. In OW-18, OW-19, OW-21, and OW-22, benzene was below the Federal Maximum Contaminant Level (MCL) of 5 ug/L in August 2006, although not below the New York State Standard or Guidance Value (SGV) of 1 ug/L.

Benzene continues to exhibit an overall downward trend in individual wells with the highest concentrations, OW-10R, OW-13/OW-13R, and OW-22, as illustrated in Figure 4. There has also been a flattening and mass decline of the benzene plume along the groundwater flow path, as illustrated in Figure 5. This depiction shows how the benzene concentration has declined 2 to 3 orders of magnitude since 1999 in OW-10R and OW-13/OW-13R, closest to the source area. The benzene concentration in OW-18, which is located approximately 850 feet downgradient of the former lagoons, has also shown a decline since 1999, but on a smaller scale, since the initial concentrations were relatively low to begin with.

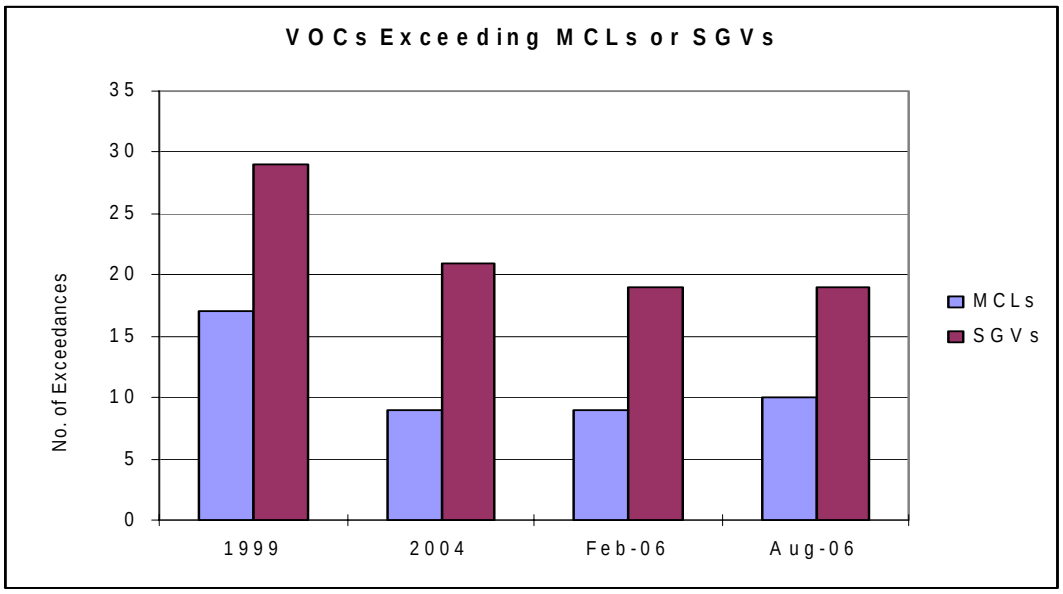
3.6 Trends for Chlorinated VOCs

Chlorinated VOCs are the predominant constituents on the eastern side of the site, particularly in OW-2, OW-5, and OW-6, but are detectable in other locations, including OW-13/OW-13R. Groundwater at OW-5 and OW-13/OW-13R is generally higher in methane and TOC, has lower DO and redox (is more reduced), and is more amenable to reductive dechlorination. In these locations, chlorinated VOCs in general show a downward trend over time (Figure 6).

In OW-2 and OW-6, total chlorinated VOC concentrations remain relatively flat. However, as discussed in Section 3.4, the impacts are localized and have not migrated significantly to the south or east.

3.7 Achievement of MCLs and SGVs

The *Supporting Documentation for Five-Year Review* (Cardinal Resources, 2005) described how in the five years between completion of OU1 remediation in 1999 and 2004, some, but not all, of the Federal Maximum Contaminant Levels (MCLs) and state groundwater standards and guidance values (SGVs) had been met in groundwater wells downgradient of the former lagoons. Table 5 summarizes these findings through the current sampling round. In August 2006, there were 19 SGV exceedances and 10 MCL exceedances. The overall trend since 1999 indicates that there has been improvement in groundwater quality relative to MCLs and SGVs:



3.8 Monitored Natural Attenuation Trends

A variety of MNA field and laboratory parameters have been analyzed over time in groundwater (Table 4). These parameters are general indicators of geochemical conditions conducive to degradation of chlorinated and other VOCs. Patterns of MNA indicators by area were discussed in detail in the *Supporting Documentation for Five-Year Review*, along with an evaluation of how those patterns may relate to contaminant distribution within the groundwater plume. The patterns seen in August 2006 are consistent with the observations presented previously:

- Methane concentrations greater than 50 ug/L are observed in monitoring wells to the south and west, coincident with wells in the area where benzene predominates.
- Relatively high TOC, 2 mg/L or greater, is typically found in the same area as elevated methane concentrations.
- Relatively lower DO and higher reduction/oxidation potential (redox) indicating reduced conditions are found within the same area.

OW-2 and OW-6 are to the north and east, outside of the area with elevated methane, TOC, and reduced conditions, which may inhibit reductive dechlorination of VOCs in these wells. In OW-5, further to the west and south, geochemical conditions are more favorable and reduction of chlorinated VOCs has been observed (Figure 6).

4.0 Data Quality Review

Data quality review, also called data validation, was performed on the analytical data package to assure that quality and usability requirements were met.

4.1 Introduction

A Tier II data quality review of the sample data package was completed using U.S. EPA guidelines. The Tier II data evaluation consisted of a review of data package completeness and a quality control (QC) review, as summarized in the QC forms provided by the laboratory, covering:

- Signed transmittal page
- Data package narrative
- Sample transmittal documentation
- Standard QC forms for:
  - Surrogate recovery
  - Matrix spike/matrix spike duplicate (MS/MSD) recovery
  - Laboratory check samples
  - Method blank summary
  - Instrument performance check
  - Internal standard summary and retention time (RT) summary
  - Initial calibration data
  - Continuing calibration data
- Form Is and raw data for field samples, blanks, laboratory control samples, MS/MSDs
- Copies of logbook pages documenting sample preparation, extract transfer, instruments, and sample tracking
- Holding times
- Form Is and raw data for field and QC samples
- Field duplicates and field, trip, and decontamination blanks.

4.2 Results of Data Review

Refer to Appendix C for Tier II data review summary tables (volatile organic analysis [VOA]), dissolved gases, and general chemistry) for the sample delivery group (SDG), 6H 30197. The hand-marked, qualified Form Is are provided in Appendix A with the laboratory reports. Results in Table 3 and Table 4 reflect the qualified data. The data qualifiers used as a result of the data review are:

- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

The data package was complete and appropriately organized, and all relevant supporting information was provided. Holding times were met for all analyses.

4.2.1 Field QC Samples

The field QC samples for VOC analyses were one duplicate (OW-6); one MS/MSD pair (OW-6); one decontamination blank for the pump used for OW-17, OW-23, OW-24, and OW-25 (pump rinsate); three field blanks for VOCs; and three trip blanks for VOCs. A field blank was collected for each sampling day, and a trip blank was included with each sample cooler. Results were within QC limits.

4.2.2 Data Qualifications

Blanks

Data qualification was minor; no results were rejected. Low concentrations of chloromethane were detected in two of the three field blanks. Using U.S. EPA data validation methods, detections of this compound in the associated field samples were qualified as appropriate. Detects below the blank 5x action level in the associated samples were qualified as U at the reporting level. The samples qualified were MW-1, OW-6, OW-8, OW-17, OW-18, and OW-22.

In addition, 2-butanone, a common laboratory contaminant, was detected in two of seven method blanks. However, no data were qualified because 2-butanone was not detected in any sample.

Matrix Spike/Matrix Spike Duplicates

One VOC sample result and one general chemistry result were qualified as J for estimated, due to MS/MSD results. For VOC sample OW-5, the MS/MSD spike recovery and duplicate analysis were out of control limits and the result for trichloro-ethene was qualified with a J. The sulfate result for sample OW-25 was also qualified as J for estimated, due to high recovery of the MS/MSD spike.

4.2.3 Data Quality and Usability

The data review process indicates that the analytical results are of acceptable quality, and no results have been rejected.

5.0 Summary and Conclusions

One of the goals for the *Supplemental Sampling Work Plan* (Cardinal Resources, 2005), which was the basis for this sampling program, was to verify the southeastern extent of the VOC plume in the vicinity of OW-2, OW-5, and OW-6 and document that it is not migrating.

The February 2006, May 2006, and August 2006 sampling rounds show that the VOC plume in the area of OW-2, OW-5, and OW-6 is localized and does not extend to the southeast:

- Chlorinated VOCs were not detected in OW-24 and OW-25, east and southeast of OW-2, OW-5, and OW-6.
- Chlorinated VOC concentrations in groundwater in OW-2 and OW-6 are stable and declining in OW-5.

These results support the U.S. EPA's conclusions in the Protectiveness Statement contained in its Five-Year Review Report:

> *"Because the implemented remedial actions at OUs at the Carroll and Dubies Sewage Disposal Site are protective, the Site is protective of human health and the environment. There are no exposure pathways that would result in unacceptable risks and none are expected as long as the institutional controls, which are in place, and the natural attenuation remedy selected in the decision documents for the Site continue to be properly monitored and maintained."*

The next round of sampling (groundwater only) is scheduled for November 2006. In accordance with the approved plan, the November 2006 sampling round will include seven monitoring wells:

- OW-2
- OW-5
- OW-6
- OW-17
- OW-23
- OW-24
- OW-25

6.0 References

Cardinal Resources LLC, July 2006, *May 2006 Sampling Report, Carroll and Dubies Superfund Site, Town of Deerpark, Orange County, New York.*

Cardinal Resources LLC, April 2006, *February 2006 Sampling Report, Carroll and Dubies Superfund Site, Town of Deerpark, Orange County, New York.*

Cardinal Resources, Inc., August 2005, *Supplemental Sampling Work Plan, Carroll and Dubies Superfund Site,* Prepared for Kolmar Laboratories, Inc. and Wickhen Products, Inc.

Cardinal Resources, Inc., March 2005, *Supporting Documentation for Five-Year Review, Carroll and Dubies Superfund Site,* Prepared for Kolmar Laboratories, Inc. and Wickhen Products, Inc.

Tables

Table 1
Groundwater Field Stabilization Parameters
August 2006
Carroll and Dubies Superfund Site
Town of Deerpark, Orange County, New York

Well ID	Date	Temperature (°C)	Dissolved Oxygen (mg/L)	Redox (mV)	Specific Conductance (uS/cm)	pH (standard units)	Turbidity (NTUs)
MW-1	08/30/06	11.33	0.22	180.1	167	5.26	1.98
MW-4	08/29/06	12.36	0.18	-14.8	587	6.05	2.75
OW-2	08/30/06	12.01	1.08	216.1	101	5.01	1.12
OW-5	08/29/06	12.49	0.16	172.6	194	5.45	3.75
OW-6	08/31/06	11.69	2.65	186.6	69	4.97	0.25
OW-8	08/31/06	11.46	0.26	-0.2	91	5.90	4.12
OW-10R	08/29/06	12.09	0.09	22.7	420	5.39	2.15
OW-13R	08/29/06	13.93	0.07	-57.0	458	6.37	119
OW-15	08/29/06	14.03	0.08	32.8	206	4.38	1.97
OW-16	08/31/06	12.60	0.11	143.4	154	5.12	0.44
OW-17	08/30/06	13.70	0.07	119.4	245	5.88	9.12
OW-18	08/30/06	14.36	0.07	-52.4	486	6.05	83.5
OW-19	08/31/06	14.01	0.06	-30.9	454	5.87	10.08
OW-21	08/29/06	13.17	0.20	-9.1	400	5.91	3.82
OW-22	08/31/06	12.44	0.23	-21.9	379	5.54	1.22
OW-23	08/30/06	13.82	0.07	-103.3	354	6.51	2.20
OW-24	08/30/06	11.98	2.10	116.6	138	6.71	74.1
OW-25	08/31/06	13.34	4.93	115.1	97	5.98	28.5

Notes:
mg/L = milligrams per liter
mV = milliVolts
uS/cm = microsiemens per centimeter
NTU = nephelometric turbidity units

Table 2
Groundwater Elevation Data[1]
August 29, 2006
Carroll and Dubies Superfund Site
Town of Deerpark, Orange County, New York

Well No.	Top of Casing Elevation or Staff Gauge[2]	Screened Interval	Depth to Groundwater or Surface Water	Groundwater or Surface Water Elevation
MW-1	469.39	28.5 - 43.5	34.90	434.49
MW-4	470.13	35.3 - 50.3	38.14	431.99
OW-2	472.33	30.0 - 47.0	40.91	431.42
OW-3	472.70	30.0 - 46.5	41.39	431.31
OW-4	473.33	26.5 - 27.5	35.31	438.02
OW-5	459.85	25.5 - 45.5	28.72	431.13
OW-6	464.40	31.4 - 51.4	32.95	431.45
OW-8	464.63	34.6 - 54.6	32.13	432.50
OW-9	472.91	25.3 - 35.3	29.81	443.10
OW-10R	469.27	29.0 - 39.0	32.27	437.00
OW-13R	457.69	25.0 - 35.0	26.75	430.94
OW-15	472.05	22.0 - 32.0	12.62	459.43
OW-16	453.90	18.0 - 28.0	22.91	430.99
OW-17	447.18	11.0 - 21.0	16.15	431.03
OW-18	444.57	11.0 - 21.0	13.71	430.86
OW-19	438.69	5.0 - 15.0	8.13	430.56
OW-21	467.46	37.1 - 47.1	36.77	430.69
OW-22	467.10	38.0 - 48.0	36.20	430.90
OW-23	444.73	29.0 - 39.0	13.86	430.87
OW-24	446.77	14.4 - 24.4	15.92	430.85
OW-25	452.47	20.0 - 30.0	21.30	431.17

Notes:
[1]Data reported in feet; elevations relative - mean sea level; 1988 National Geodetic Vertical Datum.
[2]Top of casing and gauge staff elevations surveyed by Maser Consulting P.A.

Table 3
Summary of Detected TCL Volatile Organic Compounds in Groundwater (ug/L)
August 2006
Carroll and Dubies Superfund Site
Town of Deerpark, Orange County, New York

Compound	NYSDEC SGV	U.S. EPA MCL	MW-1 08/30/06	MW-4 08/29/06	OW-2 08/30/06	OW-5 08/29/06	OW-6 08/31/06	OW-6 DUP 08/31/06	OW-8 08/31/06	OW-10R 08/29/06	OW-13R 08/29/06	OW-15 08/29/06
Acetone	50 (G)	NE	10 U	10 U	25 U	14 U	14 U	14 U	10 U	10 U	10 U	10 U
Benzene	1 (S)	5	1.0 U	9.1	2.5 U	1.4 U	1.4 U	1.4 U	1.0 U	9.9	15	0.78 J
Chlorobenzene	5 (S)*	100	1.0 U	1.0 U	2.5 U	1.4 U	1.4 U	1.4 U	1.0 U	1.4	1.0 U	0.51 J
Chloroethane	5 (S)*	NE	2.0 U	2.0 U	5.0 U	2.9 U	2.9 U	2.9 U	2.0 U	0.92 J	2.0 U	2.0 U
Chloromethane	NE	NE	2.0 U	2.0 U	5.0 U	2.9 U	2.9 U	2.9 U	2.0 U	0.20 J	2.0 U	0.37 J
1,1-Dichloroethane	5 (S)*	NE	1.0 U	1.0 U	2.5 U	1.4 U	1.4 U	1.4 U	1.0 U	1.0 U	1.0 U	0.22 J
1,2-Dichloroethene (total)	5 (S)*	70	1.0 U	1.0 U	74	34	20	20	1.0 U	0.59 J	0.40 J	1.0 U
Ethylbenzene	5 (S)*	700	1.0 U	1.0 U	2.5 U	1.4 U	1.4 U	1.4 U	1.0 U	0.25 J	1.0 U	1.0 U
Tetrachloroethene	5 (S)*	5	1.0 U	1.0 U	90	6.1	40	40	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5 (S)*	1,000	1.0 U	1.0 U	2.5 U	1.4 U	1.4 U	1.4 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5 (S)*	5	1.0 U	1.0 U	16	2.8 J	7.7	7.8	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl Chloride	2 (S)	2	2.0 U	2.0 U	5.0 U	0.82 J	2.9 U	2.9 U	2.0 U	1.7 J	1.3 J	0.82 J
Xylenes (total)	5 (S)*	10,000	1.0 U	1.0 U	2.5 U	1.4 U	1.4 U	1.4 U	1.0 U	1.0 U	1.0 U	1.0 U

Compound	NYSDEC SGV	U.S. EPA MCL	OW-16 08/31/06	OW-17 08/30/06	OW-18 08/30/06	OW-19 08/31/06	OW-21 08/29/06	OW-22 08/31/06	OW-23 08/31/06	OW-24 08/30/06	OW-25 08/31/06
Acetone	50 (G)	NE	10 U	10 U	10 U	3.1 J	10 U	10 U	10 U	10 U	10 U
Benzene	1 (S)	5	1.0 U	1.0 U	3.7	3.3	2.4	2.8	1.0 U	1.0 U	1.0 U
Chlorobenzene	5 (S)*	100	1.0 U	1.0 U	7.8	13	1.0 U	5.3	1.0 U	1.0 U	1.0 U
Chloroethane	5 (S)*	NE	2.0 U	2.0 U	0.91 J	1.8 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane	NE	NE	2.0 U	2.0 U	2.0 U	2.0 U	0.27 J	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	5 (S)*	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene (total)	5 (S)*	70	0.35 J	1.0 U	1.0 U	0.85 J	1.0 U	0.37 J	1.0 U	1.0 U	1.0 U
Ethylbenzene	5 (S)*	700	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5 (S)*	5	1.0 U	0.20 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5 (S)*	1,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.24 J	1.0 U	1.0 U	1.0 U
Trichloroethene	5 (S)*	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl Chloride	2 (S)	2	2.0 U	2.0 U	2.0 U	4.1	0.83 J	0.41 J	0.42 J	2.0 U	2.0 U
Xylenes (total)	5 (S)*	10,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U	1.0 U	1.0 U

Notes:
TCL = Target Compound List
NYSDEC SGV = New York State Department of Environmental Conservation Standards (S) and Guidance (G) Values for groundwater
U.S. EPA MCL = United States Environmental Protection Agency Maximum Contaminant Level for drinking/groundwater
NE = Not established; no criteria specified
U = The analyte was analyzed for, but was not detected above the reported quantitation limit.
J = Estimated result; result is less than reporting limit
* = The principal organic contaminant (POC) standard for groundwater of 5 ug/L applies to this substance.
Red = **Concentrations detected at or above regulatory limit**
Blue = **Analyte detected at less than regulatory limit, or analyte detected but no regulatory criteria specified**
Chloromethane was reported by the laboratory in some other samples; however, the results were qualified during the data validation process as not detected (U) at or above the reported levels due to the presence of those compounds in an associated method, field, trip, or rinsate blank.

Table 4
Natural Attenuation Parameters
August 2006
Carroll and Dubies Superfund Site
Town of Deerpark, Orange County, New York

Well ID	Date	Alkalinity (mg/L)	Chloride (mg/L)	Dissolved Oxygen (mg/L)	Ethane (ug/L)	Ethene (ug/L)	Ferrous Iron (mg/L)*	Methane (ug/L)	Laboratory Nitrate (mg/L)	Redox (mV)	Sulfate (mg/L)	Sulfide (mg/L)	TOC (mg/L)
MW-1	08/30/06	120	3.5	0.22	0.50 U	0.50 U	0.0	0.24 J	0.40	180.1	12.8	1.0 U	1
MW-4	08/29/06	200	110	0.18	0.50 U	0.50 U	0.0	850	0.10 U	-14.8	59.7	1.0 U	3
OW-2	08/30/06	36	2.3	1.08	0.50 U	0.50 U	0.0	0.50 U	2.8	216.1	22.7	1.0 U	1 U
OW-5	08/29/06	73	6.2	0.16	0.50 U	0.50 U	0.0	0.21 J	2.7	172.6	145	1.0 U	1 U
OW-6	08/31/06	28	1.8	2.65	0.50 U	0.50 U	0.0	0.50 U	0.38	186.6	41.7	1.0 U	1 U
OW-8	08/29/06	45	2.4	0.26	0.50 U	0.50 U	0.0	0.83 J	0.10 U	-0.2	25.9	1.0 U	1 U
OW-10R	08/29/06	260	5.8	0.09	0.50 U	0.5 U	0.0	630	0.10 U	22.7	106	1.0 U	3
OW-13R	08/29/06	340	4.5	0.07	0.5 U	0.5 U	0.0	320	0.10 U	-57.0	22.7	1.0 U	4
OW-15	08/29/06	99	4.2	0.08	0.19 J	0.50 U	0.0	420	0.10 U	32.8	38.5	1.0 U	3
OW-16	08/31/06	74	6.8	0.11	0.50 U	0.50 U	0.0	8.60	1.1 J	143.4	87.7	1.0 U	1 U
OW-17	08/30/06	160	2.8	0.07	0.50 U	0.50 U	0.0	16	0.10 U	119.4	22.0	1.0 U	1
OW-18	08/30/06	280	9.1	0.07	0.50 U	0.50 U	1.5	780	0.10 UJ	-52.4	13.9	1.0 U	9
OW-19	08/31/06	230	14.8	0.06	0.38 J	0.26 J	1.4	510	0.10 UJ	-30.9	58.5	1.0 U	7
OW-21	08/29/06	230	8.0	0.20	0.50 U	0.50 U	0.0	71	0.10 U	-9.1	40.9	1.0 U	2
OW-22	08/31/06	230	9.0	0.23	0.5 U	0.5 U	0.0	470	0.10 U	21.9	33.8	1.0 U	5
OW-23	08/30/06	210	5.4	0.07	0.5 U	0.5 U	3.9	250	0.10 UJ	103.3	19.9	1.0 U	3
OW-24	08/30/06	100	1.2	2.10	0.50 U	0.50 U	0.0	0.50 U	0.12	116.6	12.8	1.0 U	1 U
OW-25	08/31/06	61	2.3	4.93	0.50 U	0.50 U	0.0	0.5 U	0.19	115.1	28 J	1.0 U	1 U

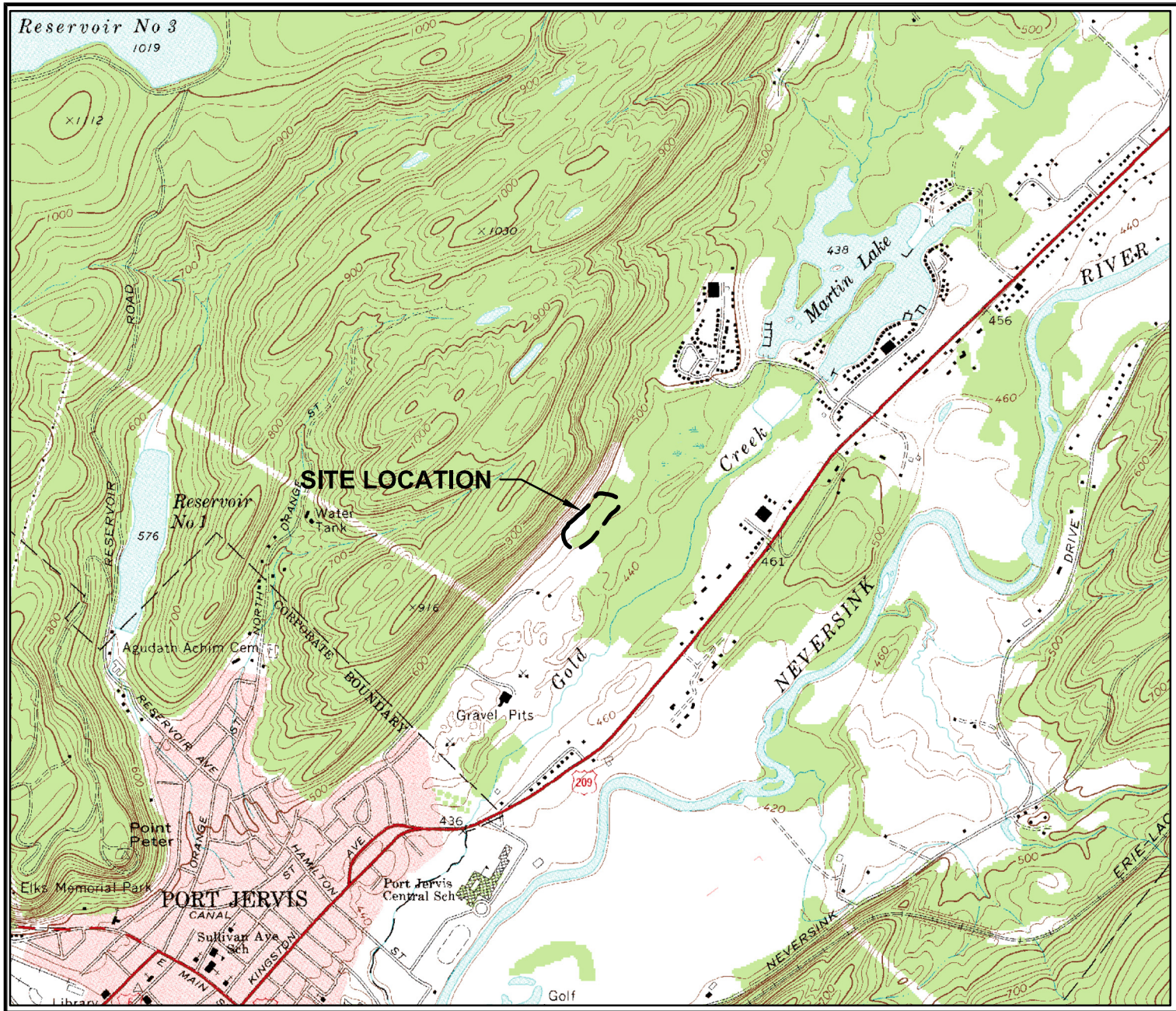
Notes:
mg/L = milligrams per liter
ug/L = micrograms per liter
*Ferrous iron was measured in the field (Hach kit).
UJ = Analyte not detected above the reporting limit; however, the reporting limit is approximate.
mV = milliVolts
TOC = total organic carbon
U = Analyte not detected at method reporting limit.
J = Estimated result; result is less than the reporting limit.

Table 5
MCL and SGV Exceedances, 1999, 2004, and 2006
Carroll and Dubies Superfund Site
Town of Deerpark, Orange County, New York

Well	Compound	MCL ug/L	SGV ug/L	1999 Exceedance		2004 Exceedance		Feb 2006 Exceedance		Aug 2006 Exceedance	
				MCL	SGV	MCL	SGV	MCL	SGV	MCL	SGV
MW-4	Benzene	5	1	X	X		X		X	X	X
	1,2-Dichloroethene (1,2-DCE)	70	5		X						
OW-2	Benzene	5	1				X				
	Tetrachloroethene (PCE)	5	5	X	X	X	X	X	X	X	X
	Trichloroethene (TCE)	5	5	X	X	X	X	X	X	X	X
	1,2-Dichloroethene (1,2-DCE)	70	5	X	X	X	X	X	X	X	X
OW-5	Tetrachloroethene (PCE)	5	5	X	X	X	X			X	X
	Trichloroethene (TCE)	5	5	X	X						
	1,2-Dichloroethene (1,2-DCE)	70	5		X		X		X		X
OW-6	Tetrachloroethene (PCE)	5	5	X	X	X	X	X	X	X	X
	Trichloroethene (TCE)	5	5			X	X	X	X	X	X
	1,2-Dichloroethene (1,2-DCE)	70	5		X		X		X		X
OW-10(R)*	Benzene	5	1	X	X	X	X		X	X	X
	Chlorobenzene	100	5		X						
	Methylene chloride	5	5	X	X						
	Toluene	1,000	5		X						
OW-13 - OW-13R**	Benzene	5	1	X	X	X	X	X	X	X	X
	1,2-Dichloroethene (1,2-DCE)	70	5		X						
	Methylene chloride	5	5	X	X						
	Toluene	1,000	5		X						
	Vinyl chloride	2	2	X	X	X	X				
OW-15	Benzene	5	1		X		X				
OW-18	Benzene	5	1		X		X	X	X		X
	Chlorobenzene	100	5				X		X		X
	Xylenes (total)	10,000	5						X		
OW-19	Benzene	5	1	X	X		X		X		X
	Chlorobenzene	100	5		X		X		X		X
	Chloroethane	NA	5		X						
	Vinyl chloride	2	2	X	X			X	X	X	X
OW-21	Benzene	5	1	X	X		X		X		X
OW-22	Benzene	5	1	X	X		X	X	X		X
	Chlorobenzene	100	5		X		X		X		X
	Vinyl chloride	2	2	X	X						

Notes:
*OW-10 was replaced with OW-10R in 2000. OW-10 was abandoned because it was within the OU1 construction area.
**OW-13R was installed in February 2006 to replace OW-13.

Figures



2,000' 0 2,000'

SCALE IN FEET

LEGEND:

APPROXIMATE SITE BOUNDARY

SOURCE:

USGS TOPOGRAPHIC QUADRANGLE MAP
PORT JERVIS NORTH, NEW YORK, DATED 1991.

CARDINAL RESOURCES

CARROLL AND DUBIES SUPERFUND SITE
TOWN OF DEERPARK, ORANGE COUNTY, NEW YORK

105-0035

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
1							
0	ECM						

FIGURE 1

SITE LOCATION MAP

CADD FILE	9005	SCALE	AS NOTED	CURRENT DATE:	03-07-2005
DRAWING NO.	105-0035-0300-01			REVISION	0

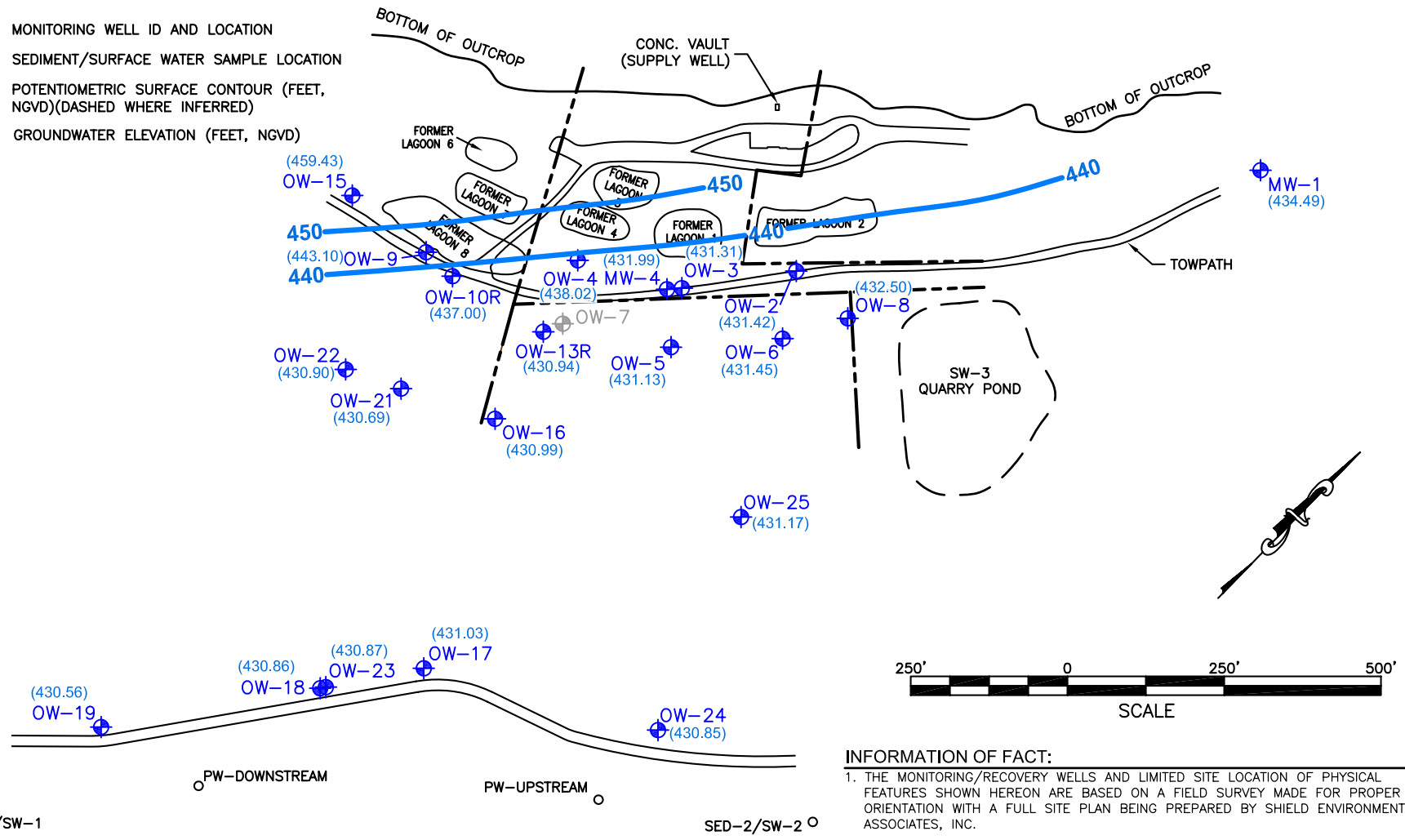
LEGEND:

OW–15 MONITORING WELL ID AND LOCATION

SED–2/SW–2 SEDIMENT/SURFACE WATER SAMPLE LOCATION

440 POTENTIOMETRIC SURFACE CONTOUR (FEET, NGVD)(DASHED WHERE INFERRED)

(459.43) GROUNDWATER ELEVATION (FEET, NGVD)



INFORMATION OF FACT:

1. THE MONITORING/RECOVERY WELLS AND LIMITED SITE LOCATION OF PHYSICAL FEATURES SHOWN HEREON ARE BASED ON A FIELD SURVEY MADE FOR PROPER ORIENTATION WITH A FULL SITE PLAN BEING PREPARED BY SHIELD ENVIRONMENTAL ASSOCIATES, INC.

2. THE HORIZONTAL POSITION OF THE HEREIN SURVEYED "CARROLL AND DUBIES" SUPERFUND SITE IS BASED ON NEW YORK GEODETIC CONTROL MONUMENTS PID # LY2611 (LAUREL) AND PID # AB3870 (DIANNE).

   ADJUSTED TO NAD 1983 WITHIN THE NEW YORK STATE PLANE COORDINATE SYSTEM.

NOTE: THE OUTLINES OF THE FORMER LAGOONS ARE BASED ON THE ACTUAL EXCAVATION.

SOURCE: MASER CONSULTING P.A. MONITORING WELL LOCATION PLAN. INDEXN). SUOOQ9, MARCH 3, 1999.

CARDINAL RESOURCES

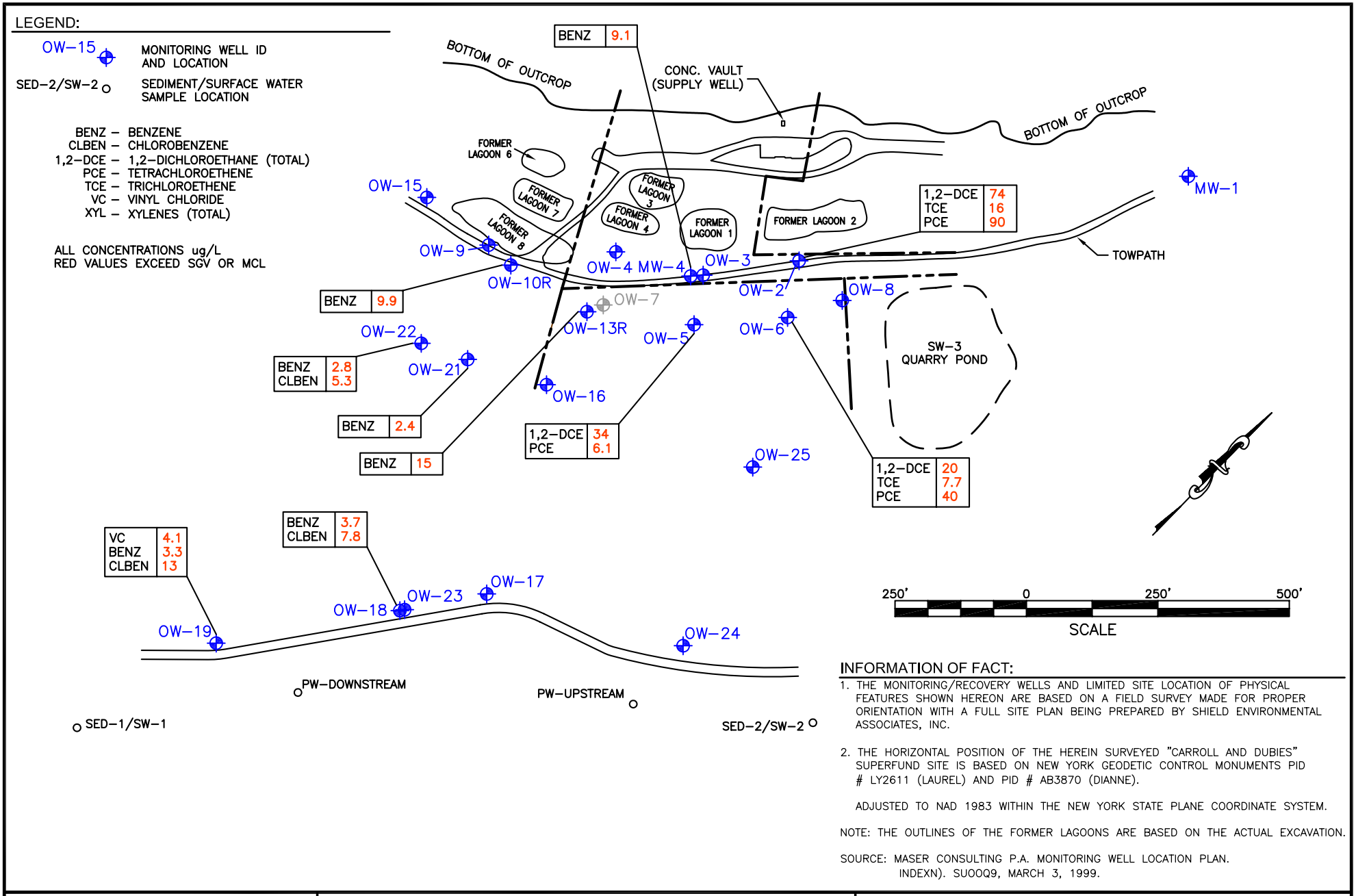
CARROLL AND DUBIES SUPERFUND SITE
TOWN OF DEERPARK, ORANGE COUNTY, NEW YORK
105-0035

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
1							
0	ECM						

FIGURE 2

GROUNDWATER CONTOUR MAP
AUGUST 2006

CADD FILE	9292	SCALE	AS NOTED	CURRENT DATE:	10–23–2006
DRAWING NO.	105-0035-0300-02 Aug06			REVISION	0



INFORMATION OF FACT:

1. THE MONITORING/RECOVERY WELLS AND LIMITED SITE LOCATION OF PHYSICAL FEATURES SHOWN HEREON ARE BASED ON A FIELD SURVEY MADE FOR PROPER ORIENTATION WITH A FULL SITE PLAN BEING PREPARED BY SHIELD ENVIRONMENTAL ASSOCIATES, INC.

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   ADJUSTED TO NAD 1983 WITHIN THE NEW YORK STATE PLANE COORDINATE SYSTEM.

NOTE: THE OUTLINES OF THE FORMER LAGOONS ARE BASED ON THE ACTUAL EXCAVATION.

SOURCE: MASER CONSULTING P.A. MONITORING WELL LOCATION PLAN. INDEXN). SUOOQ9, MARCH 3, 1999.

CARDINAL RESOURCES

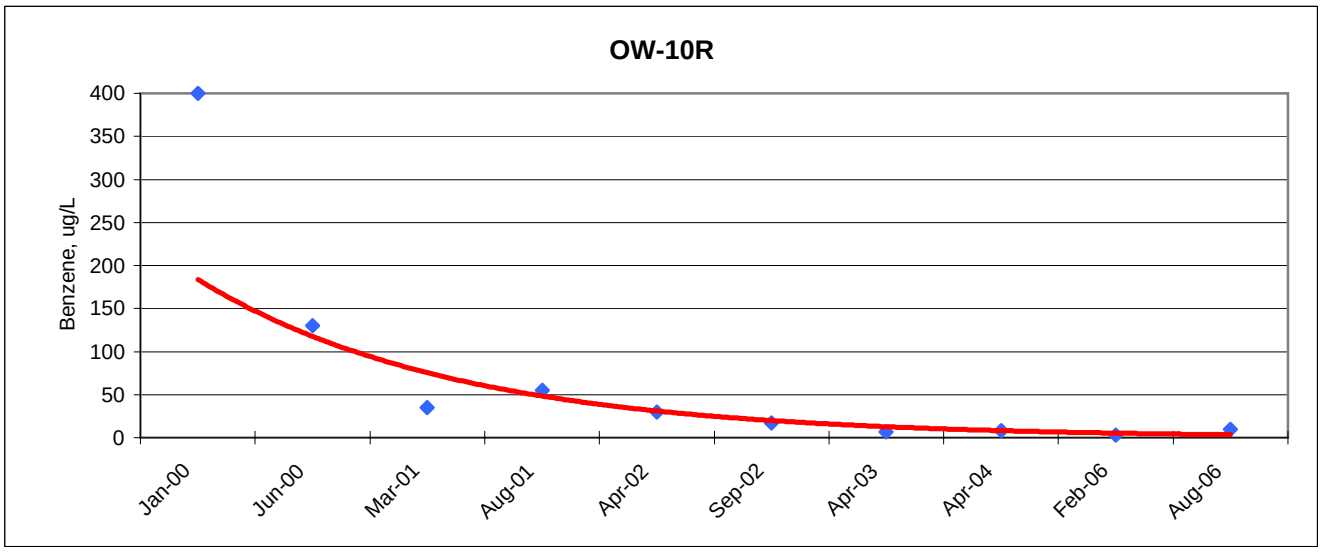
CARROLL AND DUBIES SUPERFUND SITE
TOWN OF DEERPARK, ORANGE COUNTY, NEW YORK
105-0035

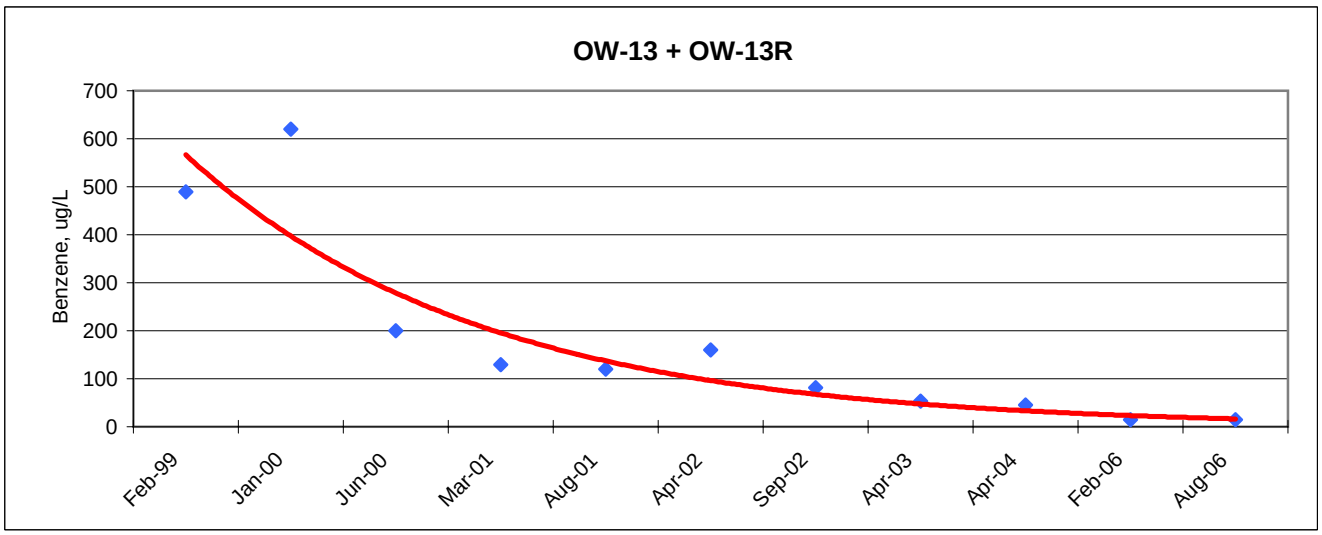
NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
1							
0	ECM						

FIGURE 3
VOLATILE ORGANIC COMPOUND EXCEEDANCES IN GROUNDWATER
AUGUST 2006

CADD FILE	9292	SCALE	AS NOTED	CURRENT DATE:	10–23–2006
DRAWING NO.	105-0035-0300-03 Aug06			REVISION	0

Figure 4
Benzene Concentration Trends in Selected Monitoring Wells
Pre-Excavation to August 2006





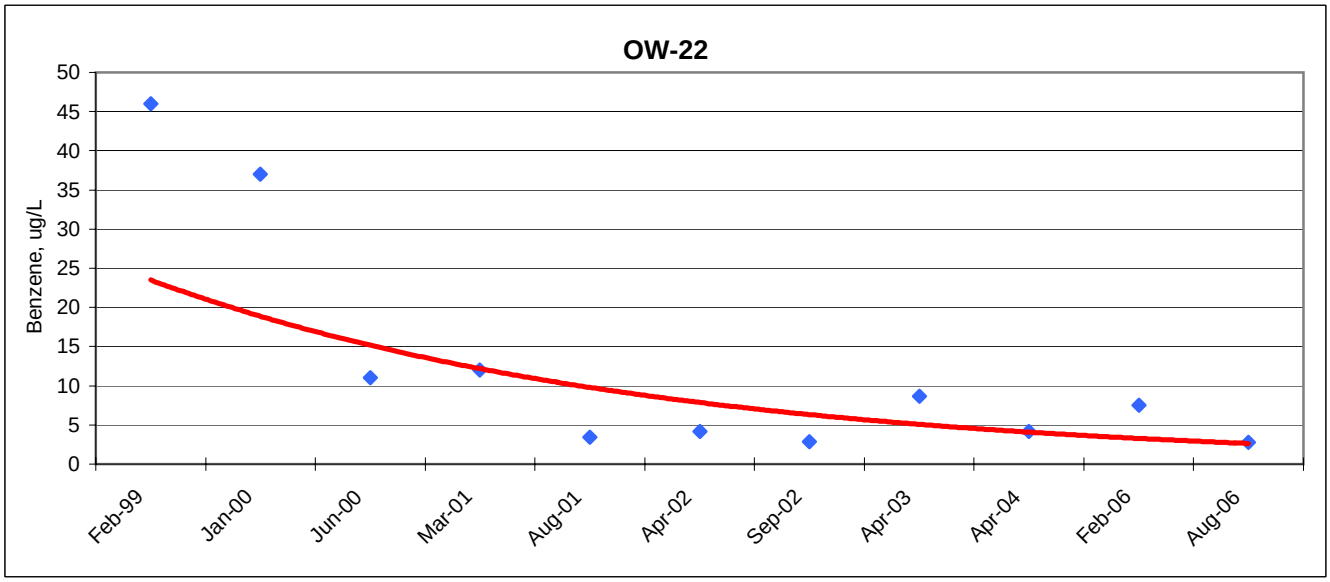


Figure 5
Benzene Concentration Trends Based on Distance from Source
Carroll and Dubies Superfund Site
Town of Deerpark, Orange County, New York

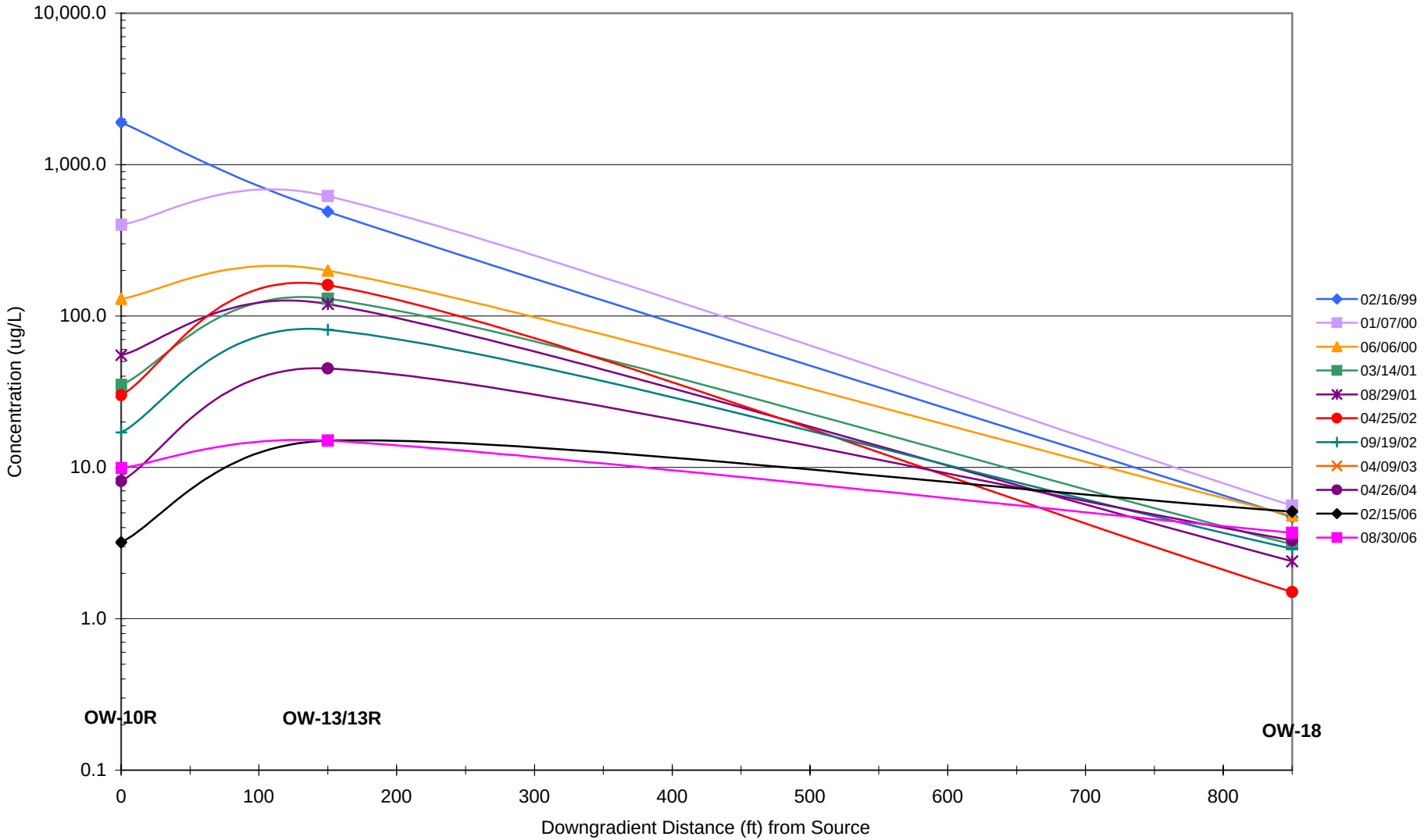
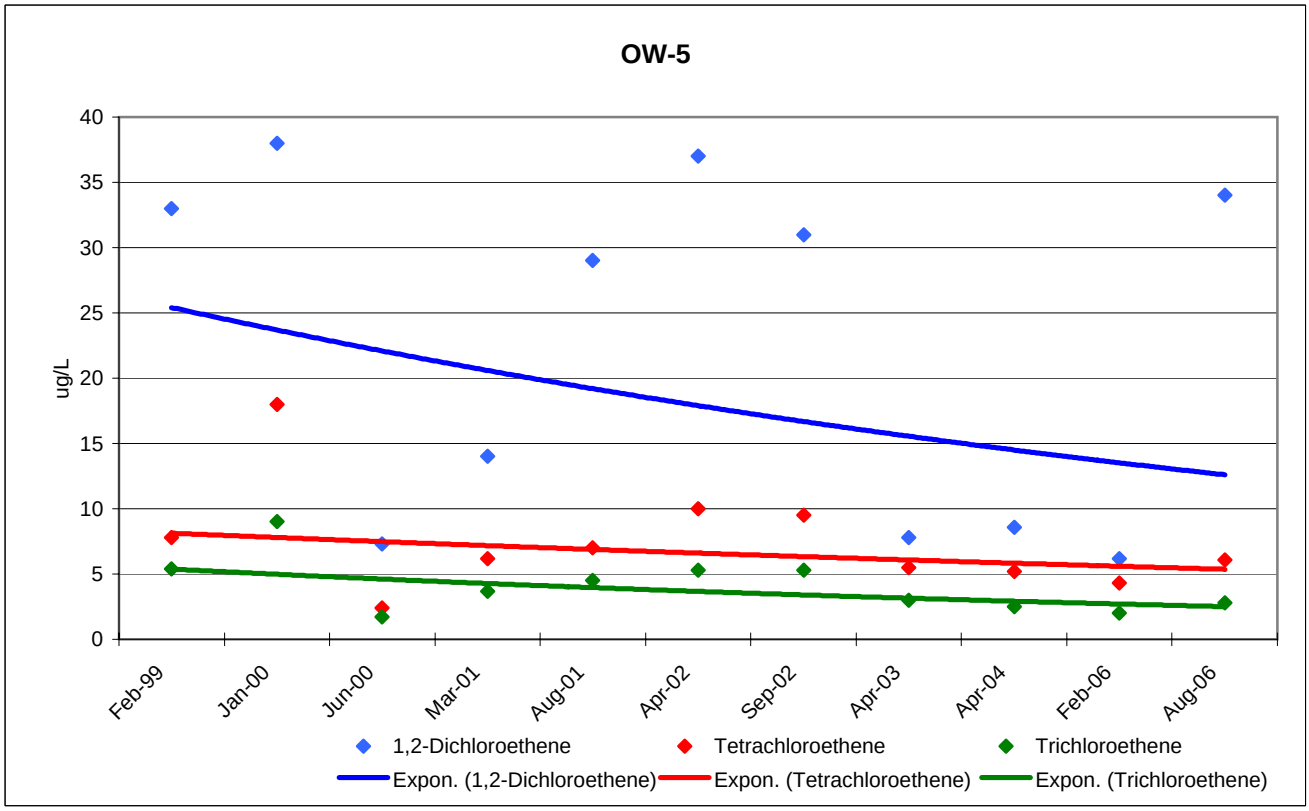
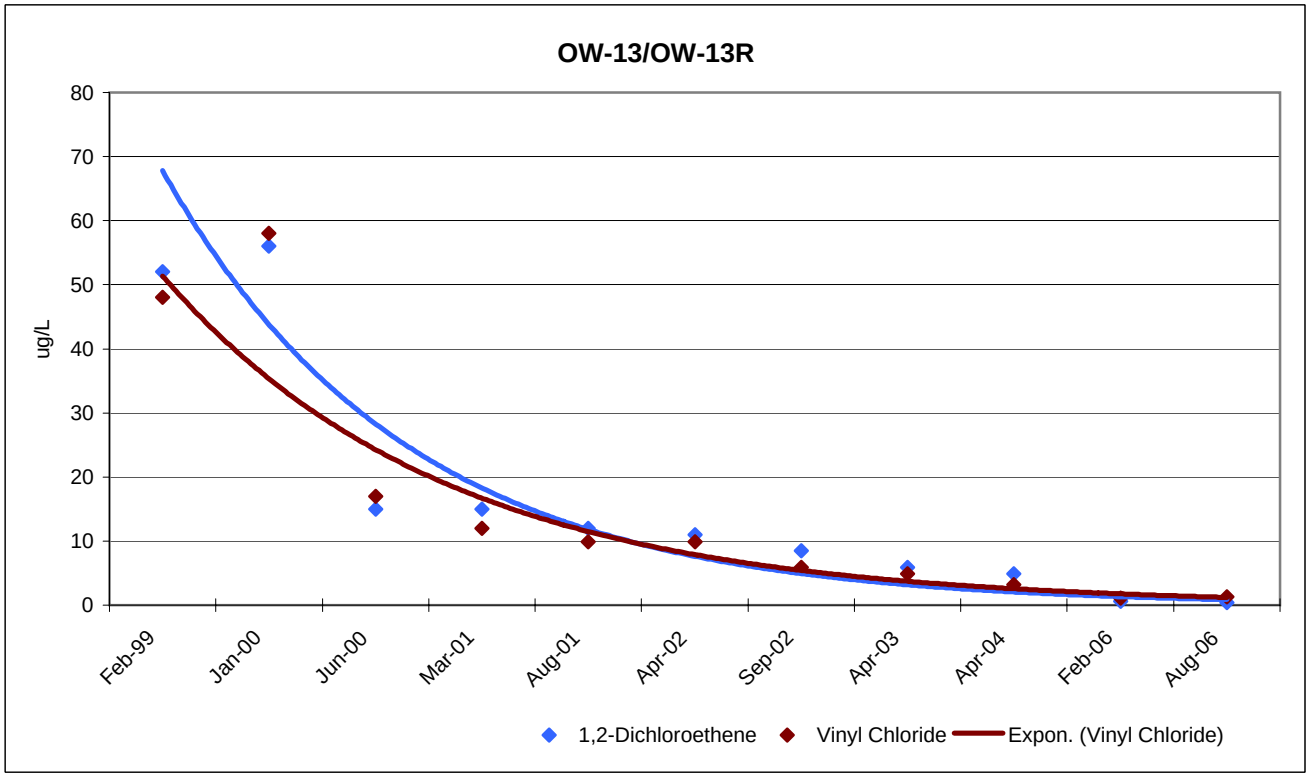


Figure 6
Chlorinated VOC Concentration Trends in Selected Wells
Pre-Excavation to August 2006





Appendix A
Laboratory Reports with Marked Form Is from Data Review

Appendix B
Historic Groundwater Results

Table B-1
Historical Summary of Detected TCL Volatile Organic Compounds in Groundwater (ug/L)
Carroll and Dubies Superfund Site
Town of Deerpark, Orange County, New York

Analyte		Acetone	Benzene	Carbon Disulfide	Carbon Tetrachloride	Chloro-benzene	Chloro-ethane	Chloroform	Chloro-methane	1,1-DCA	1,2-DCA	1,1-DCE	1,2-DCE (total)	Ethyl-benzene	2-Hexanone	Methylene Chloride	1,1,2,2-PCA	PCE	Styrene	Toluene	TCE	Vinyl Chloride	Xylenes (total)
NYSDEC SGV		50 (G)	1 (S)	NA	5 (S)	5 (S)*	5 (S)*	7 (S)	NA	5 (S)*	0.6 (S)	5 (S)*	5 (S)*	5 (S)*	50 (G)	5 (S)*	5 (S)*	5 (S)*	5 (S)*	5 (S)*	5 (S)*	2 (S)	5 (S)*
U.S. EPA MCL		NA	5	NA	5	100	NA	NA	NA	NA	5	7	70	700	NA	5	NA	5	100	1,000	5	2	10,000
Well ID	Date																						
MW-1	03/22/93	NR	0.9 J	NR	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NR	<0.1 B	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
	09/26/94	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NR	<10	<10	<10	-	<10	<10	<10	<10
	04/20/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10
	02/18/99	<10	0.66 J	<1.0	<1.0	0.40 J	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	01/05/00	<10	0.65 J,B	<1.0	<1.0	0.37 J	<2.0	0.083 J	<2.0	<1.0	<1.0	0.22 J	<1.0	0.14 J	<10	0.35 J,B	<1.0	<1.0	-	0.097 J	<1.0	<2.0	<1.0
	06/06/00	<10	0.57 J	<1.0	<1.0	0.30 J	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	03/15/01	10 UJ	0.40 J	<1.0	<1.0	0.38 J	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	08/29/01	<10	<1.0	<1.0	<1.0	0.32 J	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/25/02	10 U	<1.0	<1.0	<1.0	0.17 J	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	1.0 U	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	09/18/02	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/09/03	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/25/04	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	0.24 J	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	1.0
	2/15/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	-	1.0 U	1.0 U	2.0 U	1.0 U
	8/30/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U
MW-4	03/24/93	NR	18 J	NR	<0.5	0.4 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.3 J	<0.5	NR	<4.1 B,J	<0.5	<0.5	-	0.1 J	<0.5	<0.5	<0.5
	09/26/94	<10	11	<10	<1.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	NR	<10	<10	<10	-	<10	<10	<10	<10
	04/24/95	<10	15	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10
	02/18/99	<10	5.7	<1.0	<1.0	0.20 J	<2.0	<1.0	<2.0	<1.0	<0.1	<1.0	9.8	<1.0	<10	<1.0	<1.0	0.16 J	-	0.16 J	0.20 J	<2.0	<1.0
	01/05/00	<10	6.9 B	<1.0	<1.0	0.26 J	<2.0	<1.0	<2.0	0.13 J	<1.0	0.45 J	3.3	<1.0	<10	0.11 J,B	<1.0	<1.0	-	0.090 J	0.15 J	0.30 J	<1.0
	06/06/00	<10	4.8	<1.0	<1.0	0.20 J	<2.0	<1.0	<2.0	0.11 J	<1.0	<1.0	3.8	<1.0	<10	<1.0	<1.0	0.30 J	-	<1.0	<1.0	0.18 J	<1.0
	03/14/01	<10	3.6	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.2	<1.0	<10	<1.0	<1.0	0.66 J	-	<1.0	0.42 J	<2.0	<1.0
	08/29/01	<10	12	<1.0	<1.0	0.21 J	<2.0	<1.0	0.26 J	<1.0	<1.0	<1.0	1.5	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/25/02	<10	10	<1.0	<1.0	0.21 J	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	1.2	<1.0	<10	1.0 U	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	09/18/02	<10	7.8	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/09/03	<10	2.2	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	0.84 J	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/26/04	10 U	2.5	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	0.50 J	<1.0	<10	<1.0	<1.0	0.72 J	-	<1.0	<1.0	<2.0	<1.0
	2/15/06	10 U	3.8	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	0.53 J	1.0 U	10 U	1.0 U	1.0 U	0.33 J	-	1.0 U	1.0 U	2.0 U	1.0 U
	8/29/06	10 U	9.1	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U
OW-2	03/23/93	NR	<0.5	NR	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	55	<0.5	NR	<1.3 B	<0.5	50	-	<0.5	22	<0.5	<0.5
	09/23/94	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	130	<10	NR	<10	<10	100	-	<10	24	<10	<10
	04/23/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	85	<10	<10	<10	<10	76	-	<10	22	<10	<10
	02/17/99	<50	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	130	<5.0	<50	3.6 J,B	<5.0	86	-	<5.0	22	<10	<5.0
	01/05/00	<10	0.46 J	<5.0	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	150	<5.0	<50	<5.0	<5.0	80	-	<5.0	21	0.72 J	<5.0
	06/06/00	<33	<3.3	<3.3	<3.3	<3.3	<6.7	<3.3	<6.7	<3.3	<3.3	<3.3	99	<3.3	<33	<3.3	<3.3	80	-	<3.3	19	<6.7	<3.3
	03/15/01	<100	<10	<10	<10	<10	<20	<10	<20	<10	<10	<10	310	<10	<100	4.6 J	<10	160	-	<10	32	<20	<10
	08/29/01	<25	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	<5.0	<2.5	<2.5	<2.5	69	<2.5	<25	<2.5	<2.5	61	-	<2.5	15	<5.0	<2.5
	04/25/02	<25	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	<5.0	<2.5	<2.5	<2.5	81	<2.5	<25	1.2 U	<2.5	60	-	<2.5	18	0.95 J	<2.5
	09/18/02	<29	<2.9	<2.9	<2.9	<2.9	<5.7	<2.9	<5.7	<2.9	<2.9	<2.9	85	<2.9	<29	<2.9	<2.9	68	-	<2.9	18	<5.7	<2.9
	04/09/03	<120	<12	<12	<12	<12	<25	<12	<25	<12	<12	<12	290	<12	<120	<12	<12	160	-	<12	29	<25	<12
	04/26/04	10 U	1.5 J	<6.7	<6.7	<6.7	<13	<6.7	<13	<6.7	<6.7	<6.7	170	<6.7	<67	<6.7	<6.7	110	-	1.3 J	22	<13	<6.7
	2/15/06	40 U	4.0 U	4.0 U	4.0 U	4.0 U	8.0 U	4.0 U	8.0 U	4.0 U	4.0 U	4.0 U	150	4.0 U	4.0 U	4.0 U	4.0 U	120	-	4.0 U	20	8.0 U	4.0 U
	5/23/06	80 U	8.0 U	8.0 U	8.0 U	8.0 U	16 U	8.0 U	16 U	8.0 U	8.0 U	8.0 U	250	8.0 U	80 U	8.0 U	8.0 U	130	8.0 U	8.0 U	22	16 U	8.0 U
	8/30/06	25 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	5.0 U	2.5 U	2.5 U	2.5 U	74	2.5 U	25 U	2.5 U	2.5 U	90	2.5 U	2.5 U	16	5.0 U	2.5 U

Table B-1
Historical Summary of Detected TCL Volatile Organic Compounds in Groundwater (ug/L)
Carroll and Dubies Superfund Site
Town of Deerpark, Orange County, New York

Analyte		Acetone	Benzene	Carbon Disulfide	Carbon Tetrachloride	Chloro-benzene	Chloro-ethane	Chloroform	Chloro-methane	1,1-DCA	1,2-DCA	1,1-DCE	1,2-DCE (total)	Ethyl-benzene	2-Hexanone	Methylene Chloride	1,1,2,2-PCA	PCE	Styrene	Toluene	TCE	Vinyl Chloride	Xylenes (total)
NYSDEC SGV		50 (G)	1 (S)	NA	5 (S)	5 (S)*	5 (S)*	7 (S)	NA	5 (S)*	0.6 (S)	5 (S)*	5 (S)*	5 (S)*	50 (G)	5 (S)*	5 (S)*	5 (S)*	5 (S)*	5 (S)*	5 (S)*	2 (S)	5 (S)*
U.S. EPA MCL		NA	5	NA	5	100	NA	NA	NA	NA	5	7	70	700	NA	5	NA	5	100	1,000	5	2	10,000
Well ID	Date																						
OW-5	03/23/93	NR	<3.0 J	NR	<0.5	0.1 J	<0.5	<0.5	<1.3	<0.5	<0.6	<0.5	8.0 R	<0.5	NR	<3.8	<0.6	1.0	-	<0.5	<1.3	1.8	<0.6
	09/29/94	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	19	<10	NR	<10	<10	<10	-	<10	<10	<10	<10
	04/25/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	7 J	<10	<10	<10	<10	<10	-	<10	<10	<10	<10
	02/18/99	<17	0.67 J	<1.7	<1.7	0.20 J	<3.3	<1.7	<3.3	<1.7	<1.0	<1.7	33	<1.7	<17	1.3 J,B	<1.0	7.8	-	<1.7	5.4	<3.3	<1.7
	01/06/00	1.3 J	0.66 J	<1.0	<1.0	0.29 J	<2.0	<1.0	<2.0	<1.0	<1.0	0.20 J	38	<1.0	<10	0.25 J,B	<1.0	18	-	0.041 J	9.0	0.26 J	<1.0
	06/07/00	<10	0.91 J	<1.0	<1.0	0.19 J	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	7.3	<1.0	<10	<1.0	<1.0	2.4	-	<1.0	1.7	<2.0	<1.0
	03/14/01	<10	0.46 J	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	14	<1.0	<10	<1.0	<1.0	6.2	-	<1.0	3.7	<2.0	<1.0
	08/29/01	<12	<1.2	<1.2	<1.2	0.21 J	<2.5	<1.2	<2.5	<1.2	<1.2	<1.2	29	<1.2	<12	<1.2	<1.2	7.0	-	<1.2	4.5	<2.5	<1.2
	04/24/02	14 U	0.35 J	<1.4	<1.4	0.20 J	<2.9	<1.4	<2.9	<1.4	<1.4	<1.4	37	<1.4	<14	1.4 U	<1.4	10	-	<1.4	5.3	<2.9	<1.4
	09/19/02	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	31	<1.0	<10	<1.0	<1.0	9.5	-	<1.0	5.3	<2.0	<1.0
	04/10/03	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	7.8	<1.0	<10	<1.0	<1.0	5.5	-	<1.0	3	<2.0	<1.0
	04/25/04	<10	0.38 J	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	8.6	<1.0	<10	<1.0	<1.0	5.2	-	<1.0	2.5	<2.0	<1.0
	2/16/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	6.2	1.0 U	10 U	1.0 U	1.0 U	4.3	-	1.0 U	2.0	2.0 U	1.0 U
	5/23/06	10 U	0.69 J	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	20	1.0 U	10 U	1.0 U	1.0 U	5.7	1.0 U	1.0 U	2.6	0.27 J	1.0 U
	8/29/06	14 U	1.4 U	1.4 U	1.4 U	1.4 U	2.9 U	1.4 U	2.9 U	1.4 U	1.4 U	1.4 U	34	1.4 U	14 U	1.4 U	1.4 U	6.1	1.4 U	1.4 U	2.8 J	0.82 J	1.4 U
OW-6	03/23/93	NR	<1.3 J	NR	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.1 J	<1.3 J	<0.5	NR	<0.7 J,B	<0.5	13	-	<0.5	<2.9	1.1	<0.5
	09/27/94	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	4 J	<10	NR	<10	<10	17	-	<10	6.0 J	<10	<10
	04/23/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	19	-	<10	5.0 J	<10	<10
	02/18/99	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	7.8	<1.0	<10	3.7 B	<1.0	20	-	<1.0	4.6	<2.0	<1.0
	01/06/00	1.4 J	0.19 J,B	0.58 J	<1.0	<1.0	<2.0	<1.0	0.17 J	<1.0	<1.0	0.28 J	5.1	<1.0	<10	0.26 J,B	<1.0	21	-	<1.0	4.6	<2.0	<1.0
	06/07/00	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.2	<1.0	<10	<1.0	<1.0	14	-	<1.0	2.6	<2.0	<1.0
	03/15/01	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	6.9	<1.0	<10	<1.0	<1.0	19	-	<1.0	3.9	<2.0	<1.0
	08/29/01	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	6.7	<1.0	<10	<1.0	<1.0	12	-	<1.0	2.3	<2.0	<1.0
	04/24/02	10 U	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.7	<1.0	<10	1.1 U	<1.0	12	-	<1.0	2.9	<2.0	<1.0
	09/19/02	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	7.8	<1.0	<10	<1.0	<1.0	15	-	<1.0	3.9	<2.0	<1.0
	04/09/03	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	21	<1.0	<10	0.34 J	<1.0	28	-	<1.0	6.8	<2.0	<1.0
	04/25/04	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	21	<1.0	<10	<1.0	<1.0	32	-	<1.0	6.3	<2.0	<1.0
	2/16/06	17 U	1.7 U	1.7 U	1.7 U	1.0 U	3.3 U	1.7 U	2.0 U	1.7 U	1.7 U	1.7 U	19	1.7 U	17 U	1.7 U	1.7 U	39	-	1.7 U	7.9	2.0 U	1.0 U
	5/23/06	17 U	1.7 U	1.7 U	1.7 U	3.3 U	1.7 U	1.7 U	3.3 U	1.7 U	1.7 U	1.7 U	24	1.7 U	17 U	1.7 U	1.7 U	39	1.7 U	1.7 U	7.8	3.3 U	1.7 U
	8/31/06	14 U	1.4 U	1.4 U	1.4 U	1.4 U	2.9 U	1.4 U	2.9 U	1.4 U	1.4 U	1.4 U	20	1.4 U	14 U	1.4 U	1.4 U	40	1.4 U	1.4 U	7.7	2.9 U	1.4 U
OW-8	03/23/93	NR	<0.5	NR	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NR	<0.8 B	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
	09/26/94	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NR	<10	<10	<10	-	<10	<10	<10	<10
	04/20/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10
	02/18/99	<10	0.32 J	0.17 J	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	0.32 J	<1.0	0.17 J	-	<1.0	<1.0	<2.0	<1.0
	01/06/00	<10	0.49 J	<1.0	<1.0	0.37 J	<2.0	0.083 J	<2.0	<1.0	<1.0	0.22 J	<1.0	0.14 J	<10	0.35 J,B	<1.0	<1.0	-	0.097 J	<1.0	<2.0	<1.0
	06/07/00	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	03/15/01	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	08/29/01	<10	0.20 J	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/24/02	10 U	0.20 J	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	1.0 U	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	09/19/02	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/09/03	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/25/04	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	2/16/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	-	1.0 U	1.0 U	2.0 U	1.0 U
	8/31/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U

Table B-1
Historical Summary of Detected TCL Volatile Organic Compounds in Groundwater (ug/L)
Carroll and Dubies Superfund Site
Town of Deerpark, Orange County, New York

Analyte		Acetone	Benzene	Carbon Disulfide	Carbon Tetrachloride	Chloro-benzene	Chloro-ethane	Chloroform	Chloro-methane	1,1-DCA	1,2-DCA	1,1-DCE	1,2-DCE (total)	Ethyl-benzene	2-Hexanone	Methylene Chloride	1,1,2,2-PCA	PCE	Styrene	Toluene	TCE	Vinyl Chloride	Xylenes (total)
NYSDEC SGV		50 (G)	1 (S)	NA	5 (S)	5 (S)*	5 (S)*	7 (S)	NA	5 (S)*	0.6 (S)	5 (S)*	5 (S)*	5 (S)*	50 (G)	5 (S)*	5 (S)*	5 (S)*	5 (S)*	5 (S)*	5 (S)*	2 (S)	5 (S)*
U.S. EPA MCL		NA	5	NA	5	100	NA	NA	NA	NA	5	7	70	700	NA	5	NA	5	100	1,000	5	2	10,000
Well ID	Date																						
OW-10	10/29/93	NR	37	NR	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NR	2.9 B	<1.0	<1.0	-	0.5 J	<1.0	<1.0	<1.0
	09/25/94	68	1,100	<10	<10	4 J	<10	<10	<10	<10	<10	<10	<10	9 J	NR	<10	<10	<10	-	8 J	<10	<10	53
	04/27/95	<50	2,600	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	<50	<50	30 J
	02/16/99	<2,000	1,900	<200	<200	23 J	<400	<200	<400	<200	<200	<200	<200	<200	<2,000	100 J,B	<200	<200	-	25 J	<200	<400	<200
OW-10R	01/07/00	610	400	<17	<17	3.6 J,B	<33	<17	<33	<17	<17	<17	<17	4.3 J	<170	<17	<17	<17	-	8.5 J	<17	10 J	6.2 J
	06/06/00	<50	130 J	<5.0	<5.0	3.0 J	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	2.2 J	<50	<5.0	<5.0	<5.0	-	0.52 J	<5.0	2.2 J	<5.0
	03/14/01	<10	35	<1.0	<1.0	3.6	0.80 J	<1.0	<2.0	<1.0	<1.0	<1.0	1.0	0.89 J	<10	<1.0	<1.0	<1.0	-	0.44 J	<1.0	2.4	<1.0
	08/29/01	<20	55	<2.0	<2.0	1.4 J	1.1 J	<2.0	<4.0	<2.0	<2.0	<1.0	3.5	<1.0	<20	<1.0	<2.0	<2.0	-	<1.0	<2.0	9.5	<2.0
	04/25/02	<10	30	<1.0	<1.0	4.0	2.8	<1.0	<2.0	<1.0	<1.0	<1.0	2.7	2.0 U	<10	1.2 U	<1.0	<1.0	-	1.0 U	<1.0	4.5	1.0 U
	09/19/02	<10	17	<1.0	<1.0	2.9	1.3 J	<1.0	<2.0	<1.0	<1.0	<1.0	1.5	0.91 J	<10	<1.0	<1.0	<1.0	-	0.39 J	<1.0	6.3	<1.0
	04/09/03	<10	6.8	<1.0	<1.0	3.1	0.54 J	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	0.43 J	<1.0	<1.0	-	<1.0	<1.0	0.72 J	<1.0
	04/26/04	<10	8.1	<1.0	<1.0	2.2	0.80 J	<1.0	<2.0	<1.0	<1.0	<1.0	0.57 J	0.22 J	<10	1.0 U	<1.0	<1.0	-	0.27 J	<1.0	0.99 J	<1.0
	2/15/06	10 U	3.2	1.0 U	1.0 U	1.4	0.52 J	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	-	1.0 U	1.0 U	0.47 J	1.3 U
	8/29/06	10 U	9.9	1.0 U	1.0 U	1.4	0.92 J	1.0 U	0.20 J	1.0 U	1.0 U	1.0 U	0.59 J	0.25 J	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 J	1.0 U
OW-13	10/28/93	NR	230	NR	<1.0	<1.0	<1.0	<1.0	<1.0	0.4 J	<1.0	<1.0	12	0.2 J	NR	1.2 J,B	<1.0	<1.0	-	4.8	0.9 J	<1.0	0.8 J
	09/29/94	<10	40	<10	<10	<10	<10	<10	<10	<10	<10	<10	6 J	<10	NR	<10	<10	<10	-	<10	<10	9 J	<10
	04/25/95	<10	350	<10	<10	<10	<10	<10	<10	<10	<10	<10	20	<10	<10	<10	<10	<10	-	<10	<10	34	<10
	02/16/99	<330	490	<33	<33	<33	<67	<33	<67	<33	<33	<33	52	<33	<330	18 J,B	<33	<33	-	7.6 J	<33	48 J	<33
	01/06/00	<200	620	<20	<20	<20	<40	3.5 J,B	<40	<20	<20	<20	56	2.3 J	<200	<20	<20	<20	-	2.7 J,B	1.3 J	58	<20
	06/07/00	<83	200	<8.3	<8.3	0.84 J	<17	<8.3	<17	<8.3	<8.3	<8.3	15	5.5 J	<83	<8.3	<8.3	<8.3	-	<8.3	<8.3	17	<8.3
	03/14/01	<50	130	<5.0	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	15	4.0 J	<50	3.0 J	<5.0	<5.0	-	<5.0	<5.0	12	<5.0
	08/29/01	<62	120	<6.2	<6.2	<6.2	<12	<6.2	<12	<6.2	<6.2	<6.2	12	<6.2	<62	<6.2	<6.2	<6.2	-	<6.2	1.1 J	9.9 J	<6.2
	04/24/02	<56	160	<5.6	<5.6	<5.6	<11	<5.6	<11	<5.6	<5.6	<5.6	11	<5.6	<56	<5.6	<5.6	<5.6	-	5.6 U	1.2 J	9.9 J	<5.6
	09/19/02	<33	81	<3.3	<3.3	<3.3	<6.7	<3.3	<6.7	<3.3	<3.3	<3.3	8.5	1.8 J	24 J	<3.3	<3.3	<3.3	-	<3.3	<3.3	5.9 J	<3.3
	04/10/03	<25	53	<2.5	<2.5	<2.5	<5.0	<2.5	<5.0	<2.5	<2.5	<2.5	5.9	1.6 J	<25	<2.5	<2.5	<2.5	-	<2.5	<2.5	4.9 J	<2.5
	04/25/04	<17	45	<1.7	<1.7	0.38 J	<3.3	<1.7	<3.3	<1.7	<1.7	<1.7	4.9	1.0 J	<17	<1.7	<1.7	<1.7	-	0.31 J	0.67 J	3.2 J	<1.7
OW-13R	2/20/06	10 U	15	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	<2.0	1.0 U	1.0 U	1.0 U	0.60 J	1.0 U	10 U	1.0 U	1.0 U	1.0 U	-	0.29 J	1.0 U	1.1 J	1.0 U
	8/29/06	10 U	15	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	0.40 J	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.3 J	1.0 U
OW-15	09/24/94	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NR	<10	<10	<10	-	<10	<10	<10	<10
	04/26/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10
	02/16/99	<10	1.1	<1.0	<1.0	0.52 J	<2.0	<1.0	<2.0	0.25 J	<1.0	<1.0	0.38 J	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	1.5 J	<1.0
	01/07/00	1.3 J	1.0 B	0.92 J	<1.0	0.64 J	<2.0	<1.0	<2.0	0.31 J	<1.0	0.57 J	<1.0	<1.0	<10	0.35 J,B	0.15 J,B	<1.0	-	0.074 J	<1.0	1.4 J	<1.0
	06/06/00	<10	0.91 J	<1.0	<1.0	0.60 J	<2.0	<1.0	<2.0	0.28 J	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	1.0 J	<1.0
	03/14/01	<10	1.2	<1.0	<1.0	0.67 J	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	0.37 J	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	1.1 J	<1.0
	08/28/01	2.2 J,B	0.61 J	<1.0	<1.0	0.35 J	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	0.52 J	<1.0
	04/25/02	<10	0.99 J	<1.0	<1.0	0.47 J	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	1.0 U	<1.0	<1.0	-	<1.0	<1.0	0.91 J	<1.0
	09/18/02	<10	0.69 J	<1.0	<1.0	0.43 J	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/08/03	<10	1.2	<1.0	<1.0	0.67 J	<2.0	<1.0	<2.0	0.33 J	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0 J	<1.0
	04/23/04	<10	1.2	<1.0	<1.0	0.67 J	<2.0	<1.0	<2.0	0.29 J	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	0.90 J	<1.0
	2/15/06	10 U	0.88 J	1.0 U	1.0 U	0.53 J	2.0 U	1.0 U	2.0 U	0.24 J	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	-	1.0 U	1.0 U	0.73 J	1.3 U
	8/29/06	10 U	0.78 J	1.0 U	1.0 U	0.51 J	2.0 U	1.0 U	0.37 J	0.22 J	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.82 J	1.0 U

Table B-1
Historical Summary of Detected TCL Volatile Organic Compounds in Groundwater (ug/L)
Carroll and Dubies Superfund Site
Town of Deerpark, Orange County, New York

Analyte		Acetone	Benzene	Carbon Disulfide	Carbon Tetrachloride	Chloro-benzene	Chloro-ethane	Chloroform	Chloro-methane	1,1-DCA	1,2-DCA	1,1-DCE	1,2-DCE (total)	Ethyl-benzene	2-Hexanone	Methylene Chloride	1,1,2,2-PCA	PCE	Styrene	Toluene	TCE	Vinyl Chloride	Xylenes (total)
NYSDEC SGV		50 (G)	1 (S)	NA	5 (S)	5 (S)*	5 (S)*	7 (S)	NA	5 (S)*	0.6 (S)	5 (S)*	5 (S)*	5 (S)*	50 (G)	5 (S)*	5 (S)*	5 (S)*	5 (S)*	5 (S)*	5 (S)*	2 (S)	5 (S)*
U.S. EPA MCL		NA	5	NA	5	100	NA	NA	NA	NA	5	7	70	700	NA	5	NA	5	100	1,000	5	2	10,000
Well ID	Date																						
OW-16	09/24/94	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NR	<10	<10	<10	-	<10	<10	<10	<10
	04/26/95	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10
	02/17/99	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	01/06/00	1.4 J	0.082 J,B	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	0.61 J	<1.0	<1.0	<10	0.30 J,B	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	06/07/00	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	03/14/01	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	08/28/01	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	0.36 J	<1.0	<1.0	<10	0.80 J	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/24/02	10 U	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	1.9 U	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	09/19/02	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/10/03	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/25/04	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	2/17/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	0.37 J	1.0 U	10 U	1.0 U	1.0 U	1.0 U	-	1.0 U	1.0 U	2.0 U	<1.0
	8/31/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	0.35 J	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U
OW-17	2/20/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	-	1.0 U	1.0 U	2.0 U	1.0 U
	5/24/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U
	8/30/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	0.20 J	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U
OW-18	09/23/94	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NR	<10	<10	<10	-	<10	<10	<10	<10
	04/29/95	<10	12	<10	<10	10 J	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	1 J	<10	<10	29
	02/17/99	<17	4.7	<1.7	<1.7	3.4	1.0 J	<1.7	<3.3	<1.7	<1.7	<1.7	0.54 J	<1.7	<17	1.0 J,B	<1.7	<1.7	-	<1.7	<1.7	<3.3	1.1 J
	01/07/00	2.7 J	5.6 B	1.0	<1.0	4.5	3.0	<1.0	<2.0	0.66 J	<1.0	0.29 J	<1.0	<1.0	<10	0.40 J,B	<1.0	<1.0	-	0.22 J	0.14 J	0.29 J	1.8
	06/08/00	<10	4.8	<1.0	<1.0	4.6	1.3 J	<1.0	<2.0	0.24 J	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	03/16/01	10 UJ	3.1	<1.0	<1.0	3.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	0.38 J	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	1.4
	08/28/01	2.3 J,B	2.4 J	<1.0	<1.0	3.6 J	<2.0	<1.0	<2.0	0.18 J	<1.0	<1.0	0.38 J	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	1.3 J
	04/24/02	10 U	1.5	<1.0	<1.0	4.3	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	0.28 J	<1.0	<10	1.6 U	<1.0	<1.0	-	1.0 U	<1.0	<2.0	1.7
	09/17/02	<10	2.9	<1.0	<1.0	5.5	1.3 J	<1.0	<2.0	0.36 J	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	2.0
	04/08/03	2.6 J	2.9	<1.0	<1.0	5.6	1.2 J	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	1.2
	04/23/04	10 U	3.3	<1.0	<1.0	7.3	0.74 J	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	1.2
	2/17/06	10 U	5.1	1.0 U	1.0 U	10	3.2	1.0 U	2.0 U	1.6	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	-	0.49 J	1.0 U	2.0 U	10
	8/30/06	10 U	3.7	1.0 U	1.0 U	7.8	0.91 J	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U
OW-19	09/27/94	<10	10 J	<10	<10	5 J	15	<10	<10	<10	<10	<10	<10	<10	NR	<10	<10	<10	-	<10	<10	<10	<10
	04/28/95	<10	8 J	<10	<10	6 J	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10
	02/17/99	<10	5.8	<1.0	<1.0	7.1	6.1	<1.0	<2.0	0.27 J	<1.0	<1.0	3.3	<1.0	<10	0.16 J,B	<1.0	<1.0	-	0.16 J	0.14 J	10	<1.0
	01/05/00	0.94 J	3.7 B	<1.0	<1.0	10	2.7	<1.0	<2.0	0.16 J	0.27 J	<1.0	1.5	<1.0	<10	0.25 J,B	<1.0	<1.0	-	0.15 J	0.15 J	2.1	<1.0
	06/08/00	<10	2.3	<1.0	<1.0	5.2	1.9 J	<1.0	<2.0	<1.0	<1.0	<1.0	1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	03/16/01	10 UJ	1.7	<1.0	<1.0	3.8	1.4 J	<1.0	<2.0	<1.0	<1.0	<1.0	0.96 J	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	1.3 J	<1.0
	08/28/01	2.7 J,B	1.9 J	<1.0	<1.0	7.2 J	0.92 J	<1.0	<2.0	<1.0	<1.0	0.35 J	0.46 J	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/23/02	10 U	1.3	<1.0	<1.0	6.5	0.71 J	<1.0	<2.0	<1.0	<1.0	<1.0	0.43 J	<1.0	<10	1.0 U	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	09/17/02	<10	0.64 J	<1.0	<1.0	4.9	0.73 J	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	<1.0
	04/08/03	2.5 J	3	<1.0	<1.0	4.9	1.7 J	<1.0	<2.0	<1.0	<1.0	<1.0	0.81 J	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	0.68 J	<1.0
	04/24/04	10 U	2.1	<1.0	<1.0	6	1.3 J	<1.0	<2.0	<1.0	<1.0	<1.0	0.58 J	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	0.56 J	<1.0
	2/17/06	10 U	3.4	1.0 U	1.0 U	5.6	1.9 J	1.0 U	<2.0	1.0 U	1.0 U	1.0 U	1.3	1.0 U	10 U	1.0 U	1.0 U	1.0 U	-	1.0 U	1.0 U	2.9	1.0 U
	8/31/06	3.1 J	3.3	1.0 U	1.0 U	13	1.8 J	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	0.85 J	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.1	1.0 U

Table B-1
Historical Summary of Detected TCL Volatile Organic Compounds in Groundwater (ug/L)
Carroll and Dubies Superfund Site
Town of Deerpark, Orange County, New York

Analyte		Acetone	Benzene	Carbon Disulfide	Carbon Tetrachloride	Chloro-benzene	Chloro-ethane	Chloroform	Chloro-methane	1,1-DCA	1,2-DCA	1,1-DCE	1,2-DCE (total)	Ethyl-benzene	2-Hexanone	Methylene Chloride	1,1,2,2-PCA	PCE	Styrene	Toluene	TCE	Vinyl Chloride	Xylenes (total)
NYSDEC SGV		50 (G)	1 (S)	NA	5 (S)	5 (S)*	5 (S)*	7 (S)	NA	5 (S)*	0.6 (S)	5 (S)*	5 (S)*	5 (S)*	50 (G)	5 (S)*	5 (S)*	5 (S)*	5 (S)*	5 (S)*	5 (S)*	2 (S)	5 (S)*
U.S. EPA MCL		NA	5	NA	5	100	NA	NA	NA	NA	5	7	70	700	NA	5	NA	5	100	1,000	5	2	10,000
Well ID	Date																						
OW-21	09/22/94	6 J	5 J	<10	<10	<10	<10	10 J	<10	<10	<10	<10	<10	<10	NR	<10	<10	<10	-	<10	<10	<10	<10
	04/29/95	<10	8 J	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10
	02/16/99	<10	5.8	<1.0	<1.0	0.11 J	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	0.26 J	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	0.89 J	<1.0
	01/04/00	<10	3.8 B	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	0.11 J	<1.0	<1.0	<1.0	<1.0	<10	0.10 J,B	<1.0	<1.0	-	0.055 J	<1.0	0.46 J	<1.0
	06/07/00	<10	5.4	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	0.54 J	<1.0
	03/13/01	10 UJ	4.5	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	0.70 J	<1.0
	08/30/01	10 U	3.2	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	0.38 J	<1.0	<1.0	-	<1.0	<1.0	0.25 J	<1.0
	04/25/02	<10	2.4	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	1.0 U	<1.0	<1.0	-	<1.0	<1.0	0.33 J	<1.0
	09/18/02	<10	2.5	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	0.39 J	<1.0
	04/09/03	<10	3.7	<1.0	<1.0	<1.0	<2.0	<1.0	5.5	<1.0	<1.0	<1.0	<1.0	<1.0	<10	0.51 J	<1.0	<1.0	-	<1.0	<1.0	0.88 J	<1.0
	04/24/04	<10	2.9	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	0.56 J	<1.0
	2/16/06	10 U	3.0	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	-	1.0 U	1.0 U	0.52 J	1.0 U
	8/29/06	10 U	2.4	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	0.27 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.83 J	1.0 U
OW-22	09/24/94	<10	100	<10	<10	9 J	<10	<10	<10	<10	<10	<10	<10	<10	NR	<10	<10	<10	-	<10	<10	<10	5 J
	04/28/95	<10	48	<10	<10	10 J	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	1 J	<10	<10	<10
	02/17/99	<25	46	<2.5	<2.5	8.0	<5.0	<2.5	<5.0	<2.5	<2.5	<2.5	2.4 J	<2.5	<25	1.1 J,B	<2.5	<2.5	-	0.87 J	<2.5	4.2 J	3.5
	01/04/00	1.5 J	37 B	0.41 J	<1.2	5.8	<2.5	<1.2	<2.5	0.21 J	<1.2	<1.2	<1.2	0.098 J	<12	0.23 J,B	<1.2	<1.2	-	0.58 J	0.073 J	1.5 J	1.7
	06/07/00	<10	11	<1.0	<1.0	5.8	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	1.4
	03/13/01	10 UJ	12	<1.0	<1.0	8.2	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	0.70 J	<1.0	<10	<1.0	<1.0	<1.0	-	0.56 J	<1.0	0.76 J	1.9
	08/30/01	10 U	3.4	<1.0	<1.0	4.6	<2.0	0.34 J	<2.0	<1.0	<1.0	<1.0	0.36 J	<1.0	<10	0.36 J	<1.0	<1.0	-	0.45 J	<1.0	<2.0	1.7
	04/25/02	<10	4.2	<1.0	<1.0	3.7	<2.0	<1.0	<2.0	<1.0	0.29 J	<1.0	<1.0	<1.0	<10	1.2 U	<1.0	<1.0	-	1.0 U	<1.0	0.39 J	2.7 U
	09/18/02	<10	2.9	<1.0	<1.0	4.2	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	<1.0	<1.0	<2.0	1.8
	04/09/03	<10	8.7	<1.0	<1.0	8.5	0.66 J	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	0.40 J,B	<1.0	<1.0	-	<1.0	<1.0	0.56 J	1.6
	04/24/04	10 U	4.2	<1.0	<1.0	5.9	0.24 J	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	-	0.23 J	<1.0	0.32 J	1.1
	2/16/06	10 U	7.5	1.0 U	1.0 U	11	0.31 J	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	0.59 J	1.0 U	<10	0.59 J	1.0 U	1.0 U	-	0.26 J	1.0 U	0.29 J	1.0
	8/31/06	10 U	2.8	1.0 U	1.0 U	5.3	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	0.37 J	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	0.24 J	1.0 U	0.41 J	1.1
OW-23	2/17/06	10 U	0.38 J	1.0 U	1.0 U	1.0 U	0.31 J	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	-	1.0 U	1.0 U	0.66 J	1.0 U
	5/23/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	0.31 J	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	0.44 J	1.0 U	1.0 U	0.39 J	1.0 U
	8/30/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.42 J	1.0 U
OW-24	2/20/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	-	0.22 J	1.0 U	2.0 U	<1.0
	5/24/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	0.45 J	1.0 U	1.0 U	2.0 U	1.0 U
	8/30/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U
OW-25	2/20/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	-	0.17 J	1.0 U	0.41 J	<1.0
	5/23/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U
	8/31/06	10 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U

Notes:

TCL = Target Compound List
NYSDEC SGV = New York State Department of Environmental Conservation Standards (S) and Guidance (G) Values for groundwater
U.S. EPA MCL= United States Environmental Protection Agency Maximum Contaminant Level for drinking/groundwater
* = The principal organic contaminant (POC) standard for groundwater of 5 ug/L applies to this substance.
U (DATA VALIDATION QUALIFIER) = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
< = Analyte not detected at reporting limit
B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.
Red = Concentrations detected at or above regulatory limit
Blue = Analyte detected at less than regulatory limit, or analyte detected but no regulatory criteria specified
UJ = (DATA VALIDATION QUALIFIER) = Analyte not detected above the reporting liimit; however, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

Pre-1999 data from RETEC 1995
Pre-1999 analysis performed by Method 8240
1999 and later analyses performed by Method 8260B
NA = Not applicable; no criteria specified
NR = Analyte not reported
R = Data rejected during validation
J = Estimated result; result is less than reporting limit.

Appendix C
Data Quality Review - Checklists

SDG 6H 30197
Tier II
VOA Organic Data Review Summary - Dissolved Gases

SDG No./Matrix:	Groundwater	**Completion Date**:	10/18/06
Project No.:	Carroll & Dubies - 104-0012	**Reviewer**:	B. Jones
Laboratory:	STL		

Review Criteria	Data Qualified Yes / No	Comments / Samples Qualified
1. Data completeness	No	Complete backup provided.
2. Preservation/holding time	No	All samples analyzed within required 14-day holding time.
3. GC/MS tuning	NA	
4. Calibration:		
4A - Initial	No	7-Level calibration. RSD okay; RRF okay. 04/21/06-05/27/06
4B - Continuing	No	05/27/06; 09/07/06; 09/14/06, %D and RRF okay.
5. Blanks:		
5A - Laboratory blanks	No	2 Lab blanks (09/07; 09/14); both ND for target constituents.
5B - Trip blanks	NA	
5C - Equipment rinsates	NA	
6. Surrogate recovery	NA	
7. Lab-fortified blank	No	1 Laboratory control sample pair on 09/17; single LCS on 09/14; recoveries and RPDs within limits.
8. Matrix spike/matrix spike duplicates	NA	Laboratory control samples were analyzed in lieu of a lab MS/MSD pair. There was insufficient sample volume for a sample-specific MS/MSD.
9. Field duplicates	NA	
10. Internal standards performance	NA	
11. Compound quantitation and reporting	NA	Quantitation spot-checked and okay.
12. Tentatively identified compounds	NA	

SDG 6H 30197
Tier II
Inorganic Data Review Summary - General Chemistry

SDG No./Matrix:	Water	**Completion Date**:	10/23/06
Project No.:	Carroll & Dubies - 104-0012	**Reviewer**:	B. Jones
Laboratory:	STL		

Review Criteria	Data Qualified Yes / No	Comments / Samples Qualified
1. Data completeness	No	Complete general chemistry package; includes internal sample control chain.
2. Preservation/holding time	No	Short-hold analyses (nitrate - 48 hours; sulfide - 7 days) and all other analyses were performed with required holding times.
3. Calibration	No	Calibration reports and other raw data were provided for all parameters.
4. Blanks:		
4A - Laboratory	No	3 Laboratory blanks for chloride, nitrate, sulfate; 2 for total alkalinity, TOC; 1 for sulfide (all analyses performed on same day). All blank results were ND.
4B - Equipment rinsates	NA	
5. Interference check sample	NA	
6. Lab-fortified blank	No	Laboratory check sample and duplicate analyzed; recoveries and RPDs were within QC limits.
7. Laboratory duplicate sample	NA	
8. Field duplicate sample	NA	
9. Matrix spike sample analysis	Yes	MS/MSD for sulfate, sample OW-25 - recovery high. Qualified as J for estimated.
10. ICP serial dilution	NA	
11. Sample quantitation and reporting	No	Raw data backup provided.

SDG 6H 30197
Tier II
VOA Organic Data Review Summary - Water

SDG No./Matrix:	Water	**Completion Date**:	10/17/06
Project No.:	Carroll & Dubies - 104-0012	**Reviewer**:	B. Jones
Laboratory:	STL		

Review Criteria	Data Qualified Yes / No	Comments / Samples Qualified
1. Data completeness	No	Data package complete and organized.
2. Preservation/holding time	No	All holding times met.
3. GC/MS tuning	No	BFB performance results within specified limits.
4. Calibration:		Two instruments used/calibrated
4A - Initial	No	a3U x 15.i: RRF <0.05 for 1,2-dioxane, RSD okay. No data qualified because 1,4-dioxane is not included in Form I reports for samples. a3U x 16.i: RSD >30% for n-butanol, RRF okay. No data qualified because n-butanol is not included in Form I reports for samples.
4B - Continuing	No	a3U x 15.i: 4 continuing calibrations run. In all four, the RRF was lower for 1,4-dioxane and tert-butyl alcohol. No data qualified because these compounds are not reported in sample Form Is. a3U x 16.i: 3 continuing calibrations run. In one (09/02, 9:57), there was a low RRF for hexane. No data qualified because this compound is not reported in sample Form Is. Other continuing calibration runs were within limits.
5. Blanks:		
5A - Laboratory blanks	No	2-Butanone detected in 2 of 7 method blanks. No qualifications because it was not reported in any sample.
5B - Trip blanks	No	Nondetectable
5C - Equipment rinsates	No	Nondetectable
5D - Field blanks	Yes	Chloromethane detected in 2 of 3 field blanks. Six samples qualified as U at QL: MW-1, OW-6, OW-8, OW-17, OW-18, OW-22.
6. Surrogate recovery	No	Within limits; no qualifications.
7. Lab-fortified blank	No	LFB (check sample) and duplicate within recovery limits.
8. Matrix spike/matrix spike duplicates	Yes	5 Laboratory MS/MSD pairs; 1 field MS/MSD pair. For one lab MS/MSD, RPD and spike out of limits. OW-5 result for trichloroethene qualified as J.
9. Field duplicates	No	OW-6 is field duplicate; within limits.
10. Internal standards performance	No	Is within upper-lower limits.
11. Compound quantitation and reporting	No	Checked and okay.
12. Tentatively identified compounds	NA	No TIC reporting requested.