Interim Corrective Measure Barrier Layer Construction Certification Report

Former TRW Aeronautical Systems Facility
211 Seward Avenue
Utica, New York

December 2005

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Certification Statement

I, David R. Gerber, as a licensed Professional Engineer in the State of New York, to the best of my knowledge, certify that the interim corrective measure (ICM) barrier layer construction activities performed at the former TRW Aeronautical Systems facility in Utica, New York to mitigate the potential exposure to constituents of interest in soils at concentrations above New York State Department of Environmental Conservation (NYSDEC) soil guidance values were completed in general accordance with the following:

- the NYSDEC-approved *Interim Corrective Measure Barrier Layer Construction Work Plan* (BBL, August 2005) (the "ICM Work Plan");
- e-mail correspondence to the NYSDEC dated August 24, 2005 that presents a work plan modification;
- a September 12, 2005 letter responding to NYSDEC comments on the ICM Work Plan;
- discussions between the parties during an October 14, 2005 telephone conference call concerning an additional work plan modification, as approved in a letter from the NYSDEC dated October 25, 2005; and
- supplemental correspondence referenced throughout this Certification Report, which is included in Appendix A.

I also certify that, to the best of my knowledge, this ICM Barrier Layer Construction Certification Report accurately summarizes the work activities performed.

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Vice President
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1. Introduction

1.1 General

This Report summarizes interim corrective measure (ICM) Barrier Layer construction activities implemented to mitigate the potential exposure to constituents of interest in soils at concentrations above New York State Department of Environmental Conservation (NYSDEC) soil guidance values at the former TRW Aeronautical Systems facility located at 211 Seward Avenue in Utica, New York (the "Site"). The ICM Barrier Layer construction activities were conducted between September 2005 and December 2005 by Royal Environmental, Inc. (Royal) of Rochester, New York. Blasland, Bouck & Lee, Inc. (BBL) provided onsite observation of the activities and monitoring for airborne particulate during activities with the potential for dust generation (i.e., fill placement and grading).

The ICM Barrier Layer construction activities were conducted in general conformance with:

- the NYSDEC-approved *Interim Corrective Measure Barrier Layer Construction Work Plan* (BBL, August 2005) (the "ICM Work Plan");
- e-mail correspondence to the NYSDEC dated August 24, 2005 that presents a work plan modification (described further in Section 4);
- a September 12, 2005 letter responding to NYSDEC comments on the ICM Work Plan;
- discussions between the parties during an October 14, 2005 telephone conference call concerning an additional work plan modification, as approved in a letter from the NYSDEC dated October 25, 2005 (described further in Section 4); and
- supplemental correspondence referenced throughout this Certification Report, which is included in Appendix A.

In general, work activities completed as part of the ICM Barrier Layer construction included:

- modifying two monitoring wells included in the annual groundwater monitoring program that were located within the barrier layer footprints;
- decommissioning remaining wells not included in the annual groundwater monitoring program that were located within the barrier layer footprints;
- placing, grading, and compacting approximately 1,000 tons of run-of-bank gravel to fill depressions and to promote drainage before constructing the barrier layer; and
- constructing a minimum one-foot-thick soil barrier layer by placing, grading, and compacting at least 9-inches of run-of-bank gravel and 3-inches of topsoil over five separate areas of the Site (equivalent to 135,000 square feet).

As indicated above, the barrier layer was placed over areas of surface soil exhibiting constituents at concentrations above the soil guidance values presented in the NYSDEC Technical and Administrative Guidance Memorandum titled *Determination of Soil Cleanup Objectives and Cleanup Levels*, HWR-94-4046,

dated January 24, 1994 (hereinafter referred to as "TAGM 4046 soil guidance values"). The lateral extent of the barrier layer was determined based on the results of previous investigation activities conducted at the Site.

The organization of this Report is presented below, followed by a summary of relevant background information.

1.2 Report Organization

This Report is organized into the following sections:

Section	Purpose
Section 1 – Introduction	Provides an overview of the ICM Barrier Layer construction activities and site background information.
Section 2 – ICM Barrier Layer Construction Activities Summary	Presents a detailed description of the ICM Barrier Layer construction activities.
Section 3 – Chronology of Significant Milestone Dates	Presents a chronology of significant milestone dates for the ICM Barrier Layer construction activities.
Section 4 – Modifications to the ICM Barrier Layer Construction Work Plan	Summarizes modifications made to the ICM Barrier Layer Construction Work Plan.
Section 5 – Summary and Conclusions	Provides a brief summary and conclusions based on the ICM activities.

1.3 Background Information

This section briefly presents relevant background information used to develop the scope for the ICM Barrier Layer construction activities. Additional relevant background information is more fully set forth in the NYSDEC-approved *Corrective Measures Study Report* (BBL, December 2004) ["CMS Report"].

A number of environmental investigations were conducted at the Site beginning in the 1980s. More recently, comprehensive environmental site investigations have been conducted, including a Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) and a RCRA Facility Investigation (RFI). Findings of the RFA and the RFI are presented in the *RCRA Facility Assessment* (ERM, March 2001) and the *RCRA Facility Investigation Report* (BBL, April 2004), respectively. In response to the Site environmental investigation findings, two initial ICMs were performed onsite, including a Storm Sewer Removal ICM and a polychlorinated biphenyl- (PCB-) Impacted Soil Removal ICM. Details of the Storm Sewer Removal ICM and the PCB-Impacted Soil Removal ICM are presented in the *Interim Corrective Measure Storm Sewer Removal Certification Report* (BBL, March 2004) and the *Interim Corrective Measure PCB Soil Removal Certification Report* (BBL, November 2004), respectively.

Based on the findings of the RFI and completion of the two ICMs, a Corrective Measures Study (CMS) was completed to evaluate potential final corrective measures for the Site. The CMS Report presented an evaluation of potential final corrective measures, and recommended final corrective measures consisting of a barrier layer, site controls, and monitoring. The CMS Report was approved by the NYSDEC on March 30, 2005. The barrier layer component of the recommended final corrective measures included installing a minimum of 1 foot of clean fill materials as an active exposure prevention method over areas of surface soil exhibiting constituents at concentrations above the TAGM 4046 soil guidance values. In order to continue progress toward site closure

while further investigation is performed regarding offsite matters, the barrier layer was constructed as an ICM (as approved by NYSDEC and summarized in this report).

2. ICM Barrier Layer Construction Activities Summary

2.1 General

This section presents a description of the ICM Barrier Layer construction activities implemented at the Site. The activities were performed to mitigate:

- potential future exposure of persons at the Site to soil containing elevated concentrations of constituents of interest; and
- potential migration of wind-blown dust containing elevated concentrations of constituents of interest.

As part of these activities, areas where surface soils (soils within 1-foot of the ground surface) exhibited constituents at concentrations above the TAGM 4046 soil guidance values were covered by a one-foot thick (minimum) soil barrier layer. Accordingly, five areas of the Site were covered by a barrier layer, as shown on Figure 2 and further discussed in Subsection 2.7 below.

The barrier layer mitigates potential exposure to soil at the Site containing constituents of interest at concentrations above TAGM 4046 soil guidance values by physically isolating the impacted soils from direct contact. Similarly, the barrier layer mitigates potential exposure to windblown dust by physically isolating impacted soils and preventing them from being mobilized by the wind.

Activities associated with implementation of the ICM Barrier Layer construction included the following:

Subsection Number	Work Task
2.2	Pre-Qualification of Fill Materials
2.3	Land Surveying Activities
2.4	Monitoring Well Modification
2.5	Erosion and Sedimentation Control
2.6	Tree/Brush Clearing
2.7	Barrier Layer Construction
2.8	Air Monitoring

Weekly field reports summarizing work performed in connection with the ICM Barrier Layer construction activities are presented in Appendix B. Photographs showing work in progress and the final barrier layer are included in Appendix C.

A detailed discussion of each work task associated with the ICM Barrier Layer construction activities is presented below.

2.2 Pre-Qualification of Fill Materials

Prior to starting the onsite ICM barrier layer construction activities, Royal identified Leitz Enterprises (Leitz) of Frankfort, New York as a potential source for the run-of-bank gravel fill material and topsoil needed for the barrier layer construction. BBL subsequently collected four representative samples (via the same methods described below) of the run-of-bank gravel and topsoil from Leitz's facility on September 20, 2005. The samples were submitted to Severn Trent Laboratories, Inc. (STL) of Canton, Ohio for laboratory analysis for

PCBs, pesticides, Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), and Target Analyte List (TAL) inorganic constituents. Based on the detection of selected SVOCs and inorganic constituents in the topsoil samples at concentrations above the TAGM 4046 soil guidance values, Burrow's Trucking and Excavating [Burrow's] of Oriskany, New York was identified as an alternate backfill source. BBL collected representative samples of the run-of-bank gravel and topsoil from Burrow's facility on October 4, 2005, consisting of:

- One topsoil sample (sample TS-2); and
- Two run-of-bank gravel samples (samples RB-3 and RB-4).

Based on the estimated volume of topsoil available at Burrow's pit at the time of sampling (1,200 to 1,400 cubic yards [CY], which is approximately half of the volume called for in the ICM Work Plan), only one sample of topsoil was collected for analysis. The additional topsoil and run-of-bank gravel samples were submitted to STL for laboratory analysis for PCBs, pesticides, TCL VOCs, TCL SVOCs, and TAL inorganic constituents. The samples submitted for VOC analysis were each collected as discrete grab samples. The samples submitted for the remaining analyses were composite samples, each formed from 6 to 8 individual discrete grab samples. Quality assurance/quality control samples (including blind duplicate, matrix spike, and matrix spike duplicate samples) were submitted for laboratory analysis in connection with the pre-qualification fill material sampling.

The laboratory analytical results for the fill material samples obtained from the Burrow's facility were validated by BBL. The validated laboratory analytical results are presented in Table 1. The analytical data validation report is included as Appendix D. Based on the laboratory analytical results, the proposed topsoil and run-of-bank gravel samples did not exhibit PCBs, pesticides, TCL VOCs, or TCL SVOCs at concentrations above the TAGM 4046 soil guidance values. Concentrations of inorganic constituents identified in the samples appeared to be generally consistent with the TAGM 4046 soil guidance values, taking into consideration typical regional background concentrations. However, concentrations of selected inorganic constituents identified in the topsoil sample were above the maximum background values identified in site background samples collected in support of the RFI. After discussion between the parties regarding the analytical results, NYSDEC approved the proposed backfill material via a letter dated October 25, 2005.

Given the uncertainty in the amount of topsoil available at Burrow's facility (and the limited quantity/quality of available topsoil at other nearby sources), Lucas Western proposed to modify the barrier layer composition from equal amounts of run-of-bank gravel and topsoil (6-inches each) to 9 inches of run-of-bank gravel and 3 inches of topsoil to facilitate completion of the ICM. The overall objectives of the barrier layer, as defined in Section 2.1 above, would still be achieved under the proposed modification. A conference call was subsequently held with the NYSDEC on October 14, 2005 to discuss the proposed modification. NYSDEC approval of the proposed modification was provided in their letter dated October 25, 2005.

2.3 Land Surveying Activities

Prior to contractor mobilization, BBL performed land surveying activities to field locate the barrier layer boundaries and install stakes to serve as a reference during construction. The survey field activities were completed on September 6 and 7, 2005. Grade stakes were installed at the corners of each of the five barrier layer areas, and every 100 feet, with a minimum of two stakes in interior portions of each barrier layer area. Each grade stake was marked to identify the appropriate fill thickness, and was used for reference by equipment operators during construction.

2.4 Monitoring Well Modification

In preparation for the barrier layer construction activities, groundwater monitoring wells within the limits of the barrier layer areas that are included in the annual groundwater monitoring program (wells B95-1 and MW03-3, as shown on Figure 2) were modified to accommodate the barrier layer construction and facilitate continued groundwater monitoring. In addition, wells within the limits of the barrier layer areas that are not included in the annual groundwater monitoring program (wells B84-1, B84-2, B84-3, B85-4, B85-5, and B85-6) were decommissioned.

Monitoring wells B95-1 and MW03-3 were modified on September 12, 2005. The well modifications were performed via the following sequential steps:

- The well cover and concrete curb box was removed.
- Approximately 3 feet of 2-inch diameter Schedule 40 PVC riser pipe was connected to the top of the existing riser pipe using a compression coupling.
- Approximately 3.5 to 4.5 feet of 4-inch diameter protective steel casing was installed around the PVC riser pipe and driven approximately 1 to 2 feet into the current ground surface.
- An 18-inch long by 18-inch wide cylindrical concrete form was placed around the base of the 4-inch diameter steel casing approximately 6 inches below grade surface and 12 inches above grade, and subsequently was filled with concrete.
- A new locking cover was installed on the top of the steel casing.

Revised well construction information and reference elevations for monitoring wells B95-1 and MW03-3 are presented in Table 2.

Decommissioning of wells B84-1, B84-2, B84-3, B85-4, B85-5, and B85-6 was performed on September 12 and 13, 2005. The decommissioning was performed using a streamlined method approved by the NYSDEC on August 24, 2005 (*see* Section 4 for detailed description and Appendix A for e-mail correspondence detailing the approach). The well decommissioning method minimized the amount of materials generated and was consistent with ASTM Standard D-5299 and the NYSDEC guidance document titled, *Groundwater Monitoring Well Decommissioning Procedures* (NYSDEC, October 1996). The decommissioning work was performed at each of the above-identified wells as follows:

- The protective steel casing and concrete surface pad was removed.
- Grout was added, from the bottom of the borehole upward to within 4 feet of the ground surface, while the PVC well casing was pulled and removed.
- Bentonite pellets were placed in the upper 4 feet of the borehole as the last of the casing was pulled.
- A ferrous metal marker was embedded in the bentonite at each former well location.

The PVC well casing for all of the above-identified wells was pulled and removed successfully without severing the casing. Therefore, no overdrilling was required. The well casing and surface completion materials were decontaminated and taken offsite for recycling of the steel and disposal of the scrap PVC.

2.5 Erosion and Sedimentation Control

Erosion and sedimentation control measures were installed, where necessary, on September 27, 2005 following completion of limited clearing, where needed to install the measures. The measures included silt fencing around the barrier layer construction areas and material staging areas. The erosion and sedimentation control measures were installed and maintained in accordance with the *Stormwater Pollution Prevention Plan* (BBL, August 2005) and the New York Guidelines for Urban Erosion and Sediment Control (Empire State Chapter of the Soil and Water Conservation Society, latest edition). The erosion and sediment control measures were maintained throughout the construction and will be left in place until vegetation is established over the barrier layer areas (Spring 2006).

2.6 Tree/Brush Clearing

After the erosion and sediment control measures were installed, brush and small trees within the limits of the barrier layer areas were mowed/cleared on October 10 and 11, 2005. Brush was mowed via a brush-hog mower. Heavy accumulations of brush were cleared from the proposed barrier layer area and processed through a wood chipper, as appropriate. Trees located within the proposed barrier layer footprint south of the Test Building location (see Figure 2) were cut with chain-saws and felled. Tree clearing began on September 30, 2005 and was completed on November 18, 2005. Contact between the felled trees and impacted soils was minimized by guiding the direction of the fall away from the impacted soils. Felled trees were delimbed and the limbs were processed through a wood chipper, as appropriate based on size. Wood chips resulting from chipping were spread onsite (south of Parking Lot No. 3) outside the limits of the barrier layer. Trees too large to process through the chipper were temporarily staged onsite (outside the barrier layer limits) pending offsite transportation for use of the lumber or disposal.

2.7 Barrier Layer Construction

The barrier layer construction began on October 26, 2005. The barrier layer consisted of a minimum one-foot thick soil cover placed in five separate areas covering a total of approximately 135,000 square feet. The horizontal limits of each barrier layer area are shown on Figure 2. As the initial element of the barrier layer construction, approximately 1,000 tons of run-of-bank gravel was placed in several areas, where appropriate, to fill depressions remaining from previous excavation activities and to promote drainage. The run-of-bank gravel was imported from Burrow's via dump truck and stockpiled adjacent to the depressions and/or previous excavation areas. The run-of-bank gravel stockpiles were graded and compacted with a dozer as the material was delivered. These depressions and previous excavation areas were filled to match the surrounding grade.

Within the horizontal limits of the five barrier layer areas, each barrier layer consisted of a run-of-bank gravel layer at least 9 inches thick and a topsoil cover at least 3 inches thick. Section 4 below describes the NYSDEC-approved modification to the ICM Work Plan changing the run-of-bank layer thickness from 6 to 9 inches and the topsoil layer from 6 to 3 inches. The run-of-bank gravel was a mixture of gravel and sand, free from organic matter. The topsoil was fertile, friable, natural loam surface soil suitable for vegetation.

The fill materials were delivered to the Site following receipt of the acceptable pre-qualification sample results and approval from the NYSDEC. The fill materials were staged either within the limits of the barrier layer areas or on the asphalt pavement adjacent to the proposed barrier layer areas (with appropriate erosion and

sedimentation controls, in accordance with Subsection 2.5), moved to the barrier layer areas as needed, graded using a dozer, and then compacted with the dozer while grading. As detailed in the ICM Work Plan, run-of-bank gravel and topsoil were also placed around the perimeter of the barrier layer areas to provide a gradual transition to the surrounding lines and grades. A typical section of the barrier layer is shown on Figure 3.

The barrier layer construction activities were sequenced to minimize potential tracking of impacted soils. General fill material was placed working from the perimeter of the barrier layer towards the center or from one end to the other, to minimize contact between construction equipment/personnel and impacted soils. Topsoil was placed working from the center out towards the perimeter or again from one end to the other, to minimize disturbance of topsoil following placement.

A section of chain-link fencing that extended in an east-west direction south of the former Test Building (and was located within the barrier layer limits) was removed to facilitate the barrier layer construction. A new section of fence was installed near Gilmore Street and was tied into existing fencing to completely enclose/secure the Site, as needed, during and after the barrier layer construction activities. The location of the new fence is shown on Figure 2. The fence installation work was completed on November 18, 2005.

After the topsoil placement and fence removal/replacement work was completed, the barrier layer areas were seeded with a mixture of grass seed (consisting of perennial and annual ryegrass, timothy, and white clover) and mulched. The seed was mechanically applied uniformly upon the prepared surface. A straw chopper/blower with a 50-foot hose was used to create mulch from straw bales and blow the mulch on each barrier layer area covering the seed. Seeding and mulching were completed on December 1, 2005.

2.8 Air Monitoring

Airborne monitoring for particulate (dust) was conducted in accordance with the NYSDOH's Community Air Monitoring Plan, dated June 2000. Dust monitoring was conducted using a Real-Time Aerosol Monitor (pDR-1000 AN). Air monitoring equipment was calibrated daily, prior to the start of work activities.

The results of airborne particulate monitoring were recorded by the onsite health and safety supervisor at a minimum frequency of once per hour, unless site conditions and work activities did not cause the generation of dust. Dust readings are summarized on the air monitoring logs included in Appendix E. A listing of the dates when air monitoring was performed is also presented in Appendix E.

The ICM Work Plan specified that if particulate monitoring indicated ambient dust levels in the worker breathing zone exceeded the action level of 100 micrograms per cubic meter ($\mu g/m^3$) above background, the level of particulates was to be manually recorded at the downwind perimeter of the work area at 15-minute intervals. As indicated on the air monitoring logs included in Appendix E, the worker breathing zone action level was not exceeded during the ICM Barrier Layer construction activities, and thus, manual 15-minute readings were not conducted.

The ICM Barrier Layer Construction Work Plan also specified that if the level of particulates at the downwind perimeter of the work area was 150 $\mu g/m^3$ (above site background) or greater, or if visible airborne dust was observed leaving the work area, then work activities were to cease and additional dust control techniques would then be employed to maintain particulate levels below 150 $\mu g/m^3$ and address visible dust migration. Because visible dust was not observed leaving the work area and the 150 $\mu g/m^3$ action level was not exceeded (as indicated on the air monitoring logs included in Appendix E) during the ICM Barrier Layer construction activities, there were no dust-related work stoppages.

3. Chronology of Significant Milestone Dates

A chronology of significant milestone dates for the ICM Barrier Layer construction activities is presented in the table below.

Activity	Dates
Barrier Layer Pre-Construction Activities	
– Survey Barrier Layer Boundaries/Install Survey Stakes	9/6/05 - 9/7/05
– Modify and Decommission Groundwater Monitoring Wells	9/12/05 - 9/13/05
– Mobilization and Installation of Erosion and Sediment Control Measures	9/27/05
– Pre-Qualification of Alternate Fill Source	9/20/05 - 10/20/05
– Tree/Brush Clearing	9/30/05 - 11/18/05
Barrier Layer Construction Activities	
– Placement/Grading/Compaction of Run-of-Bank Gravel to fill depressions	10/26/05 - 11/1/05
– Placement of 9-inch Minimum-Thickness Run-of-Bank Gravel Layer	11/1/05 - 11/18/05
– Placement of 3-inch Minimum-Thickness Topsoil Layer	11/4/05 - 11/18/05
Chain-Link Fence Installation	11/18/05
Seeding and Mulching	12/1/05

4. Modifications to Barrier Layer Construction Work Plan

Modifications made to the NYSDEC-approved ICM Work Plan are summarized below. The correspondence referenced below is included in Appendix A.

- The method for decommissioning the wells located within the limits of the proposed barrier layer and not included in the annual groundwater monitoring program (wells B84-1, B84-2, B84-3, B85-4, B85-5, and B85-6) was modified to allow a more streamlined, cost-effective implementation. The revised approach, approved by the NYSDEC on August 24, 2005, minimized the amount of waste materials generated and was consistent with ASTM Standard D-5299 and the NYSDEC guidance document titled, Groundwater Monitoring Well Decommissioning Procedures (NYSDEC, October 1996). The revised decommissioning method included removing the protective steel casing and concrete surface pad, knocking out the bottom of the well casing, adding grout from the bottom of the casing up to approximately four feet of the ground surface while the casing was pulled, and placing bentonite pellets in the remaining 4 feet as the last of the casing was pulled. As noted in Subsection 2.4, none of the well casings were severed during removal; therefore, no overdrilling was required.

- The barrier layer was constructed using a minimum of 9 inches of run-of-bank gravel and 3 inches of topsoil (instead of 6 inches of run-of-bank gravel and 6 inches of topsoil) due to limited availability of acceptable topsoil material at the proposed fill source (Burrow's) and elsewhere in the area. The NYSDEC approved the modification to the ICM Work Plan on October 14, 2005.

5. Summary and Conclusions

The 12-inch thick barrier layer, consisting of a minimum of 9 inches of gravel and 3 inches of topsoil, was identified as an element of the recommended final corrective measures for the Site and was constructed as an ICM to maintain progress toward site closure. The barrier layer mitigates potential exposures to soil containing constituents of interest at concentrations above the TAGM 4046 soil guidance values by physically isolating impacted soils from direct contact and by preventing the impacted soils from being mobilized by the wind. Once vegetation is established over the barrier layer areas (Spring 2006), the existing erosion and sedimentation control measures will be removed.

Tables

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TABLE 1
BACKFILL MATERIAL SAMPLE RESULTS (ppm)

ICM BARRIER LAYER CONSTRUCTION CERTIFICATION REPORT
FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE
UTICA, NEW YORK

Sample ID: Date Collected:	TAGM 4046 Guidance Value (exceedences shaded)	Maximum Site Background (exceedences in bold)	NY Region Background Values (exceedences in italics)	RB-3 10/04/05	RB-4 10/04/05	TS-3 10/04/05
PCBs						
Aroclor 1016	NA	NA	NA	<0.038 [<0.036]	<0.036	<0.040
Aroclor 1221	NA	NA	NA	<0.038 [0.022 J]	<0.036	<0.040
Aroclor 1232	NA	NA	NA	<0.038 [<0.036]	<0.036	<0.040
Aroclor 1242	NA	NA	NA	<0.038 [<0.036]	<0.036	<0.040
Aroclor 1248	NA	NA	NA	<0.038 [0.0096 J]	<0.036	0.050
Aroclor 1254	NA	NA	NA	<0.038 [<0.036]	<0.036	<0.040
Aroclor 1260	NA	NA	NA	<0.038 [<0.036]	<0.036	0.013 J
Total PCBs	1.0	NA	NA	<0.038 [0.032 J]	<0.036	0.063 J
Detected Pesticides						
4,4'-DDD	2.9	NA	NA	<0.0019 [<0.0019]	<0.0019	0.0019 J
4,4'-DDE	2.1	NA	NA	<0.0019 [<0.0019]	<0.0019	0.011
4,4'-DDT	2.1	NA	NA	<0.0019 [<0.0019]	<0.0019	0.006 J
alpha-Chlordane	NA	NA	NA	<0.0019 [<0.0019]	<0.0019	0.016 J
beta-BHC	0.2	NA	NA	<0.0019 [<0.0019]	<0.0019	0.0044 J
Dieldrin	0.044	NA	NA	<0.0019 [<0.0019]	<0.0019	0.027
gamma-Chlordane	0.54	NA	NA	<0.0019 [<0.0019]	<0.0019	0.0055
Detected TCL VOCs						
1,2,4-Trichlorobenzene	3.4	NA	NA	<0.0057 [<0.0055]	<0.0055	0.0012 J
1,2-Dichlorobenzene	7.9	NA	NA	<0.0057 [<0.0055]	<0.0055	0.00041 J
Total VOC TICs	NA	NA	NA	ND	ND	ND
Detected TCL SVOCs						
Anthracene	50	NA	NA	<0.38 [<0.36]	<0.36	0.021 J
Benzo(a)anthracene	0.224	NA	NA	<0.38 [<0.36]	<0.36	0.075 J
Benzo(a)pyrene	0.061	NA	NA	<0.38 [<0.36]	<0.36	0.061 J
Benzo(b)fluoranthene	1.1	NA	NA	<0.38 [<0.36]	<0.36	0.084 J
Benzo(ghi)perylene	50	NA	NA	<0.38 [<0.36]	<0.36	0.040 J
Benzo(k)fluoranthene	1.1	NA	NA	<0.38 [<0.36]	<0.36	0.027 J
Carbazole	NA	NA	NA	<0.38 [<0.36]	<0.36	0.019 J
Chrysene	0.4	NA	NA	<0.38 [<0.36]	<0.36	0.074 J
Fluoranthene	50	NA	NA	<0.38 [<0.36]	<0.36	0.15 J
Indeno(1,2,3-cd)pyrene	3.2	NA	NA	<0.38 [<0.36]	<0.36	0.035 J
Phenanthrene	50	NA	NA	<0.38 [<0.36]	<0.36	0.11 J
Pyrene	50	NA	NA	<0.38 [<0.36]	<0.36	0.12 J
Total SVOC TICs	NA	NA	NA	0.44 J [<0.36]	0.33 J	0.61 J

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TAL Inorganic Constituents						
Aluminum	NA	9,360	100,000	3,270 [4,310]	2,900	**10,100**
Antimony	NA	6.9	NA	<6.8 J [<6.6 J]	<6.6 J	**<7.2 J**
Arsenic	7.5	11.2	12	3.30 [3.40]	2.8	9.8
Barium	300	83	600	15.3 B [19.4 B]	12.9 B	66.3
Beryllium	0.16	0.5	1.75	0.16 B [0.2 B]	0.15 B	**0.530 B**
Cadmium	1	0.61	1	<0.570 [0.037 B]	<0.55	0.19 B
Calcium	NA	167,000	35,000	18,700 J [27,200 J]	16,100 J	4,830 J
Chromium	10	23.8	40	4.0 J [5.4 J]	3.6 J	13.6 J
Cobalt	30	7.4	60	3.4 BJ [4.1 BJ]	3.0 BJ	**10.5 J**
Copper	25	27.9	50	11.8 J [16.9 J]	9.7 J	**42.4 J**
Iron	2,000	27,400	550,000	8,370 [10,700]	7,290	25,300
Lead	NA	26.7	61	2.30 [3.0]	2.0	24.8
Magnesium	NA	21,100	5,000	4,860 *[7,480]*	3,430	3,210
Manganese	NA	1,780	5,000	337 J [391]	276 J	746 J
Mercury	0.1	0.12	0.2	<0.11 [<0.11]	<0.11	0.087 B
Nickel	13	15.7	25	6.5 J [8.3 J]	5.9 J	**18.5 J**
Potassium	NA	759	43,000	<518 J [<711 J]	<551 J	**1,020 J**
Selenium	2	1.2	3.9	<0.57 [<0.55]	<0.550	0.45 B
Sodium	NA	82.4	50,000	50.1 B [63.9 B]	46.9 B	<601
Thallium	NA	1.2	NA	<1.1 [0.61 B]	<1.1	0.82 B
Vanadium	150	17.9	300	5.4 BJ [7.3 J]	5.1 BJ	15.7 J
Zinc	20	92	50	28.9 J [38.6 J]	19.6 J	*58.1 J*
Total Cyanide	NA	0.61	NA	<0.57 [0.54 BJ]	<0.55	<0.6
Miscellaneous						
Percent Solids (%)	NA	NA	NA	87.9 [91.6]	90.8	83.2
pH (standard pH Units)	NA	NA	NA	9.0 [8.9]	9.0	7.4

TABLE 1
BACKFILL MATERIAL SAMPLE RESULTS (ppm)

ICM BARRIER LAYER CONSTRUCTION CERTIFICATION REPORT
FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE
UTICA, NEW YORK

Notes:

1. Samples collected by Blasland, Bouck & Lee, Inc. (BBL) on October 4, 2005.
2. Samples submitted to Severn Trent Laboratories, Inc., of North Canton, Ohio for laboratory analysis of the following constituents:
   - Polychlorinated biphenyls (PCBs) using United States Environmental Protection Agency (USEPA) SW-846 Method 8082;
   - Pesticides using USEPA SW-846 Method 8081;
   - Target Compound List (TCL) volatile organic compounds (VOCs), including tentatively identified compounds (TICs), using USEPA SW-846 Method 8260;
   - TCL Semi-volatile organic compounds (SVOCs), including TICs, using USEPA SW-846 Method 8270; and
   - Target Analyte List (TAL) inorganic constituents using USEPA SW-846 Method 6010 (except for mercury which was analyzed using Method 7471 and cyanide which was analyzed using Method 9012).
3. Concentrations reported on a dry weight basis, in parts per million (ppm), which is equivalent to milligrams per kilogram (mg/kg).
4. [ ] = Result for blind duplicate.
5. < = No Aroclors were detected above the reported concentration (for PCBs) or constituent was not detected at a concentration exceeding the reported detection limit (for all other parameters).
6. Laboratory data qualifiers indicate the following:
   - J (Organic & Inorganic) = Indicates that the compound was positively identified; however, the associated numerical value is an estimated concentration only.
   - B (Inorganic) = Indicates an estimated value between the instrument detection limit (IDL) and PQL.
7. NA = Not applicable.
8. ND = Not detected.
9. TAGM 4046 guidance values are from the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) titled "Determination of Soil Cleanup Objectives and Cleanup Levels", HWR-94-4046 (TAGM 4046) dated January 24, 1994.
10. Maximum site background represents the highest concentration identified at background soil sampling locations BGD-1 through BGD-5 as part of a background soil sampling program completed during January 2002.
11. NY Region background values are maximum values from the NYSDEC document titled "Background Concentrations of 20 Elements in Soils with Special Regard for New York State", by E. Carol McGovern, dated 1988.
12. With the exception of PCBs and TAL inorganic constituents, only those constituents detected in one or more samples are summarized.
13. Analytical results were validated by BBL.

TABLE 2
UPDATED MONITORING WELL CONSTRUCTION SUMMARY

ICM BARRIER LAYER CONSTRUCTION CERTIFICATION REPORT
FORMER TRW AERONAUTICAL SYSTEMS SITE
211 SEWARD AVENUE
UTICA, NEW YORK

Location	Installation Date	Modification Date	Well Type	Ground Surface Elevation	Reference Point Elevation (TIC)	Depth to Top of Screen	Depth to Bottom of Screen	Elevation of Well Screen Interval	Depth to Screen Midpoint	Elevation of Screen Midpoint
B85-2	07/18/85	--	Stickup	513.6	515.86	15	25	498.6 - 488.6	20	493.6
B94-6	11/17/94	--	Flush	512.9	512.54	6	16	506.9 - 496.9	11	501.9
B95-1	03/02/95	09/12/05	Stickup	517.0	519.85	7.6	17.6	509.4 - 499.4	12.6	504.4
B95-2	03/02/95	--	Flush	515.6	515.26	10	20	505.6 - 495.6	15	500.6
MW03-1	04/24/03	--	Stickup	523.5	525.66	6	16	517.5 - 507.5	11	512.5
MW03-3	04/24/03	09/12/05	Stickup	517.2	520.07	8.3	18.3	508.9 - 498.9	13.3	503.9
MW03-4	04/25/03	--	Flush	514.7	514.41	8	18	506.7 - 496.7	13	501.7
MW03-5	04/24/03	--	Flush	512.6	512.31	12	22	500.6 - 490.6	17	495.6
MW03-6	06/06/03	--	Stickup	509.3	510.81	8	18	501.3 - 491.3	13	496.3
MW03-7	06/03/03	--	Stickup	509.7	509.83	8	18	501.7 - 491.7	13	496.7
MW03-8	06/03/03	--	Stickup	507.1	508.92	8	18	499.1 - 489.1	13	494.1

Notes:
1. All wells constructed of 2-inch diameter polyvinyl chloride (PVC).
2. TIC = Top of Inner Casing.
3. Elevations are in feet referenced to the North American Vertical Datum (NAVD) 1988.
4. Depths are measured in feet referenced from the ground surface.
5. Gray shading designates monitoring wells that were modified as part of the interim corrective measure (ICM) barrier layer construction activities.

Figures

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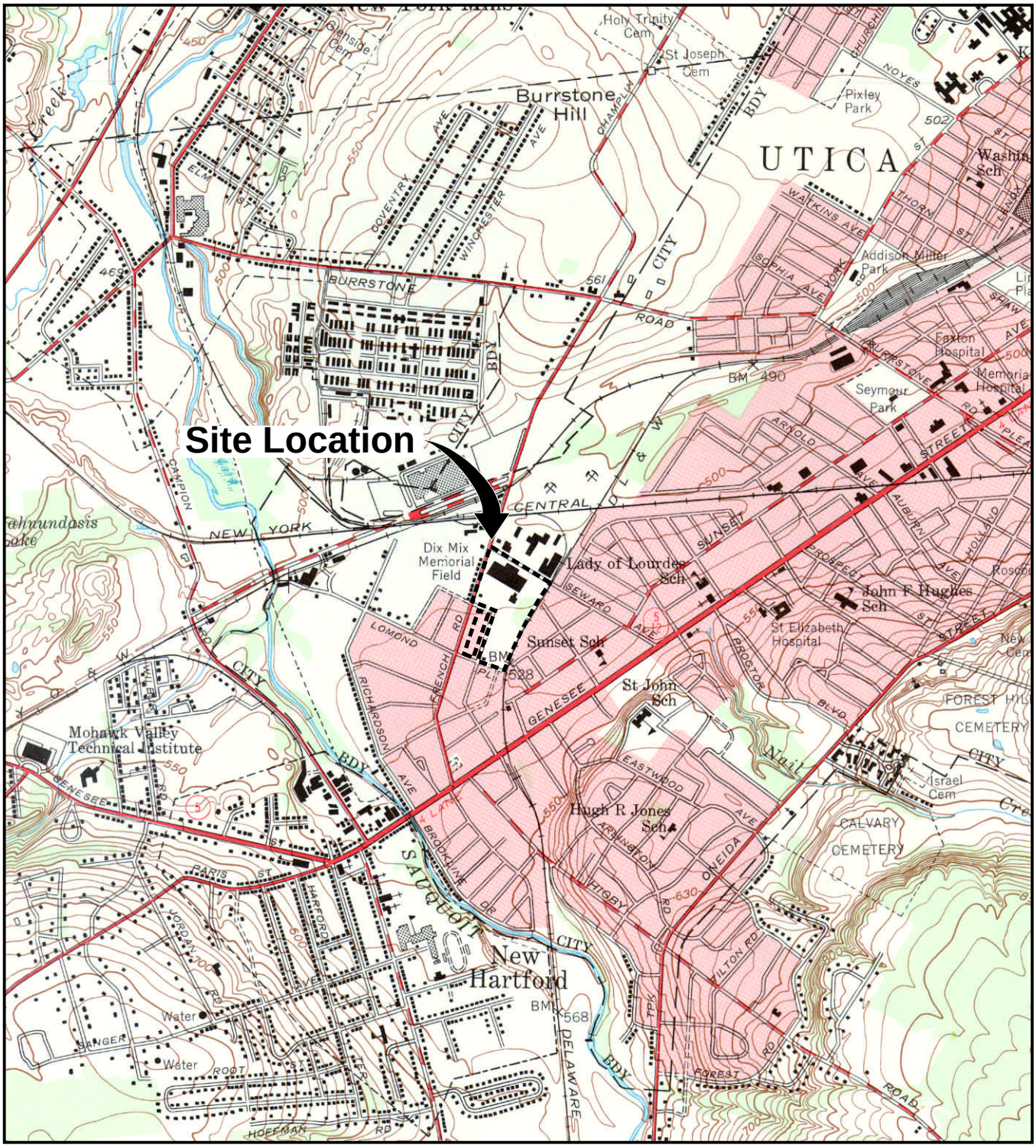
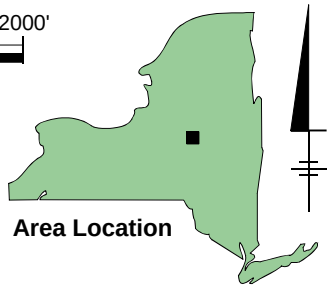


REFERENCE: BASE MAP USGS 7.5 MIN. QUAD., UTICA, WEST, NEW YORK, 1983.

2000' 0 2000'

Approximate Scale: 1" = 2000'



Area Location

03/16/04 SYR-D85-DJH KFS
48107001/48107n02.cdr

FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE
UTICA, NEW YORK

SITE LOCATION MAP

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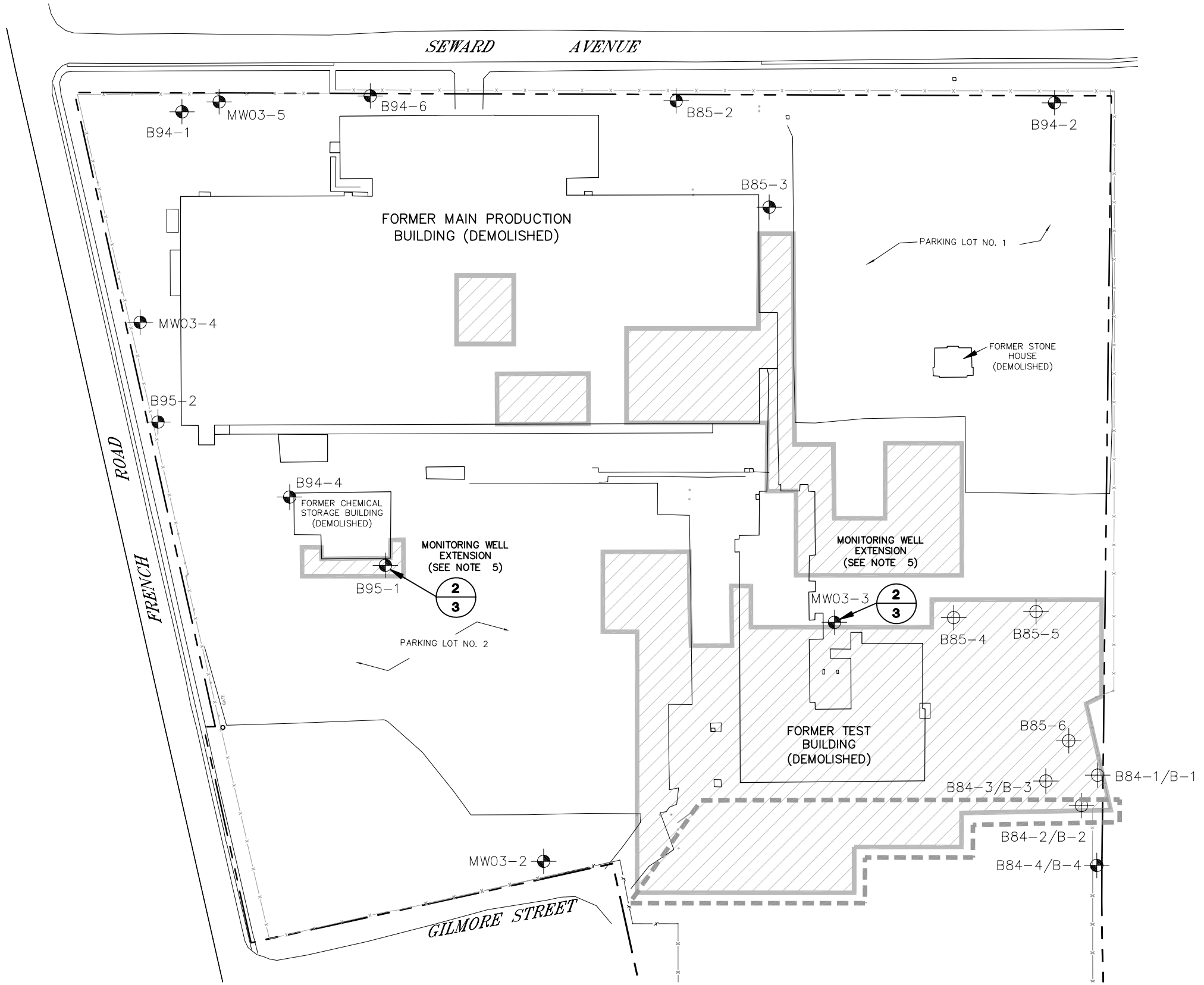
FIGURE
1



LEGEND:

- B85-5 — PERMANENT MONITORING WELL ABANDONED
- MW03-3 — PERMANENT MONITORING WELL
- AREA OF BARRIER LAYER
- APPROXIMATE AREA OF TREE CLEARING
- PROPERTY LINE
- FENCE
- NEW FENCE

NOTES:

1. UNLESS OTHERWISE INDICATED, MAPPING IS BASED ON SURVEYS PERFORMED BY BLASLAND, BOUCK & LEE, INC.(BBL), MARCH 19, 2003 TO JUNE 28, 2004.
2. PROPERTY LINES, AND ROADWAYS ARE ADAPTED FROM A DRAWING ENTITLED "SITE LAYOUT MAP SHOWING AREAS OF CONCERN", FIGURE 1-1, BY ENVIRONMENTAL RESOURCE MANAGEMENT, INC. (ERM), EXTON, PA., AT A SCALE OF 1" = 40', DATED AUGUST 27, 2002.
3. BARRIER LAYER THICKNESS IS 12-INCHES MINIMUM. ADDITIONAL FILL MATERIAL WAS PLACED AS APPROPRIATE TO FILL DEPRESSIONS REMAINING FROM PREVIOUS EXCAVATION ACTIVITIES AND TO PROMOTE DRAINAGE.
4. RUN-OF-BANK GRAVEL AND TOPSOIL WERE PLACED AROUND THE PERIMETER OF THE BARRIER LAYER AREAS TO PROVIDE A GRADUAL TRANSITION TO THE SURROUNDING LINES AND GRADES.
5. LOCATION OF NEW FENCE IS APPROXIMATE.

0 50' 100'
GRAPHIC SCALE

FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE
UTICA, NEW YORK

FINAL BARRIER LAYER LIMITS

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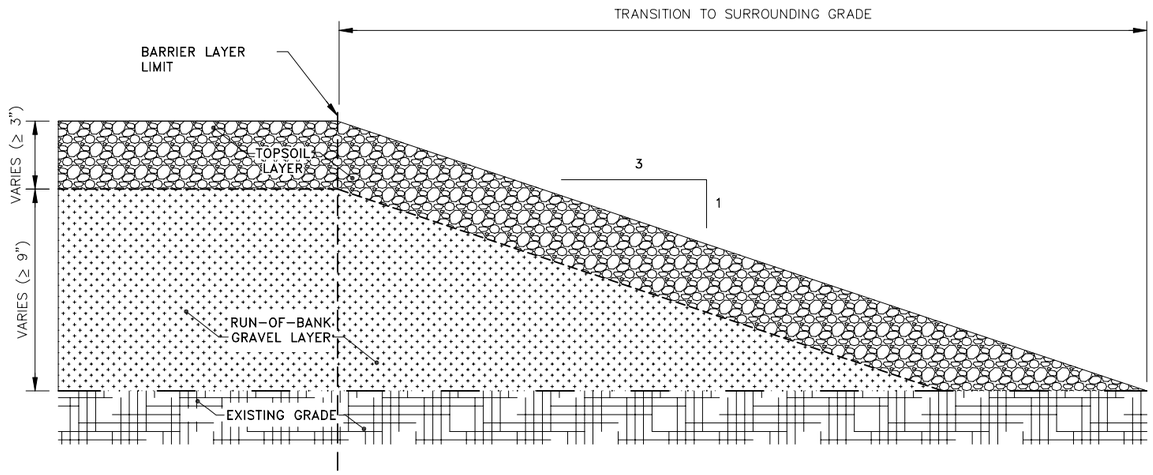
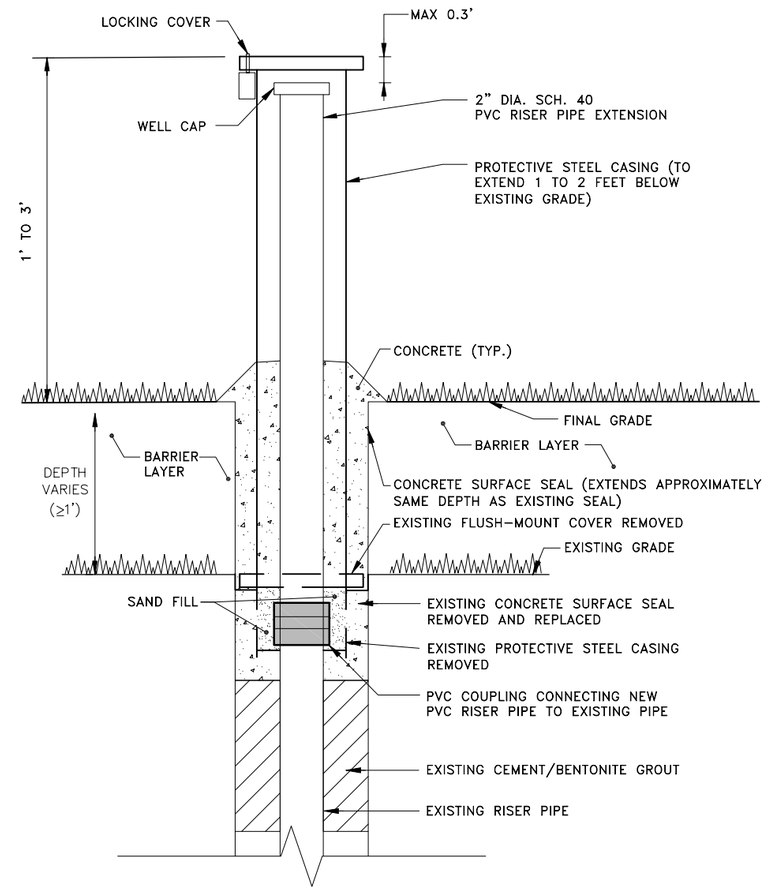
FIGURE 2

X:37117X00, X01.DWG
L: ON=*, OFF=CONTOUR,REF
P: PAGESET/PLT-D2BL1
12/28/05 SYR-85-BGP RCA AMS
37117010/37117B05.DWG



BARRIER LAYER (1)

NOT TO SCALE



MONITORING WELL EXTENSION (2)

NOT TO SCALE

NOT TO SCALE

X: NONE
L: ON=*, OFF=CONTOUR,REF
P: PAGESET/PLT-D2BL1
12/28/05 SYR-85-BGP RCA AMS
37117010/37117G03.DWG

FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE
UTICA, NEW YORK

FINAL DETAIL AND SECTION

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FIGURE 3

Appendices

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Appendix A

Relevant Correspondence

BBL®
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SUMMARY OF RELEVANT PROJECT CORRESPONDENCE

ICM BARRIER LAYER CONSTRUCTION CERTIFICATION REPORT
FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE
UTICA, NEW YORK

Date	Title of Correspondence
8/16/05	E-Mail Correspondence to NYSDEC: Plan for Pre-ICM Activities
8/18/05	E-Mail Correspondence from NYSDEC: Approval of Monitoring Well Modification & Decommissioning Activities
8/24/05	E-Mail Correspondence to NYSDEC: Revised Plan for Monitoring Well Decommissioning
9/12/05	Letter to NYSDEC: Response to Comments on the ICM Work Plan
9/15/05	E-Mail Correspondence from NYSDEC: Approval of the ICM Work Plan
10/13/05	E-Mail Correspondenc to NYSDEC: Sample Results for Alternative Backfill Source
10/25/05	Letter from NYSDEC: Approval of Modification to ICM Work Plan

8/16/05
E-Mail Correspondence to NYSDEC

Plan for Pre-ICM Activities

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engineers, scientists, economists

JOHN BRUSSEL - ICM Barrier Layer Construction / Conference Call Follow-up - TRW Utica

From: JOHN BRUSSEL
To: aabarraz@gw.dec.state.ny.us; larosenm@gw.dec.state.ny.us
Date: 8/16/2005 3:52 PM
Subject: ICM Barrier Layer Construction / Conference Call Follow-up - TRW Utica
CC: batsel@dextra-group.com; GERBER, DAVID

Alicia/Larry:

As discussed during a telephone conference call this morning with Alicia Barraza, Kurt Batsel, and myself, the ICM Barrier Layer Construction Work Plan for the former TRW Aeronautical Systems facility is scheduled to be submitted to the NYSDEC by this Friday, 8/19/05. In advance of work plan approval by the NYSDEC, Lucas Western proposes to implement various pre-ICM activities that need to be initiated to support completion of ICM barrier layer construction before the end of this construction season. As confirmed during the call, NYSDEC agrees that the following activities may be conducted prior to NYSDEC approval of the Work Plan:

1. Complete surveying activities to field-locate barrier layer area boundaries.

    - Grade stakes will be placed at the corners of each barrier layer area (there are five areas, as shown on Figure 6 of the CMS Report) and approximately every 100 feet, with a minimum of two, in interior portions of each barrier layer area. Each grade stake will be marked to identify the appropriate fill thickness, and will be used for reference by equipment operators during construction.

2. Pre-qualify proposed fill materials to be used in the barrier layer construction.

    - Representative samples for each proposed source and type of fill material (i.e., one sample of run-of-bank gravel material and one sample of topsoil) will be submitted for laboratory analysis for PCBs, pesticides, VOCs, SVOCs, and inorganic constituents.

3. Complete contractor procurement activities (bidding and award) so that contractor mobilization can begin quickly following work plan approval.

Also, Lucas Western proposes to conduct the following additional activities prior to NYSDEC approval of the Work Plan. It is our understanding that NYSDEC will further evaluate this proposal and provide us with a decision shortly.

A. Modify two existing groundwater monitoring wells located within the proposed barrier layer areas that are included in the annual groundwater monitoring program (flush-mount wells B95-1 and MW03-3) to accommodate the barrier layer construction and facilitate continued groundwater monitoring.

    - Each well will be modified by: (1) removing the well cover and concrete curb box; (2) connecting approximately 3-feet of 2-inch diameter Schedule 40 PVC riser pipe to the top of the existing riser pipe using a compression coupling; and (3) installing/driving approximately 3.5 to 4.5 feet of 4-inch diameter protective steel casing approximately 1 to 2 feet into the current ground surface, centered around the PVC riser pipe. After the barrier layer is constructed, a concrete surface completion will be installed that will promote drainage away from the base of the well.

B. Decommission the six existing groundwater monitoring wells located within the proposed barrier layer areas that are not included in the annual groundwater monitoring program (wells B84-1 through B84-3 and B85-4 through B85-6, which were installed to evaluate conditions in the vicinity of the former cyanide waste pits and are not needed in connection with planned additional soil gas investigation activities). All existing wells outside the proposed barrier layer areas will remain.

- The proposed well decommissioning will be performed in accordance with ASTM Standard D-5299 and the NYSDEC guidance document titled, Groundwater Monitoring Well Decommissioning Procedures (NYSDEC, October 1996). Decommissioning work for each well will entail: (1) removing the protective steel casing and concrete surface pad; (2) pulling the PVC riser pipe and screen from the ground; (3) overdrilling remaining well construction materials (bentonite seal, sand pack, and remaining PVC piping) to a distance approximately 0.5 feet below the former bottom of well; (4) adding cement/bentonite grout into the borehole, from the bottom of the borehole upward to the surrounding grade, while the augers are lifted and removed; and (5) embedding a ferrous metal marker in the ground near each former well location.

If our understanding of the NYSDEC's agreement to the performance of Items 1 through 3 (above) prior to Work Plan approval is incorrect, please notify us immediately. We plan to initiate these activities shortly. Also, we await further communication from NYSDEC for approval to implement the groundwater monitoring well modification/abandonment activities described above. Please do not hesitate to contact Kurt Batsel at (770) 578-9696 or myself if you have any questions or require additional information.

-John

John C. Brussel, P.E.
Senior Engineer I
Blasland, Bouck & Lee, Inc.
6723 Towpath Road, Box 66
Syracuse, NY 13214-0066

Tel: (315) 446-2570 (ext. 441)
Fax: (315) 449-4111
JCB@BBL-inc.com

8/18/05

E-Mail Correspondence from NYSDEC

Approval of Monitoring Well Modification & Decommissioning Activities

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BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

From: "Larry Rosenmann" <larosenm@gw.dec.state.ny.us>
To: <JCB@bbl-inc.com>
Date: 8/18/2005 4:06:33 PM
Subject: Re: ICM Barrier Layer Construction / Conference Call Follow-up - TRW Utica

John,

I have reviewed the well modification and well abandonment plans. They are fine. In order to better protect the wells, you should put a tall flag on each of the wells remaining in the cap area, and others nearby that could be hit by construction equipment. If you got those felxible bike flags they would be high enough, and you could put a bell on top that will ring as it sways in the wind. :> /

Sorry for the hasty reply, I am trying to get a bunch of stuff done before I leave. I won't be back until Tuesday or later next week.

Larry A. Rosenmann
NYSDEC Division of Solid & Hazardous Materials
625 Broadway, Albany, NY 12233-7258
Phone: (518) 402-8594 Fax: (518) 402-9025

****
"If you can't say anything nice,
Say it in Yiddish"
Aunt Selma's 27 rules for Jewish living

CC: "Alicia Barraza" <aabarraz@gw.dec.state.ny.us>

8/24/05
E-Mail Correspondence to NYSDEC

Revised Plan for Monitoring Well Decommissioning

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JOHN BRUSSEL - Re: ICM Barrier Layer Construction / Conference Call Follow-up - TRW Utica

From: JOHN BRUSSEL
To: Rosenmann, Larry
Date: 8/24/2005 11:45 AM
Subject: Re: ICM Barrier Layer Construction / Conference Call Follow-up - TRW Utica
CC: Barraza, Alicia; batsel@dextra-group.com; GERBER, DAVID

Larry:

As discussed and agreed during our telephone conversation this morning, the procedure for well decommissioning at the former TRW-Utica facility will be revised to allow a more streamlined, cost-effective implementation. The revised approach minimizes the amount of materials generated, supports future site development, and is consistent with the guidance in the NYSDEC's document titled *Groundwater Monitoring Well Decommissioning Procedures* (NYSDEC, October 1996). Under the revised approach:

- grout will be added, from the bottom of the borehole upward to within 4 feet of the ground surface, while the PVC well casing is pulled and removed; and

- bentonite pellets will be placed in the upper 4 feet of the borehole as the last of the casing is pulled.

Overdrilling will only be performed in the event that the casing or well screen is severed during casing pulling.

If our understanding of the NYSDEC's agreement to the revised procedure presented above is incorrect, please notify me immediately. We anticipate that the well decommissioning activities will be performed either next week or the following week.

Please do not hesitate to contact me if you have any questions or require additional information.

-John

John C. Brussel, P.E.
Senior Engineer I
Blasland, Bouck & Lee, Inc.
6723 Towpath Road, Box 66
Syracuse, NY 13214-0066

Tel: (315) 446-2570 (ext. 441)
Fax: (315) 449-4111
JCB@BBL-inc.com

>>> JOHN BRUSSEL 8/18/2005 4:36 PM >>>
Larry:

Thanks for your quick reply. We had planned to put some stakes or posts with flagging attached around the wells to serve as visible reminders to the operators. We hadn't considered the bells... but we probably won't use them.
-John

>>> "Larry Rosenmann" <larosenm@gw.dec.state.ny.us> 8/18/2005 4:05 PM >>>
John,

I have reviewed the well modification and well abandonment plans. They are fine. In order to better protect the wells, you should put a tall flag on each of the wells remaining in the cap area, and others nearby that could

be hit by construction equipment. If you got those felxible bike flags they would be high enough, and you could put a bell on top that will ring as it sways in the wind. :> /

Sorry for the hasty reply, I am trying to get a bunch of stuff done before I leave. I won't be back until Tuesday or later next week.

Larry A. Rosenmann
NYSDEC Division of Solid & Hazardous Materials
625 Broadway, Albany, NY 12233-7258
Phone: (518) 402-8594 Fax: (518) 402-9025

****
"If you can't say anything nice,
Say it in Yiddish"
Aunt Selma's 27 rules for Jewish living

9/12/05
Letter to NYSDEC

Response to Comments on the ICM Work Plan

BBL®
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

From: JOHN BRUSSEL
To: aabarraz@gw.dec.state.ny.us
Date: 9/12/2005 7:10:57 PM
Subject: Response to NYSDEC Comments on ICM Barrier Layer Construction Work Plan - TRW Utica

Alicia:

On behalf of Lucas Western, please find the attached PDF file containing a response to the NYSDEC's comments on the ICM Barrier Layer Construction Work Plan for the former TRW Aeronautical Systems facility in Utica, NY. A hard-copy of the response will follow via regular mail.

Please do not hesitate to contact Kurt Batsel of the Dextra Group at (770) 578-9696 or myself if you have any questions or require additional information.

-John

John C. Brussel, P.E.
Senior Engineer I
Blasland, Bouck & Lee, Inc.
6723 Towpath Road, Box 66
Syracuse, NY 13214-0066

Tel: (315) 446-2570 (ext. 441)
Fax: (315) 449-4111
JCB@BBL-inc.com

CC: batsel@dextra-group.com; ENIGK, ANDREW; GERBER, DAVID

Dextra

Transmitted Via Federal Express

September 12, 2005

Ms. Alicia Barraza
New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials
Bureau of Solid Waste and Corrective Action
625 Broadway
Albany, New York 12233-7258

Re: Former TRW Aeronautical Systems Facility
211 Seward Avenue – Utica, New York
USEPA ID#: NYD002244911
ICM Barrier Layer Construction Work Plan – Response to NYSDEC Comments

Dear Ms. Barraza:

On behalf of Lucas Western LLC (Lucas Western), please find the attached response to the New York State Department of Environmental Conservation's (NYSDEC's) comments on the *Interim Corrective Measure Barrier Layer Construction Work Plan* prepared by Blasland, Bouck & Lee, Inc. (BBL, August 2005). The NYSDEC's comments were presented in your e-mail correspondence dated September 1, 2005 and responses were discussed during a conference call with the NYSDEC on September 6, 2005. For ease of presentation, each NYSDEC comment is provided in Attachment 1, followed by Lucas Western's response.

Please do not hesitate to contact me at (770) 578-9696 or via e-mail at batsel@dextra-group.com if you have any questions or require additional information regarding the attached response or any other aspect of the project.

Sincerely,
The Dextra Group, Inc.

Kurt Batsel, P.E.
Principal

Attachment

cc: Gabriel Calvo, Esq., Northrop Grumman Corporation
Valerie M. Hanna, Esq., Hanna Law Offices LLC
Mr. David R. Gerber, P.E., BBL Environmental Services, Inc.
Mr. John C. Brussel, P.E., Blasland, Bouck & Lee, Inc.

The Dextra Group, Inc.
1205 Johnson Ferry Road, Suite 136-446
Marietta, GA 30068

Environmental Business Solutions
(770) 578-9696 Phone
(770) 321-5345 Fax

ATTACHMENT 1
RESPONSE TO NYSDEC COMMENTS ON
ICM BARRIER LAYER CONSTRUCTION WORK PLAN

FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE
UTICA, NEW YORK

General Comment

Comment 1

How long does TRW/Lucas anticipate that the barrier layer will remain in place? Will it be removed when new buildings/structures are constructed?

Response 1

Lucas Western anticipates that the barrier layer will remain in place as long as the impacted soils it covers remain onsite (assuming there are no changes to the soil guidance values that would result in the layer no longer being needed). Lucas Western has no current plans to construct buildings/structures on the site.

If another party were to redevelop the site in the future, the NYSDEC-approved *Corrective Measures Study Report* (BBL, December 2004) expressly provides that the barrier layer may be modified in areas where new buildings, structures, or driveways are constructed as part of future Site redevelopment activities. Specifically, future concrete building floor slabs and asphalt/concrete pavement materials could be designed (in consultation with the NYSDEC) to serve as the barrier layer in these areas. Requirements to maintain the barrier layer will be identified in the Site Management Plan to be prepared as an element of the final remedy outlined in the *Corrective Measures Study Report*.

♦ ♦ ♦

Comments on Section 2.3 – Pre-Qualification of Fill Materials

Comment 2

One grab sample of each type and source of material to be used is proposed for analysis of VOCs. One composite sample, formed from four grab samples, is proposed for analysis of SVOCs, inorganics, pesticides and PCBs. For the volume of fill materials (gravel and topsoil) that will be used over an area of 135,000 ft², one grab sample and one composite sample seems insufficient. There should be, at a minimum, at least two grab samples and two composite samples to verify that the materials are clean.

Response 2

Per the NYSDEC's request, a minimum of two composite samples and two grab samples will be collected to characterize the run-of-bank gravel proposed for use in the barrier layer. Similarly, a minimum of two composite samples and two grab samples will be collected to characterize the topsoil proposed for use in the barrier layer. If more than one fill source will be used for topsoil and/or run-of-bank gravel, at least one composite and one grab sample will be collected from each source.

♦ ♦ ♦

Comment 3

Analysis should also confirm that the fill materials are not hazardous. Therefore, the fill materials should be analyzed for pH.

Response 3

The composite fill material samples will also be analyzed for pH.

♦ ♦ ♦

Comment on Section 2.6 – Erosion and Sedimentation Control

Comment 4

According to the Stormwater Pollution Prevention Plan (SWPPP), silt fencing will be installed south of the former Test Building where tree/shrub clearing will occur. The existing fencing in this area should be moved to the outside of the silt fencing, in order to secure the site during construction activities (see Figure 2 in the SWPPP).

Response 4

Based on barrier layer survey activities completed on September 7, 2005, the majority of the area where tree/shrub clearing will be performed, south of the former Test Building footprint, is already enclosed by continuous chain-link fencing that also extends completely around the parking lot south of the former Test Building. Some new chain-link fencing will be installed, as needed, to secure the Site during construction activities. The approximate locations of the proposed new chain-link fence are shown on the attached, revised version of Figure 2.

♦ ♦ ♦

Comment on Section 2.7 – Tree/Brush Clearing

Comment 5

In this area, what will prevent vegetation such as shrubs from pushing through the barrier layer, particularly since the layer will not be compacted. The barrier layer must remain in good condition as long as it is in place.

Response 5

The Contractor selected to perform the barrier layer construction will compact the barrier layer materials by tracking over them using a dozer (one or more Case 850 dozers are proposed). The compacted barrier layer materials will be a minimum of one-foot thick to achieve the objective of mitigating potential exposures. As discussed during the September 6, 2005 conference call, in-place density/permeability performance testing is not needed to achieve the barrier layer objective.

After the barrier layer is installed, it will be maintained in good condition in accordance with the Site Management Plan to be prepared as an element of the final remedy outlined in the *Corrective Measures Study Report*.

♦ ♦ ♦

Comments on Section 2.9 – Barrier Layer Construction

Comment 6

Explain the reason for not compacting the topsoil, as this would reduce water infiltration, erosion and cracking. As noted above, the barrier layer must remain in good condition during its entire duration.

Response 6

The topsoil will be compacted as discussed in Response 5.

♦ ♦ ♦

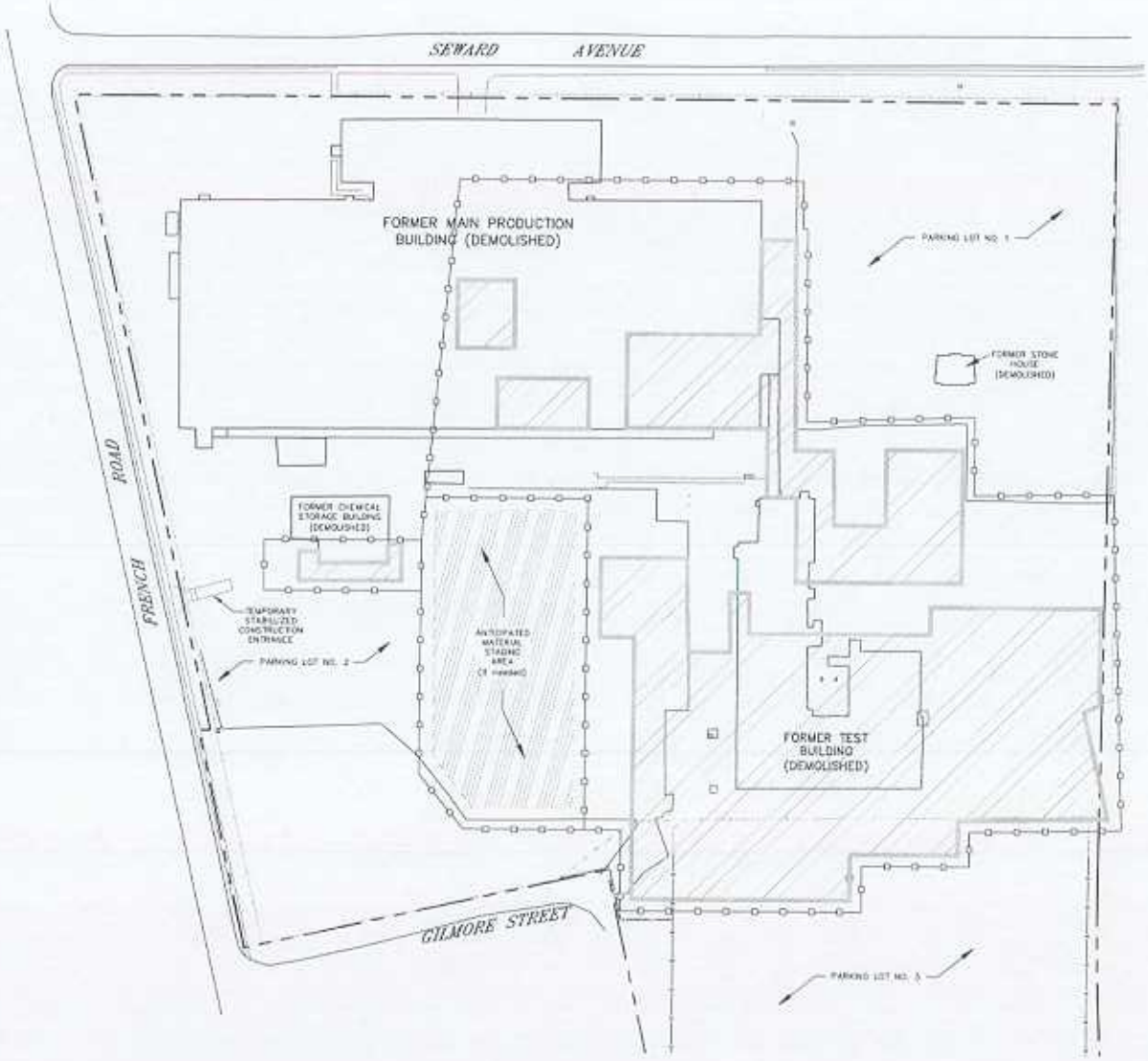
Comment 7

Long grass seed and flowers should be avoided, as this presents a health hazard to residents with allergies. They will complain about it.

Response 7

The hydroseed to be used on the barrier layer will be a typical lawn-type mixture (consisting of perennial and annual ryegrass, timothy, clover, etc.) that will be free from noxious weeds. The grass height will be maintained in accordance with City of Utica ordinance.

♦ ♦ ♦



LEGEND:

- TEMPORARY SILT FENCE
- PROPERTY LINE
- EXISTING CHAIN-LINK FENCE
- PROPOSED CHAIN-LINK FENCE
- ANTICIPATED AREA OF BARRIER LAYER

NOTES:

1. UNLESS OTHERWISE INDICATED, MAPPING IS BASED ON SURVEYS PERFORMED BY ELAYLAND, BOUCK & LEE, INC.(BBL), MARCH 13, 2003 TO JUNE 20, 2004.
2. PROPERTY LINES, AND ROADWAYS ARE ADAPTED FROM A DRAWING ENTITLED "SITE LAYOUT MAP SHOWING AREAS OF CONCERN", FIGURE 1-1, BY ENVIRONMENTAL RESOURCE MANAGEMENT, INC. (ERM), EXTON, PA., AT A SCALE OF 1" = 40', DATED AUGUST 27, 2002.
3. TENDELINE WEST OF PARKING LOT NO. 3 IS APPROXIMATE.

0 50' 100'
GRAPHIC SCALE

FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE
UTICA, NEW YORK

LOCATION OF EROSION AND SEDIMENTATION CONTROL MEASURES

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engineers scientists economists

FIGURE 2

9/15/05
E-Mail Correspondence from NYSDEC

Approval of the ICM Work Plan

BBL®
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From: "Alicia Barraza" <aabarraz@gw.dec.state.ny.us>
To: <JCB@bbl-inc.com>, <batsel@dextra-group.com>
Date: 9/15/2005 2:24:29 PM
Subject: Barrier Layer Work Plan

Kurt & John -
Attached below is the approval letter for the Barrier Layer ICM. The signed version will go out later this week. Let me know if you have any questions.

Alicia

New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials
Bureau of Hazardous Waste & Radiation Management
625 Broadway, Albany, NY 12233-7258
Phone: (518) 402-8594 • **FAX:** (518) 402-9024
Website: www.dec.state.ny.us

Denise M. Sheehan
Acting
Commissioner

September 15, 2005

Mr. Kurt Batsel
The Dextra Group, LLC
4665 Lower Roswell Road, #154
Marietta, Georgia 30068

Dear Mr. Batsel:

Re: Former TRW Aeronautical Systems Facility, Utica, NY, USEPA ID No. NYD002244911; ICM Barrier Layer Construction Work Plan, August 2005

The New York State Department of Environmental Conservation (Department) provided comments to Lucas Western (Lucas) for the work plan referenced above. The comments were also discussed with Lucas during a conference call on September 6, 2005. On September 15, 2005, the Department received from Lucas satisfactory responses to the comments. The Department approves the ICM Barrier Layer Construction Work Plan and the responses.

If necessary, please update the proposed project schedule and submit it to the Department. If you have any questions, please contact me at (518) 402-8594.

Sincerely,

Alicia Barraza
Environmental Engineer
Hazardous Waste Engineering Eastern Section

cc: J. Reidy, EPA Region II
Greg Rys, NYSDOH

ecc: D. Evans
L. Rosenmann
S. Hamilton
S. Shoemaker, R6

10/13/05
E-Mail Correspondence to NYSDEC

Sample Results for Alternative Backfill Source

BBL®
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JOHN BRUSSEL - Sample Results for Alternative Backfill Source - ICM Barrier Layer Construction, TRW Utica

From: JOHN BRUSSEL
To: aabarraz@gw.dec.state.ny.us
Date: 10/13/2005 2:29 PM
Subject: Sample Results for Alternative Backfill Source - ICM Barrier Layer Construction, TRW Utica
CC: batsel@dextra-group.com; ENIGK, ANDREW

Alicia:

Please find the attached Excel table presenting final laboratory analytical results for samples of run-of-bank gravel (samples RB-3 and RB-4) and topsoil (sample TS-3) recently collected from Burrow's Trucking & Excavating (Burrow's), the proposed source of fill for the ICM barrier layer construction at the TRW Utica site. The laboratory analytical data report is included in the attached PDF file.

Based on the laboratory analytical results, the samples do not exhibit PCBs, pesticides, TCL VOCs, or TCL SVOCs at concentrations above the TAGM 4046 soil guidance values. Concentrations of inorganic constituents identified in the samples appear to be generally consistent with the TAGM 4046 soil guidance values, taking into consideration typical background concentrations. With NYSDEC approval, the run-of-bank gravel and topsoil from Burrow's will be used for the barrier layer construction.

Based on observations of Burrow's topsoil stockpile, it looks like they do not have enough topsoil for the proposed 6-inch thickness across the barrier layer areas. There is an abundant supply of available clean run-of-bank gravel. Kurt Batsel and I will give you a call soon to discuss the analytical results and an approach to address the shortage of available clean topsoil.

-John

John C. Brussel, P.E.
Senior Engineer I
Blasland, Bouck & Lee, Inc.
6723 Towpath Road, Box 66
Syracuse, NY 13214-0066

Tel: (315) 446-2570 (ext. 441)
Fax: (315) 449-4111
JCB@BBL-inc.com

TABLE 1
BACKFILL MATERIAL SAMPLE RESULTS (ppm)

DRAFT
PRIVILEGED AND CONFIDENTIAL
ATTORNEY-CLIENT WORK PRODUCT

INTERIM CORRECTIVE MEASURE BARRIER LAYER CONSTRUCTION
FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE
UTICA, NEW YORK

Sample ID: / Date Collected:	TAGM 4046 Guidance Value (exceedences shaded)	Maximum Site Background (exceedences in bold)	NY Region Background Values (exceedences in italics)	RB-3 10/04/05	RB-4 10/04/05	TS-3 10/04/05
PCBs						
Aroclor 1016	NA	NA	NA	<0.038 [<0.036]	<0.036	<0.040
Aroclor 1221	NA	NA	NA	<0.038 [0.022 J]	<0.036	<0.040
Aroclor 1232	NA	NA	NA	<0.038 [<0.036]	<0.036	<0.040
Aroclor 1242	NA	NA	NA	<0.038 [<0.036]	<0.036	<0.040
Aroclor 1248	NA	NA	NA	<0.038 [0.0096 J]	<0.036	0.050
Aroclor 1254	NA	NA	NA	<0.038 [<0.036]	<0.036	<0.040
Aroclor 1260	NA	NA	NA	<0.038 [<0.036]	<0.036	0.013 J
Total PCBs	1.0	NA	NA	<0.038 [0.0316 J]	<0.036	0.063 J
Pesticides						
4,4'-DDD	2.9	NA	NA	<0.0019 [<0.0019]	<0.0019	0.0019 J
4,4'-DDE	2.1	NA	NA	<0.0019 [<0.0019]	<0.0019	0.011
4,4'-DDT	2.1	NA	NA	<0.0019 [<0.0019]	<0.0019	0.0060 PG
alpha-Chlordane	NA	NA	NA	<0.0019 [<0.0019]	<0.0019	0.016 PG
beta-BHC	0.2	NA	NA	<0.0019 [<0.0019]	<0.0019	0.0044 PG
Dieldrin	0.044	NA	NA	<0.0019 [<0.0019]	<0.0019	0.027
gamma-Chlordane	0.54	NA	NA	<0.0019 [<0.0019]	<0.0019	0.0055
TCL VOCs						
1,2,4-Trichlorobenzene	3.4	NA	NA	<0.0057 [0.0012 JB]	<0.0055	0.0012 J
1,2-Dichlorobenzene	7.9	NA	NA	<0.0057 [0.00036 JB]	<0.0055	0.00041 J
1,3-Dichlorobenzene	1.6	NA	NA	<0.0057 [0.00035 JB]	<0.0055	<0.0060
1,4-Dichlorobenzene	8.5	NA	NA	<0.0057 [0.00042 J]	<0.0055	<0.0060
Acetone	0.2	NA	NA	0.0038 JB [<0.022]	<0.022	<0.024
Carbon disulfide	2.7	NA	NA	<0.0057 [0.00030 JB]	0.00031 JB	<0.0060
Methylene chloride	0.1	NA	NA	0.0090 B [0.0064 B]	0.0060 B	0.0059 JB
TCL SVOCs						
Anthracene	50	NA	NA	<0.38 [<0.36]	<0.36	0.021 J
Benzo(a)anthracene	0.224	NA	NA	<0.38 [<0.36]	<0.36	0.075 J
Benzo(a)pyrene	0.061	NA	NA	<0.38 [<0.36]	<0.36	0.061 J
Benzo(b)fluoranthene	1.1	NA	NA	<0.38 [<0.36]	<0.36	0.084 J
Benzo(ghi)perylene	50	NA	NA	<0.38 [<0.36]	<0.36	0.040 J
Benzo(k)fluoranthene	1.1	NA	NA	<0.38 [<0.36]	<0.36	0.027 J
bis(2-Ethylhexyl) phthalate	50	NA	NA	0.031 JB [0.026 JB]	0.027 JB	0.031 JB
Carbazole	NA	NA	NA	<0.38 [<0.36]	<0.36	0.019 J
Chrysene	0.4	NA	NA	<0.38 [<0.36]	<0.36	0.074 J
Fluoranthene	50	NA	NA	<0.38 [<0.36]	<0.36	0.15 J
Indeno(1,2,3-cd)pyrene	3.2	NA	NA	<0.38 [<0.36]	<0.36	0.035 J
Phenanthrene	50	NA	NA	<0.38 [<0.36]	<0.36	0.11 J
Pyrene	50	NA	NA	<0.38 [<0.36]	<0.36	0.12 J
Total SVOC TICs	NA	NA	NA	0.44 J [0.062 J]	0.33 J	0.61 J

TABLE 1
BACKFILL MATERIAL SAMPLE RESULTS (ppm)

INTERIM CORRECTIVE MEASURE BARRIER LAYER CONSTRUCTION
FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE
UTICA, NEW YORK

Sample ID: / Date Collected:	TAGM 4046 Guidance Value (exceedences shaded)	Maximum Site Background (exceedences in bold)	NY Region Background Values (exceedences in italics)	RB-3 10/04/05	RB-4 10/04/05	TS-3 10/04/05
TAL Inorganic Constituents						
Aluminum	NA	9,360	100,000	3,270 [4,310]	2,900	**10,100**
Arsenic	7.5	11.2	12	3.30 [3.40]	2.80	9.80
Barium	300	83	600	15.3 B [19.4 B]	12.9 B	66.3
Beryllium	0.16	0.5	1.75	0.160 B [0.200 B]	0.150 B	**0.530 B**
Cadmium	1	0.61	1	<0.570 [0.0370 B]	<0.550	0.190 B
Calcium	NA	167,000	35,000	18,700 J [27,200 J]	16,100 J	4,830 J
Chromium	10	23.8	40	4.00 [5.40]	3.60	13.6 E
Cobalt	30	7.4	60	3.40 B [4.10 B]	3.00 B	**10.5 E**
Copper	25	27.9	50	11.8 [16.9]	9.70	**42.4 E**
Iron	2,000	27,400	550,000	8,370 [10,700]	7,290	25,300
Lead	NA	26.7	61	2.30 [3.00]	2.00	24.8
Magnesium	NA	21,100	5,000	4,860 J *[7,480 J]*	3,430 J	3,210 J
Manganese	NA	1,780	5,000	337 J [391 J]	276 J	746 JE
Mercury	0.1	0.12	0.2	<0.110 [<0.110]	<0.110	0.0870 B
Nickel	13	15.7	25	6.50 [8.30]	5.90	**18.5 E**
Potassium	NA	759	43,000	518 BJ [711 J]	471 BJ	**1,020 JE**
Selenium	2	1.2	3.9	<0.570 [<0.550]	<0.550	0.450 B
Sodium	NA	82.4	50,000	50.1 B [63.9 B]	46.9 B	<601
Thallium	NA	1.2	NA	<1.10 [0.610 B]	<1.10	0.820 B
Total Cyanide	NA	0.61	NA	<0.570 [0.540 B]	<0.550	<0.600
Vanadium	150	17.9	300	5.40 B [7.30]	5.10 B	15.7 E
Zinc	20	92	50	28.9 J [38.6 J]	19.6 J	*58.1 JE*
Miscellaneous						
Percent Solids (%)	NA	NA	NA	87.9 [91.6]	90.8	83.2
pH (standard pH Units)	NA	NA	NA	9.0 [8.9]	9.0	7.4

TABLE 1
BACKFILL MATERIAL SAMPLE RESULTS (ppm)

INTERIM CORRECTIVE MEASURE BARRIER LAYER CONSTRUCTION
FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE
UTICA, NEW YORK

Notes:

1. Samples collected by Blasland, Bouck & Lee, Inc. (BBL) on October 4, 2005.
2. Samples submitted to Severn Trent Laboratories, Inc., of North Canton, Ohio for laboratory analysis of the following constituents:
   - Polychlorinated biphenyls (PCBs) using United States Environmental Protection Agency (USEPA) SW-846 Method 8082;
   - Pesticides using USEPA SW-846 Method 8081;
   - Target Compound List (TCL) Volatile organic compounds (VOCs), including tentatively identified compounds (TICs), using USEPA SW-846 Method 8260;
   - TCL Semi-volatile organic compounds (SVOCs), including TICs, using USEPA SW-846 Method 8270; and
   - Target Analyte List (TAL) inorganic constituents using USEPA SW-846 Method 6010 (except for mercury which was analyzed using Method 7471 and cyanide which was analyzed using Method 9012).
3. Concentrations reported on a dry weight basis, in parts per million (ppm), which is equivalent to milligrams per kilogram (mg/kg).
4. [ ] = Result for blind duplicate.
5. < = No Aroclors were detected above the reported concentration (for PCBs) or constituent was not detected at a concentration exceeding the reported detection limit (for all other parameters).
6. Laboratory data qualifiers indicate the following:
   - B (Organic) = Analyte was also detected in the associated method blank.
   - J (Organic) = Indicates an estimated value less than the practical quantitation limit (PQL).
   - PG (Organic) = The percent difference between the original and confirmation analysis is greater than 40%.
   - B (Inorganic) = Indicates an estimated value between the instrument detection limit (IDL) and PQL.
   - E (Inorganic) = The serial dilution percent difference was outside control limits.
   - J (Inorganic) = Analyte was also detected in the associated method blank.
7. NA = Not applicable.
8. TAGM 4046 guidance values are from the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) titled "Determination of Soil Cleanup Objectives and Cleanup Levels", HWR-94-4046 (TAGM 4046) dated January 24, 1994.
9. Maximum site background represents the highest concentration identified at background soil sampling locations BGD-1 through BGD-5 as part of a background soil sampling program completed during January 2002.
10. NY Region background values are maximum values from the NYSDEC document titled "Background Concentrations of 20 Elements in Soils with Special Regard for New York State", by E. Carol McGovern, dated 1988.
11. With the exception of PCBs, only those constituents detected in one or more samples are summarized.
12. Analytical results have not been validated.

10/25/05
Letter from NYSDEC

Approval of Modification to ICM Work Plan

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BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials
Bureau of Hazardous Waste & Radiation Management
625 Broadway, Albany, NY 12233-7258
Phone: (518) 402-8594 • **FAX:** (518) 402-9024
Website: www.dec.state.ny.us

Denise M. Sheehan
Acting
Commissioner

October 25, 2005

Mr. Kurt Batsel
The Dextra Group, LLC
4665 Lower Roswell Road, #154
Marietta, Georgia 30068

Dear Mr. Batsel:

Re: Former TRW Aeronautical Systems Facility, Utica, NY, USEPA ID No. NYD002244911; ICM Barrier Layer Construction Work Plan, August 2005

On September 16, 2005, the New York State Department of Environmental Conservation (Department) approved the ICM Barrier Layer Construction Work Plan and responses. On October 14, 2005, Lucas Western (Lucas) requested a modification to the ICM work plan, due to a potential shortage of topsoil material. The approved work plan calls for a minimum of six inches of topsoil and a minimum of six inches of gravel material. Lucas requested a change to a minimum of three inches of topsoil and nine inches of gravel material. However, Lucas will make every effort to place the six inches of topsoil, or as much as is available at the time.

The Department approves the modification to the work plan, with the understanding that Lucas must promptly address conditions leading to deterioration of the topsoil layer, such as lack of vegetation, erosion, and cracking. This must also be addressed in the Site Management Plan, to be proposed as a final remedial measure.

In addition, the Department approves the use of topsoil material from Burrow's Trucking & Excavating, based on the analytical results submitted to the Department on October 14, 2005.

If you have any questions, please contact me at (518) 402-8594.

Sincerely,

Alicia Barraza

Alicia Barraza
Environmental Engineer
Hazardous Waste Engineering Eastern Section

cc: J. Reidy, EPA Region II
Greg Rys, NYSDOH

Appendix B

Weekly Field Reports

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Weekly Activity Report

PROJECT		
	Lucas Western LLC **Former TRW Aeronautical Systems Facility** **Utica, NY** **ICM Barrier Layer Construction** **Project Oversight**	**Week #1: 9/12/05 to 9/16/05** **File No.: 2253.37117.010 #5** **Date Submitted: 10/4/05**
Contractors on site: Royal Environmental		Observer: Andrew Enigk, BBL

Activities, Remarks

❖ **Activities Completed this Week:**

9/12/05, Monday:

- BBL inspected the perimeter lawn and collected trash and debris.

- Completed the trash and debris collection, left the site and returned to meet Parratt-Wolff (PW) at 12:00 noon to modify/decommission designated monitoring wells onsite.

- Modified B95-1 and MW-03-3. Modifications at each well consisted of the following:
  - pulled flush-mount cover and concrete surface pad;
  - dug soil around PVC well for placement of 18 inch Sonitube (cylindrical concrete form);
  - installed PVC pipe extension and connected to existing pipe using Fernco coupling;
  - installed a lockable steel casing around the PVC well extension; and
  - placed Sonitube, extending from 6-inches below to 12-inches above surrounding grade, then hand-filled with concrete.

- Note: MW-03-3 was pulled up approximately 6 inches during removal of the flush-mount cover and concrete. The well was left in the pulled up position to avoid compressing the well screen if it were pushed back to its original position.

- B85-4 was decommissioned per NYSDEC approved procedure in the following basic steps:
  - pulled steel casing of stick-up;
  - pulled PVC well up approximately two feet;
  - punched out bottom of the well;
  - added grout while removing the PVC well;
  - added grout to approximately 4 feet below surrounding grade; and
  - topped off grout with bentonite chips.

- PW and BBL left the site at 5:30 p.m.

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9/13/05, Tuesday:

- PW completed decommissioning of the remaining wells (B85-5, B85-6, B84-1/B-1, B84-2/B-2, and B84-3/B-3) per the NYSDEC-approved procedure.
- Rebar was placed in the top four feet of bentonite (as a marker for future reference) per the procedure.
- The steel casing of B84-2/B-2 was cut using an acetylene torch because large maple tree roots had enveloped the concrete and steel casing, making direct removal not possible.

❖ **Activities Planned for Next Week:**

- Mobilization by Royal Environmental, Inc. (Royal)

❖ **Potential Impacts to Schedule**

- On Schedule.

❖ **Resolutions to Potential Impacts to Schedule**

- Not Applicable.

BLASLAND, BOUCK & LEE, INC.
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Weekly Activity Report

PROJECT		
	Lucas Western LLC **Former TRW Aeronautical Systems Facility** **Utica, NY** **ICM Barrier Layer Construction** **Project Oversight**	**Week #2: 9/19/05 to 9/23/05** **File No.: 2253.37117.010 #5** **Date Submitted: 10/10/05**
Contractors on site: Royal Environmental		Observer: Andrew Enigk, BBL

Activities, Remarks

❖ **Activities Completed this Week:**

9/20/05, Tuesday:

- BBL collected backfill samples (run-of-bank gravel and topsoil) from Leitz Enterprises in Frankfort, NY and submitted the samples to STL of North Canton, Ohio for analysis.

- Royal provided an updated project schedule and the following submittals as required by the RFP:

  - Operation Plan
  - Decontamination Plan
  - Health and Safety Plan

9/21/05, Wednesday:

- BBL and Royal attended a pre-construction meeting at the site. Introduced project teams, reviewed Contract requirements, discussed project schedule, and discussed Royal's approach for completing the ICM activities, including additional site clearing activities requested by Lucas Western and fence re-location activities needed based on the survey layout of the barrier layer areas.

9/22/05, Thursday:

- BBL revised the *NYSDEC Community Fact Sheet* based on NYSDEC comments.

9/23/05, Friday:

- Royal signed the *Agreement for Barrier Layer Construction Activities* with Lucas Western.

- BBL distributed the *NYSDEC Community Fact Sheet* in accordance with the mailing list previously provided by the NYSDEC.

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BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

❖ **Activities Planned for Next Week**

- Review and provide comments on Royal's submittals.
- Mobilize equipment and office trailer to the site.

❖ **Potential Impacts to Schedule**

- On Schedule.

❖ **Resolutions to Potential Impacts to Schedule**

- Not Applicable.

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

Weekly Activity Report

PROJECT		
	Lucas Western LLC **Former TRW Aeronautical Systems Facility** **Utica, NY** **ICM Barrier Layer Construction** **Project Oversight**	**Week #3: 9/26/05 to 9/30/05** **File No.: 2253.37117.010 #5** **Date Submitted: 10/10/05**
Contractors on site: Royal Environmental		Observer: Andrew Enigk, BBL

Activities, Remarks

❖ **Activities Completed this Week:**

9/26/05, Monday:

- Dextra and BBL provided comments on Royal's submittals.
- Weather conditions (high winds and excessive precipitation) prohibited work onsite.

9/27/05, Tuesday:

- Acceptable revisions to Royal's submittals were received by Dextra and BBL.
- Royal mobilized an office trailer to the site.
- Two personnel from Royal installed silt fence, while two personnel from Royal and the onsite observer from BBL marked the barrier layer boundaries with tape to make them more visible to equipment operators. Silt fence installation locations are shown on the hand-markup of Figure 1 from the RFP (see attached).

9/28/05, Wednesday:

- Royal provided a lump sum quote for additional site clearing and grading.
- Weather conditions (50-60 mph winds) prohibited work onsite.

9/29/05, Thursday:

- STL provided laboratory analytical results for the run-of-bank gravel and topsoil.
- BBL compared the backfill sample results to NYSDEC TAGM 4046 soil guidance values. Results for topsoil indicate unacceptable chemical characteristics (PAHs, pesticides).

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engineers, scientists, economists

9/30/05, Friday:

- Royal mobilized a bulldozer to the site.
- Royal used chain saws to clear trees on the western side of the designated tree clearing area (refer to the attached hand-markup of Figure 2 from the RFP).
- Trees were cut close to grade, limbs were removed and piled for future chipping, and the logs were piled on the southern parking lot.

❖ **Activities Planned for Next Week**

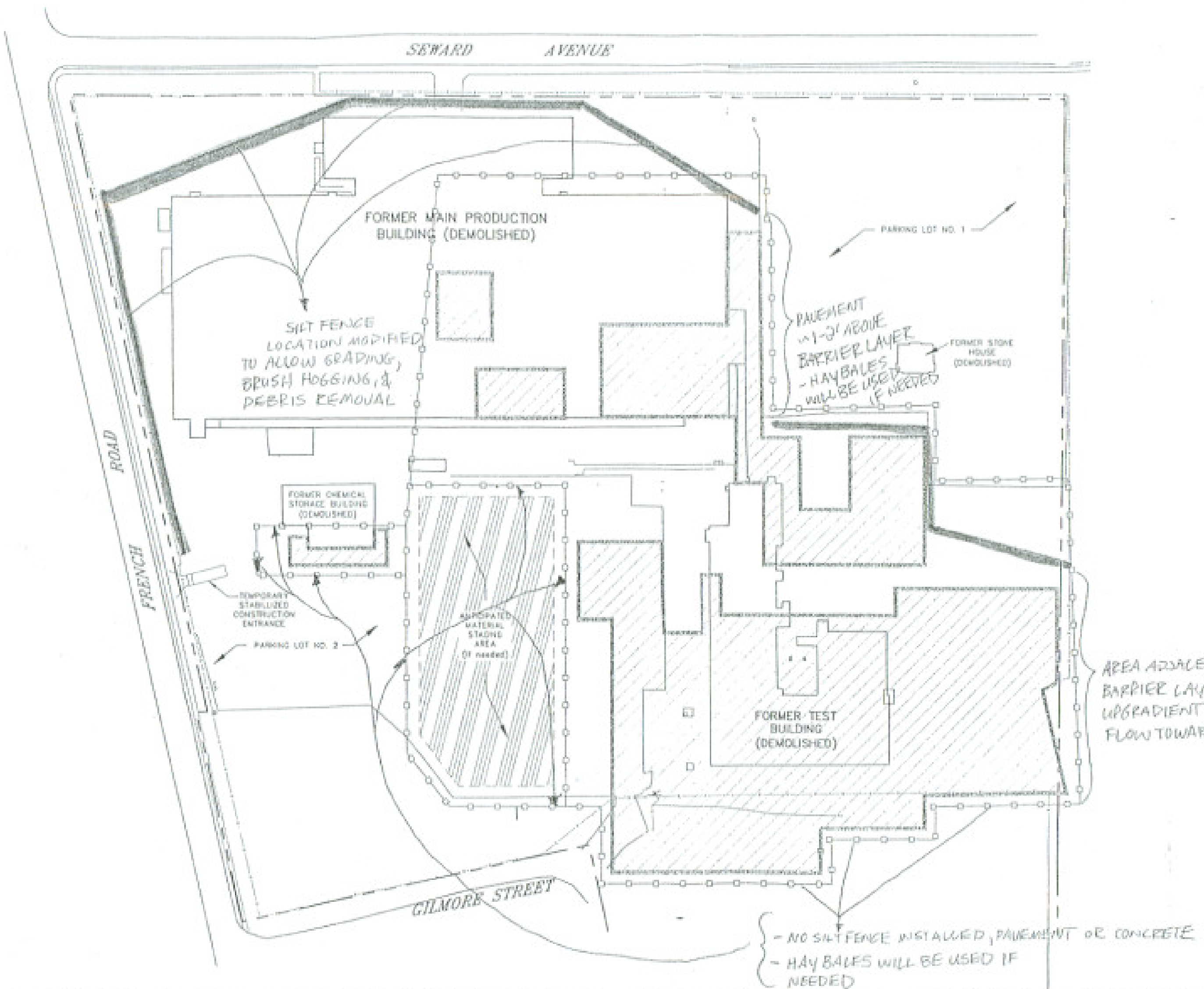
- Sample alternative backfill source.
- Complete tree clearing.
- Manually clear debris and use a brush hog to mow brush/weeds/grass/vegetation onsite.
- Review Royal's revised cost estimate for clearing and grading.

❖ **Potential Impacts to Schedule**

- Start of actual barrier layer construction (scheduled for 10/4/05) will be delayed by unacceptable topsoil characterization analytical results. Completion date may not be affected.

❖ **Resolutions to Potential Impacts to Schedule**

- Not Applicable.



LEGEND:

- TEMPORARY SILT FENCE
- PROPERTY LINE
- FENCE
- ANTICIPATED AREA OF BARRIER LAYER
- SILT FENCE INSTALLED ON 09/27/05

NOTES:

1. UNLESS OTHERWISE INDICATED, MAPPING IS BASED ON SURVEYS PERFORMED BY BLASLAND, BOUCK & LEE, INC.(BBL), MARCH 18, 2003 TO JUNE 28, 2004.
2. PROPERTY LINES, AND ROADWAYS ARE ADAPTED FROM A DRAWING ENTITLED "SITE LAYOUT MAP SHOWING AREAS OF CONCERN", FIGURE 1-1, BY ENVIRONMENTAL RESOURCE MANAGEMENT, INC. (ERM), EXTON, PA., AT A SCALE OF 1" = 40', DATED AUGUST 27, 2002.

Graphic Scale: 0 50' 100'

Professional Engineer's Name: DAVID R. GERBER
Designed by: CSA
Drawn by: RCB

BBL — BLASLAND, BOUCK & LEE, INC. engineers & scientists

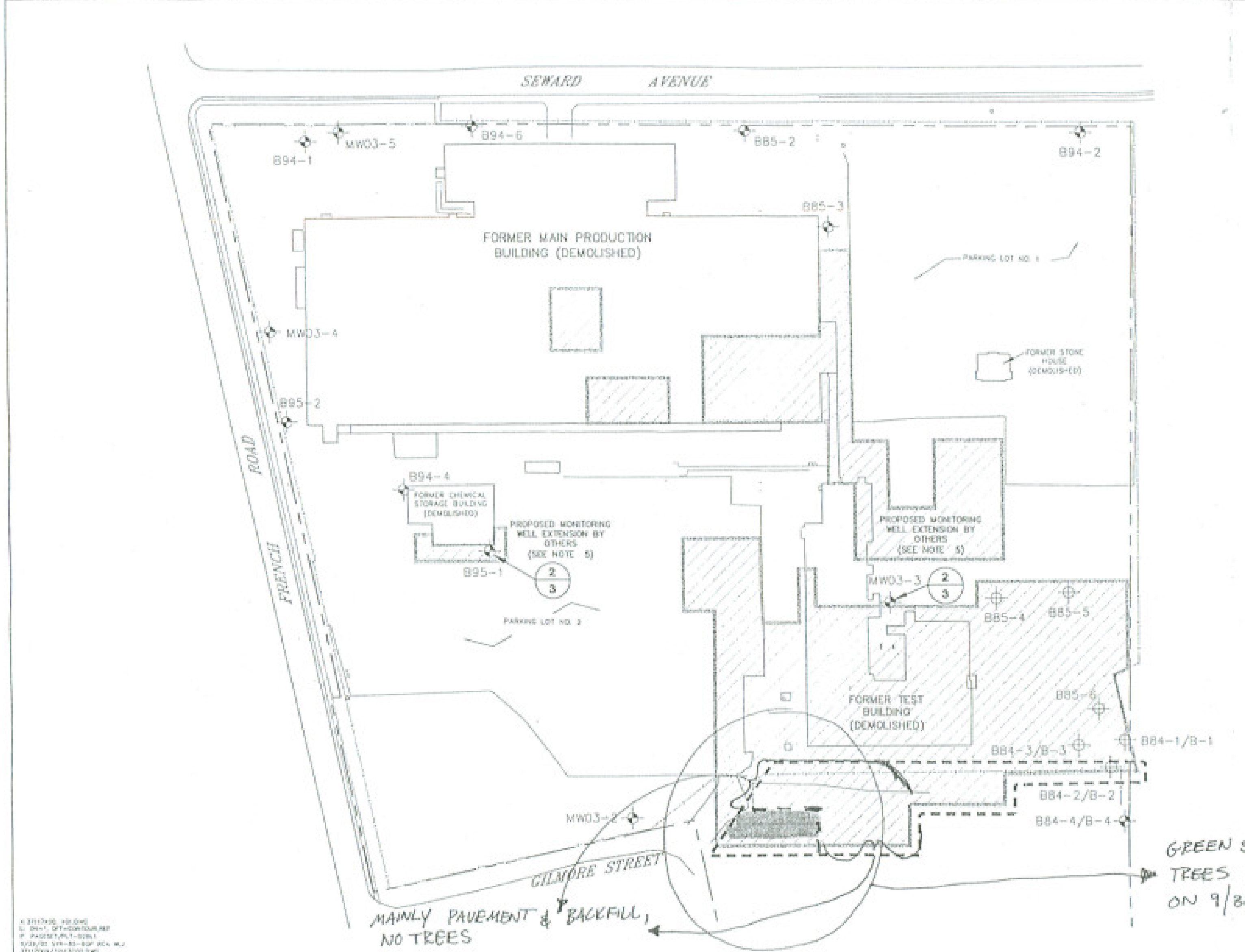
FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE, UTICA, NEW YORK
INTERIM CORRECTIVE MEASURE BARRIER LAYER CONSTRUCTION

LOCATION OF EROSION AND SEDIMENTATION CONTROL MEASURES

GENERAL

BBL Project No. 371.17
Date: AUGUST 2005
Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120

FIGURE 1



LEGEND:

- B85-5 — PERMANENT MONITORING WELL TO BE ABANDONED BY OTHERS
- MW03-3 — PERMANENT MONITORING WELL TO REMAIN
- ANTICIPATED AREA OF BARRIER LAYER
- APPROXIMATE AREA OF ANTICIPATED TREE CLEARING
- PROPERTY LINE
- FENCE

NOTES:

1. UNLESS OTHERWISE INDICATED, MAPPING IS BASED ON SURVEYS PERFORMED BY BLASLAND, BOUCK & LEE, INC.(BBL), MARCH 19, 2003 TO JUNE 28, 2004.
2. PROPERTY LINES, AND ROADWAYS ARE ADAPTED FROM A DRAWING ENTITLED "SITE LAYOUT MAP SHOWING AREAS OF CONCERN", FIGURE 1-1, BY ENVIRONMENTAL RESOURCE MANAGEMENT, INC. (ERM), EXTON, PA., AT A SCALE OF 1" = 40', DATED AUGUST 27, 2002.
3. PROPOSED BARRIER LAYER THICKNESS IS 12-INCHES MINIMUM. ADDITIONAL FILL MATERIAL WILL BE PLACED AS APPROPRIATE TO FILL DEPRESSIONS REMAINING FROM PREVIOUS EXCAVATION ACTIVITIES AND TO PROMOTE DRAINAGE.
4. RUN-OF-BANK GRAVEL AND TOPSOIL WILL BE PLACED AROUND THE PERIMETER OF THE BARRIER LAYER AREAS TO PROVIDE A GRADUAL TRANSITION TO THE SURROUNDING LINES AND GRADES.
5. HEIGHT OF MONITORING WELL EXTENSION TO BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION.

Graphic Scale: 0 — 50' — 100' GRAPHIC SCALE

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No.	Date	Revisions	Init

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Professional Engineer's Name: DAVID R. CERBER
Professional Engineer's No.: 073001
State: NY
Date Signed:
Project Mgr.: JCB | Designed by: CSA | Drawn by: RGB

BBL — BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE, UTICA, NEW YORK
INTERIM CORRECTIVE MEASURE BARRIER LAYER CONSTRUCTION

ANTICIPATED BARRIER LAYER LIMITS

GENERAL

BBL Project No. 371.17
Date: AUGUST 2005
Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

FIGURE 2

BBL®
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engineers & scientists

Weekly Activity Report

PROJECT		
	Lucas Western LLC **Former TRW Aeronautical Systems Facility** **Utica, NY** **ICM Barrier Layer Construction** **Project Oversight**	**Week #4: 10/3/05 to 10/7/05** **File No.: 2253.37117.010 #5** **Date Submitted: 10/10/05**
Contractors on site: Royal Environmental		Observer: Andrew Enigk, BBL

Activities, Remarks

❖ **Activities Completed this Week:**

- BBL collected samples of backfill materials from Burrow's Trucking & Excavating in Oriskany, NY (the alternate source proposed by Royal) on 10/4/05.
- At the request of the Dextra Group, BBLES submitted a scope of work and cost estimate for clearing brush/weeds/grass/vegetation at the site using a brush-hog mower. Approval to proceed was provided on 10/7/05.

❖ **Activities Planned for Next Week**

- Review analytical results for alternative backfill materials.
- Complete debris removal and brush-hog clearing of brush/weeds/grass/vegetation onsite.
- Complete tree clearing.
- Begin construction of barrier layer, pending acceptable analytical results.

❖ **Potential Impacts to Schedule**

- Actual start of actual barrier layer construction (originally scheduled for 10/4/05) will take place once acceptable fill material analytical results are received.

❖ **Resolutions to Potential Impacts to Schedule**

- Not Applicable.

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engineers, scientists, economists

Weekly Activity Report

PROJECT	**Lucas Western LLC** **Former TRW Aeronautical Systems Facility** **Utica, NY** **ICM Barrier Layer Construction** **Project Oversight**	**Week #5: 10/10/05 to 10/14/05** **File No.: 2253.37117.010 #5** **Date Submitted: 10/25/05**
Contractors on site: Royal Environmental		Observer: Andrew Enigk, BBL

Activities, Remarks

❖ **Activities Completed this Week:**

- BBLES completed manual collection of debris (reinforcing bars, miscellaneous trash, etc.) encountered within areas proposed to be cleared with a brush-hog.
- BBLES cleared brush/weeds/grass/vegetation at the Site using a brush-hog mower.
- BBLES manually cut large weeds and saplings growing along the perimeter chain-link fence on the north and west sides of the Site.
- STL provided laboratory analytical results for the alternative run-of-bank gravel and topsoil from Burrow's Trucking & Excavating.
- BBL compared the backfill sample results to NYSDEC TAGM 4046 soil guidance values.
- BBL submitted the backfill sample results to the NYSDEC in e-mail correspondence dated October 13, 2005 and participated on a follow-up conference call with the NYSDEC on October 14, 2005.

❖ **Activities Planned for Next Week**

- Begin construction of barrier layer following NYSDEC approval of the proposed barrier layer materials.

❖ **Potential Impacts to Schedule**

- Start of barrier layer construction (originally scheduled for 10/4/05) will take place following NYSDEC approval of the proposed barrier layer materials.

❖ **Resolutions to Potential Impacts to Schedule**

- Not applicable.

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engineers, scientists, economists

Weekly Activity Report

PROJECT	**Lucas Western LLC** **Former TRW Aeronautical Systems Facility** **Utica, NY** **ICM Barrier Layer Construction** **Project Oversight**	**Week #6: 10/17/05 to 10/21/05** **File No.: 2253.37117.010 #5** **Date Submitted: 10/28/05**
Contractors on site: Royal Environmental		Observer: Andrew Enigk, BBL

Activities, Remarks

❖ **Activities Completed this Week:**

- No field activities performed this week.
- NYSDEC approval of proposed fill material was provided on 10/20/05.

❖ **Activities Planned for Next Week**

- Begin placement of run-of-bank gravel.

❖ **Potential Impacts to Schedule**

- Start of barrier layer construction (originally scheduled for 10/4/05) has been delayed by the need to identify and pre-qualify fill material from a second source.

❖ **Resolutions to Potential Impacts to Schedule**

- Discuss with Royal the need to expedite delivery and placement of barrier layer materials to meet the November 11, 2005 project completion deadline.

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Weekly Activity Report

PROJECT	**Lucas Western LLC** **Former TRW Aeronautical Systems Facility** **Utica, NY** **ICM Barrier Layer Construction** **Project Oversight**	**Week #7: 10/24/05 to 10/28/05** **File No.: 2253.37117.010 #5** **Date Submitted: 10/28/05**
Contractors on site: Royal Environmental		Observer: Andrew Enigk, BBL

Activities, Remarks

❖ **Activities Completed this Week:**

- Royal took delivery of forty 10-wheeled dump truck loads (each hauling approximately 25 tons) of run-of-bank gravel. The gravel was staged adjacent to uneven areas or depressions for future grading before installation of the barrier layer. The stockpiles were placed as follows (see attached map showing stockpile locations):
  - 14 piles adjacent to the pit east of the Former Test Building;
  - 5 piles south of the Former Test Building;
  - 13 piles west of the Former Test Building;
  - 3 piles on the southwest corner of Parking Lot No. 1;
  - 2 piles southwest of Parking Lot No. 1;
  - 2 piles south of the Former Chemical Storage Building; and
  - 1 pile south of the Former Main Production Building.
- BBL observed Burrows Trucking and Excavating weighing a load at their facility using an electronic, digital scale for the 5-cubic yard loader bucket. Each load is being electronically-weighed using the loader bucket scale and weight tickets are being provided to BBL.
- The anticipated location of the new chain-link fence at the corner of Gilmore Street and Lyons Place was inspected and measured (approximately 135 linear feet).

❖ **Activities Planned for Next Week**

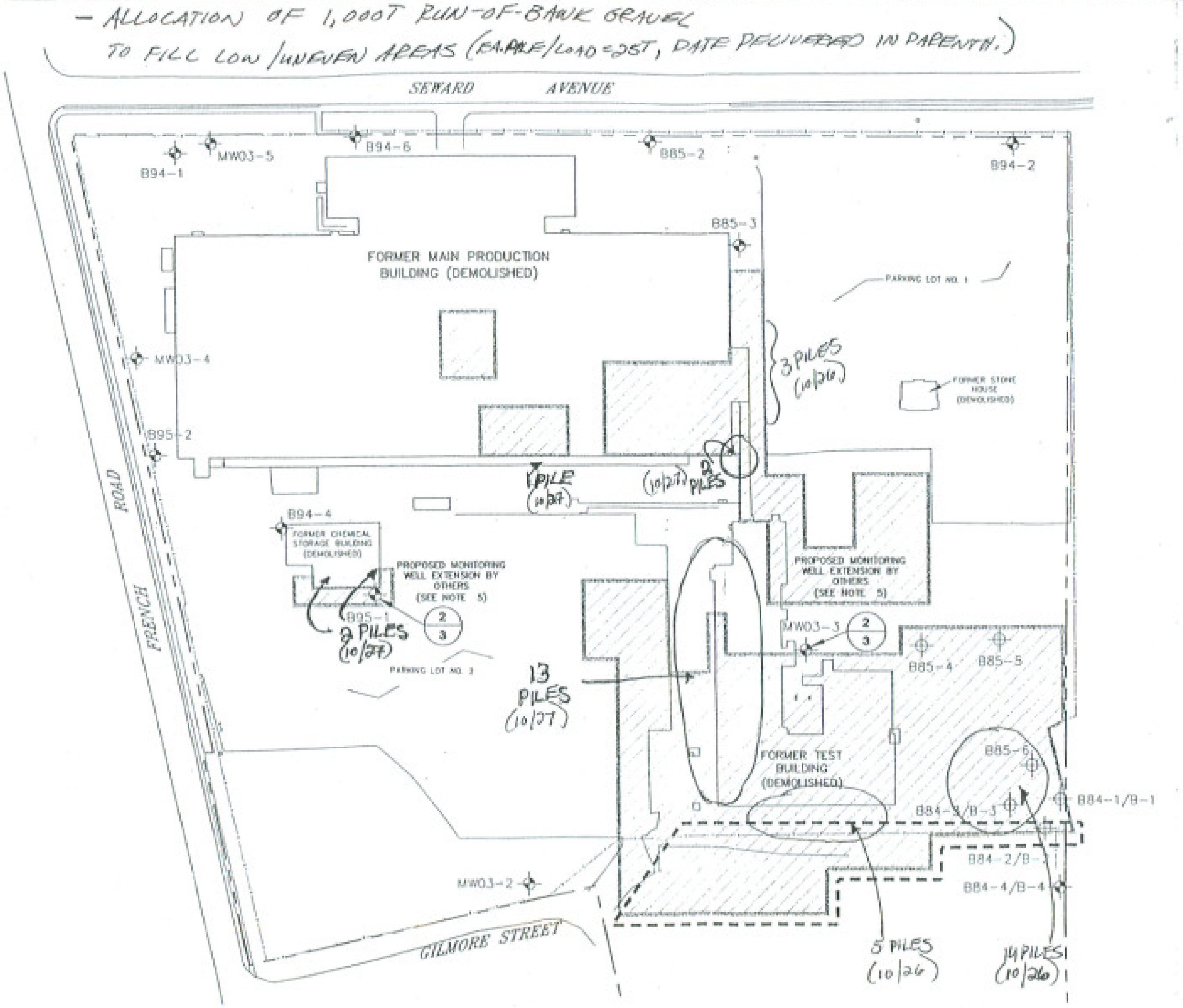
- Review cost estimate from Royal for additional grading of site to promote future brush-hog mowing.
- Grade stockpiled material to fill in uneven areas and depressions before construction of the barrier layer.
- Review cost estimate for installation of new fence at the corner of Gilmore Street and Lyons Place and implement installation.
- Complete tree clearing, grubbing, and chipping.
- Begin construction of barrier layer.

❖ **Potential Impacts to Schedule**

- Not Applicable

❖ **Resolutions to Potential Impacts to Schedule**

- Not Applicable.



LEGEND:

- B85-5 — PERMANENT MONITORING WELL TO BE ABANDONED BY OTHERS
- MW03-3 — PERMANENT MONITORING WELL TO REMAIN
- ANTICIPATED AREA OF BARRIER LAYER
- APPROXIMATE AREA OF ANTICIPATED TREE CLEARING
- PROPERTY LINE
- FENCE

NOTES:

1. UNLESS OTHERWISE INDICATED, MAPPING IS BASED ON SURVEYS PERFORMED BY BLASLAND, BOUCK & LEE, INC.(BBL), MARCH 19, 2003 TO JUNE 28, 2004.
2. PROPERTY LINES, AND ROADWAYS ARE ADAPTED FROM A DRAWING ENTITLED "SITE LAYOUT MAP SHOWING AREAS OF CONCERN", FIGURE 1-1, BY ENVIRONMENTAL RESOURCE MANAGEMENT, INC. (ERM), EXTON, PA., AT A SCALE OF 1" = 40', DATED AUGUST 27, 2002.
3. PROPOSED BARRIER LAYER THICKNESS IS 12-INCHES MINIMUM. ADDITIONAL FILL MATERIAL WILL BE PLACED AS APPROPRIATE TO FILL DEPRESSIONS REMAINING FROM PREVIOUS EXCAVATION ACTIVITIES AND TO PROMOTE DRAINAGE.
4. RUN-OF-BANK GRAVEL AND TOPSOIL WILL BE PLACED AROUND THE PERIMETER OF THE BARRIER LAYER AREAS TO PROVIDE A GRADUAL TRANSITION TO THE SURROUNDING LINES AND GRADES.
5. HEIGHT OF MONITORING WELL EXTENSION TO BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION.

Graphic Scale: 0 — 50' — 100' GRAPHIC SCALE

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No.	Date	Revisions	Init.

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Professional Engineer's Name: DAVID R. GERBER
Professional Engineer's No.: 073001
State: NY | Date Signed:
Project Mgr.: JCB | Designed by: CSA | Drawn by: RCB

BBL — BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE, UTICA, NEW YORK
INTERIM CORRECTIVE MEASURE BARRIER LAYER CONSTRUCTION

ANTICIPATED BARRIER LAYER LIMITS

GENERAL

BBL Project No. 371.13
Date: AUGUST 2005

Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

FIGURE 2

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

Weekly Activity Report

PROJECT	**Lucas Western LLC** **Former TRW Aeronautical Systems Facility** **Utica, NY** **ICM Barrier Layer Construction** **Project Oversight**	**Week #8: 10/31/05 to 11/05/05** **File No.: 2253.37117.010 #5** **Date Submitted: 11/10/05**
Contractors on site: Royal Environmental		Observer: Andrew Enigk, BBL

Activities, Remarks

❖ **Activities Completed this Week:**

- Royal completed preliminary grading activities (using run-of-bank gravel delivered during Week #7) to level uneven areas and fill depressions prior to installation of the one-foot thick barrier layer. BBL observed grading activities.
- BBL assigned numbers to each barrier layer area to simplify identification (see first attached map for barrier layer area numbers).
- Royal cleared trees in southern portion of Area 5 to facilitate construction of the barrier layer.
- Royal completed the placement and grading of 9 inches of run-of-bank gravel in all of Areas 1 and 2 and in part of Areas 3 and 5 (see second attached map for barrier layer construction progress).
- Royal placed and graded 3 inches of topsoil in the eastern portion of Area 5.
- BBL conducted airborne monitoring for particulate (dust) during grading activities, except in wet conditions.
- Barrier layer construction near the corner of Gilmore Street and Lyons Place was deferred until new chain-link fence is installed.
- BBL reviewed Royal's proposal for additional fill placement/site grading to facilitate future brush-hog mowing.

❖ **Activities Planned for Next Week**

- Install new fence at the corner of Gilmore Street and Lyons Place following proposal submittal and approval.
- Complete tree clearing, grubbing, and chipping.
- Complete barrier layer construction.
- Begin additional fill placement/site grading to promote future brush-hog mowing.

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❖ **Potential Impacts to Schedule**

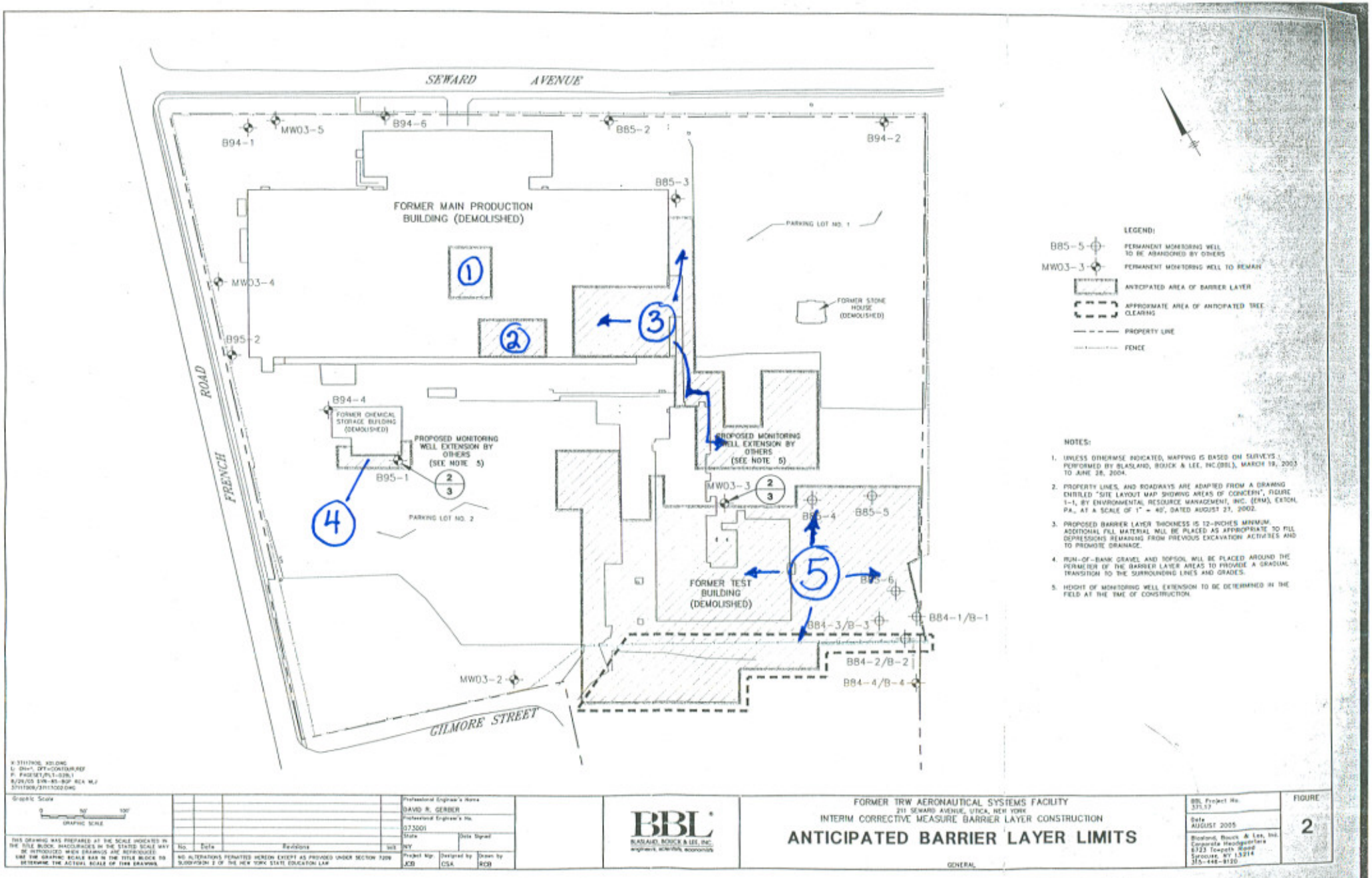
- Not Applicable

❖ **Resolutions to Potential Impacts to Schedule**

- Not Applicable.

NUMBERING OF BARRIER LAYER LOCATIONS

①-⑤



Graphic Scale 0 50' 100' GRAPHIC SCALE

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Professional Engineer's Name: DAVID R. GERBER
Professional Engineer's No.: 073001
State: NY
Date Signed:
Project Mgr.: JOB
Designed by: CSA
Drawn by: RCH

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE, UTICA, NEW YORK
INTERIM CORRECTIVE MEASURE BARRIER LAYER CONSTRUCTION

ANTICIPATED BARRIER LAYER LIMITS

GENERAL

BBL Project No.: 371.57
Date: AUGUST 2005

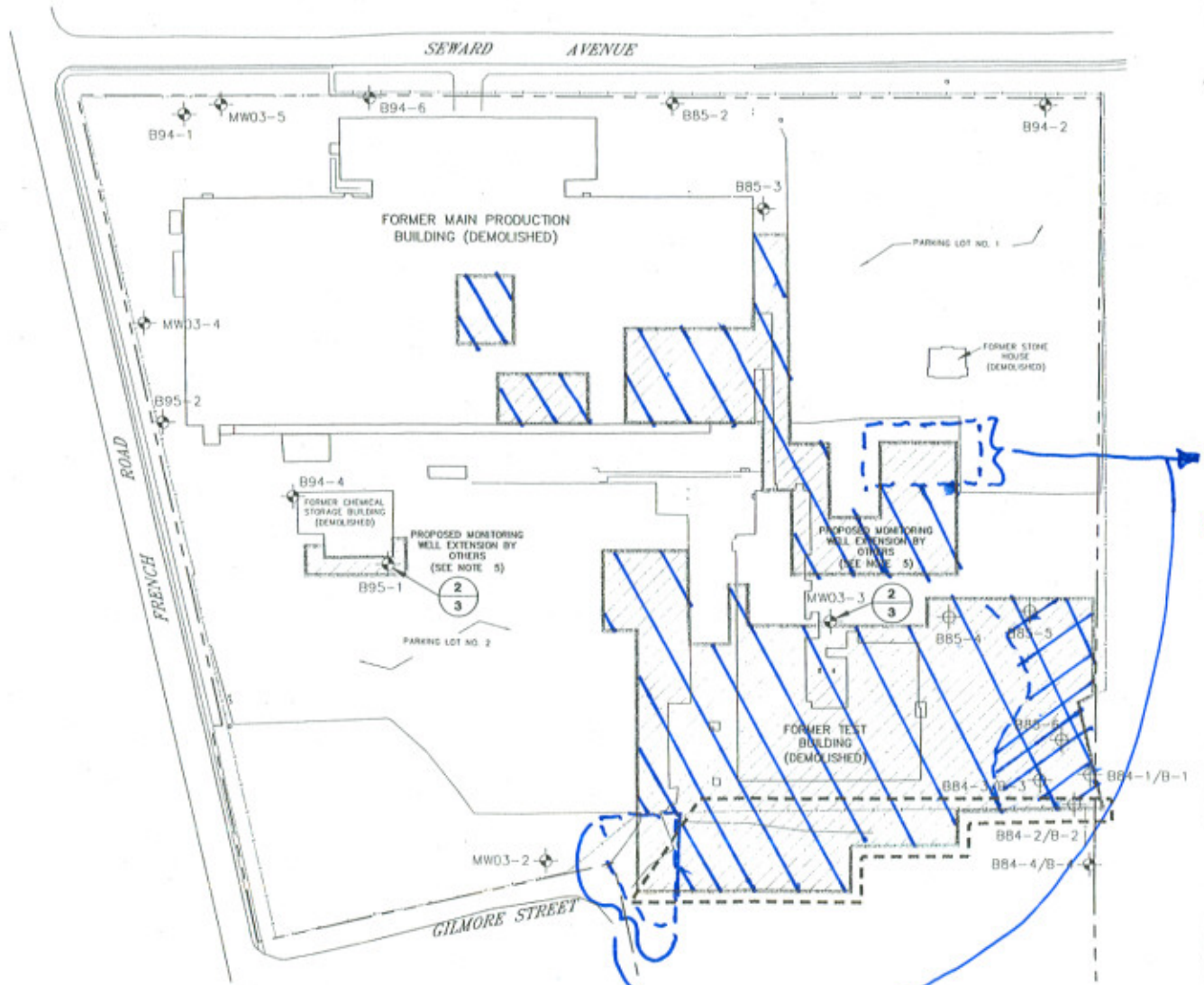
Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

FIGURE 2

CONSTRUCTION OF BARRIER LAYERS

9" RUN-OF-BANK GRAVEL LOCATION COMPLETED

3" OF TOPSOIL & 9" RUN-OF-BANK GRAVEL COMPLETED } AS OF 11/05/05



AREAS WITH NO 9" LAYER OF RUN-OF-BANK GRAVEL AS OF 11/05/05.

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Professional Engineer's Name: DAVID R. GERBER
Professional Engineer's No.: 073001
State Signed: NY
Project Mgr.: JOB
Designed by: CSA
Drawn by: RDB

BBL BLASLAND, BOUCK & LEE, INC. engineers scientists economists

FORMER TRW AERONAUTICAL SYSTEMS FACILITY
251 SEWARD AVENUE, UTICA, NEW YORK
INTERIM CORRECTIVE MEASURE BARRIER LAYER CONSTRUCTION

ANTICIPATED BARRIER LAYER LIMITS

GENERAL

BBL Project No.: 371.17
Date: AUGUST 2005
Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120

FIGURE 2

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

Weekly Activity Report

PROJECT	**Lucas Western LLC** **Former TRW Aeronautical Systems Facility** **Utica, NY** **ICM Barrier Layer Construction** **Project Oversight**	**Week #9: 11/07/05 to 11/11/05** **File No.: 2253.37117.010 #5** **Date Submitted: 11/11/05**
Contractors on site: Royal Environmental		Observer: Andrew Enigk, BBL

Activities, Remarks

❖ **Activities Completed this Week:**

- Royal completed the placement and grading of 9 inches of run-of-bank gravel in all of Areas 3 and 4 (see attached map for barrier layer construction progress). Run-of-bank gravel fill placement is complete, except for near the intersection of Gilmore Street and Lyon Place (where fence removal and replacement is needed).
- Royal completed the placement and grading of 3 inches of topsoil in all of Areas 1, 2, and 5 and in part of Area 3 (refer to the attached map). Topsoil placement is complete, except for in Area 4 and a small portion of Areas 3 and 5.
- BBL conducted airborne monitoring for particulate (dust) during grading activities, except in wet conditions.
- Royal received approval to proceed with the additional fill placement/site grading to promote future brush-hog mowing. Royal agreed to proceed on Monday, 11/14/05.
- Royal mowed the lawn area on the outside of the chain-link fence adjacent to French Road and Seward Avenue.

❖ **Activities Planned for Next Week**

- Install new fence at the corner of Gilmore Street and Lyons Place following proposal submittal and approval.
- Complete tree clearing, grubbing, and chipping.
- Complete barrier layer construction in vicinity of new fence.
- Complete additional fill placement/site grading to promote future brush-hog mowing.
- Demobilize bull dozer, equipment trailer, and site trailer.

❖ **Potential Impacts to Schedule**

- Barrier layer construction activities were delayed due to weather conditions on 11/9/05 and 11/10/05.

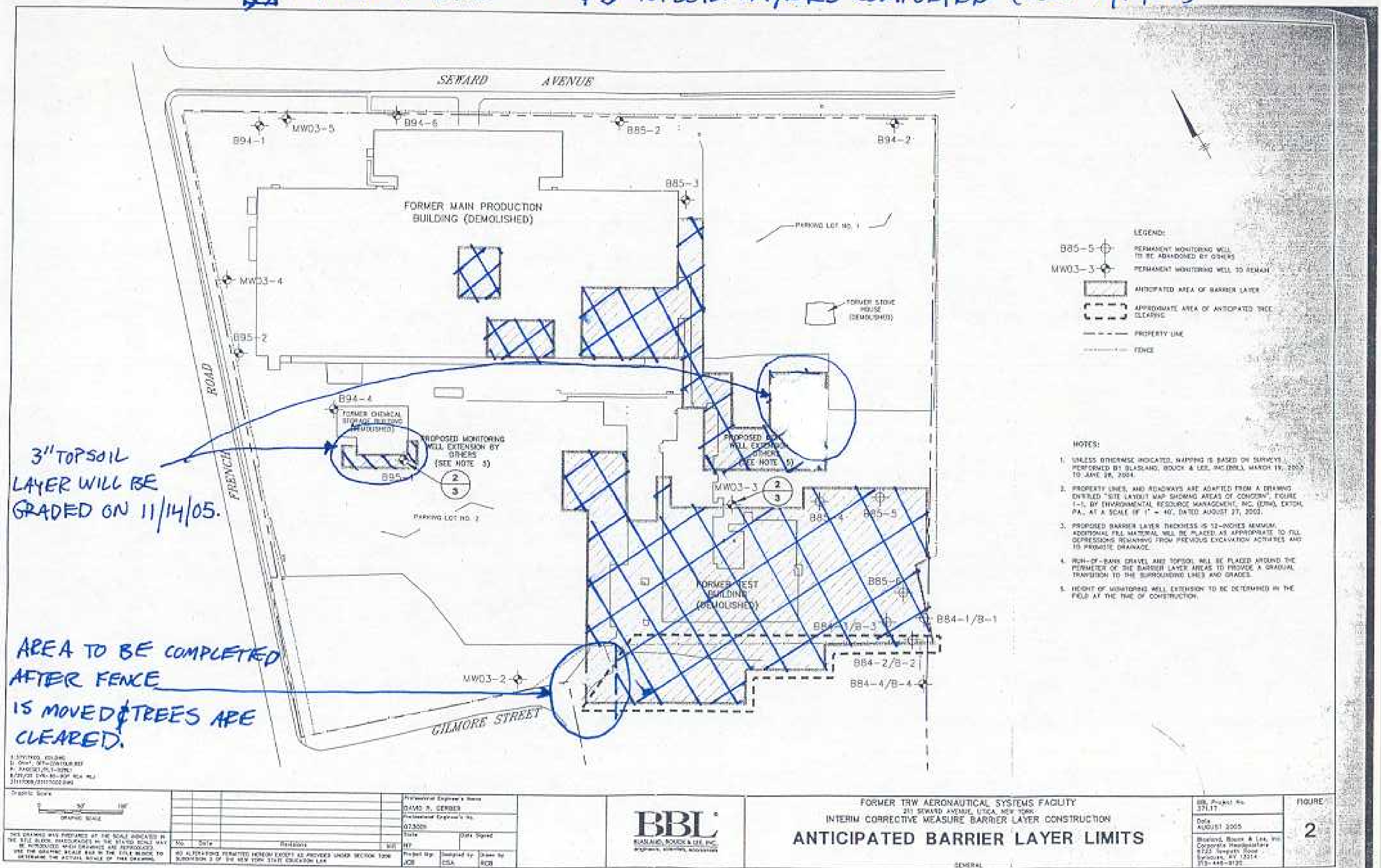
❖ **Resolutions to Potential Impacts to Schedule**

- Work will continue next week, weather permitting.

CONSTRUCTION OF BARRIER LAYERS

9" RUN-OF-BANK GRAVEL LOCATION COMPLETED

9" RUN-OF-BANK " & 3" TOPSOIL LAYERS COMPLETED (AS OF 11/11/05)



BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

Weekly Activity Report

PROJECT		
	Lucas Western LLC **Former TRW Aeronautical Systems Facility** **Utica, NY** **ICM Barrier Layer Construction** **Project Oversight**	**Week #10: 11/14/05 to 11/18/05** **File No.: 2253.37117.010 #5** **Date Submitted: 12/08/05**
Contractors on site: Royal Environmental		Observer: Andrew Enigk, BBL

Activities, Remarks

❖ **Activities Completed this Week:**

- Royal removed the existing chain-link fencing near the intersection of Gilmore Street and Lyon Place and installed new, replacement fencing as shown on Figure 2 of the September 12, 2005 Response to NYSDEC Comments on the ICM Barrier Layer Construction Work Plan.
- Remaining trees in the designated clearing and grubbing area were cut even with grade. Limbs were removed and staged for chipping and logs were separated for future removal from the Site.
- Royal completed construction of the barrier layer, with the exception of seeding and mulching.
- BBL conducted airborne monitoring for particulate (dust) during grading activities, except in wet conditions.
- Royal graded additional run-of-bank gravel (approximately 1,000 tons) to promote future brush-hog mowing outside the barrier layer limits. Topsoil was stockpiled over the newly graded run-of-bank gravel-covered areas for grading on 11/20/05.

❖ **Activities Planned for Next Week**

- Complete chipping and offsite transportation of cut trees.
- Complete additional topsoil placement/site grading on areas where additional fill was placed to promote future brush-hog mowing.
- Demobilize bulldozer, equipment trailer, and site trailer.

❖ **Potential Impacts to Schedule**

- Not Applicable.

❖ **Resolutions to Potential Impacts to Schedule**

- Not Applicable.

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engineers, scientists, economists

Weekly Activity Report

PROJECT	**Lucas Western LLC** **Former TRW Aeronautical Systems Facility** **Utica, NY** **ICM Barrier Layer Construction** **Project Oversight**	**Week #11: 11/21/05 to 11/25/05** **File No.: 2253.37117.010 #5** **Date Submitted: 12/08/05**
Contractors on site: Royal Environmental		Observer: Andrew Enigk, BBL

Activities, Remarks

❖ **Activities Completed this Week:**

- Royal graded additional topsoil (approximately 270 cubic yards) on areas where additional run-of-bank gravel was placed to promote future brush-hog mowing.
- BBL conducted airborne monitoring for particulate (dust) during grading activities, except in wet conditions.
- Royal demobilized the bulldozer.

❖ **Activities Planned for Next Week**

- Complete chipping and offsite transportation of cut trees.
- Demobilize equipment trailer and site trailer.
- Seed and mulch all areas where fill was placed.

❖ **Potential Impacts to Schedule**

- Not Applicable.

❖ **Resolutions to Potential Impacts to Schedule**

- Not Applicable.

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

Weekly Activity Report

PROJECT	**Lucas Western LLC** **Former TRW Aeronautical Systems Facility** **Utica, NY** **ICM Barrier Layer Construction** **Project Oversight**	**Week #12: 11/28/05 to 12/02/05** **File No.: 2253.37117.010 #5** **Date Submitted: 12/08/05**
Contractors on site: Royal Environmental		Observer: Andrew Enigk, BBL

Activities, Remarks

❖ **Activities Completed this Week:**

- Royal completed seeding and mulching of the barrier layer areas (and the other areas where grading/fill placement occurred to promote future brush-hog mowing).
- Royal completed chipping of the small trees and limbs of large trees removed from the barrier layer areas.

❖ **Activities Planned for Next Week**

- Offsite transportation of remaining cut, de-limbed trees.
- Demobilize equipment trailer/site trailer.

❖ **Potential Impacts to Schedule**

- Not Applicable.

❖ **Resolutions to Potential Impacts to Schedule**

- Not Applicable.

Appendix C

Photo Log

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PHOTO LOG

ICM BARRIER LAYER CONSTRUCTION CERTIFICATION REPORT
FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE
UTICA, NEW YORK

Modification and Decommissioning of Monitoring Wells
Looking north from Former Test Building location on 9/12/05

Modification and Decommissioning of Monitoring Wells
Looking north from Former Test Building location on 9/13/05

Erosion and Sedime ntation Control Measures
Looking north from Parking Lot No. 2 on 9/27/05

Erosion and Sedimentation Control Measures
Looking east from Former Main Production Building location on 9/27/05

Tree/Brush Clearing
Looking northwest from Parking Lot No. 2 on 10/10/05

Tree/Brush Clearing
Looking northeast from Parking Lot No. 2 on 10/11/05

Tree/Brush Clearing
Looking southeast from Parking Lot No. 2 on 9/30/05

Tree/Brush Clearing
Looking east from Parking Lot No. 3 on 11/2/05

Pre-Qualification of Alternate Fill Source
Run-of-bank gravel at Burrow's Trucking and Excavating Pit on 10/4/05

Pre-Qualification of Alternate Fill Source
Topsoil at Burrow's Trucking and Excavating Pit on 10/4/05

Placement/Grading/Compaction of Run-of-Bank Gravel to Fill Depressions
Looking east from Parking Lot No. 2 on 10/26/05

Placement/Grading/Compaction of Run-of-Bank Gravel to Fill Depressions
Looking east from Parking Lot No. 2 on 10/31/05

Placement of 9-Inch Minimum-Thickness Run-of-Bank Gravel Layer
Looking north from Parking Lot No. 2 on 11/1/05

Placement of 9-Inch Minimum-Thickness Run-of-Bank Gravel Layer
Looking east from Parking Lot No. 2 on 11/2/05

Placement of 9-Inch Minimum-Thickness Run-of-Bank Gravel Layer
Looking west from Parking Lot No. 1 on 11/1/05

Placement of 9-Inch Minimum-Thickness Run-of-Bank Gravel Layer
Looking east from Parking Lot No. 2 on 11/3/05

Placement of 3-Inch Minimum-Thickness Topsoil Layer
Looking south from between Former Test Building location and Parking Lot No. 1 on 11/705

Placement of 3-Inch Minimum-Thickness Topsoil Layer
Looking south from between Former Test Building location and Parking Lot No. 1 on 11/7/05

Chain-Link Fence Installation
Looking south from Parking Lot No. 2 on 11/18/05

Chain-Link Fence Installation
Looking south from Former Test Building location on 11/21/05

Barrier Layer Construction Activities Completed
Looking northeast from Parking Lot No. 2 on 11/21/05

Barrier Layer Construction Activities Completed
Looking east from Parking Lot No. 2 on 11/8/05

Appendix D

Validated Analytical Data Report

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DATA REVIEW FOR

TRW
UTICA, SEWARD AVENUE

SDG# 5J05155

VOLATILE, SEMIVOLATILE,
PCB AND METALS ANALYSES

Analyses performed by:

Severn Trent Laboratories, Inc.
North Canton, Ohio

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the data package for sample delivery group (SDG) # 5J05155for sampling at the TRW Inc, Utica NY site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis				
				VOA	SVOC	PCB	MET	MISC[3]
TS-3	A5J050155-001	soil	10/04/05	x	x	x	x	x
RB-3	A5J050155-002	soil	10/04/05	x	x	x	x	x
RB-4[1]	A5J050155-003	soil	10/04/05	x	x	x	x	x
DUP-2[2]	A5J050155-0044	soil	10/04/05	x	x	x	x	x

1 MS/MSD analyses performed on sample.
2 Field duplicate of sample location RB-3.
3 Miscellaneous parameters include Total Cyanide and pH.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

Introduction

Analyses were performed according to United Stated Environmental Protection Agency (USEPA) SW-846 Method 8260 as referenced in NYSDEC-ASP.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

ND The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

NDJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding time for volatile analyses under NYSASP is 10 days from sample receipt. The technical holding time for soils is 14 days from sample collection.

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, field, and 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 contamination of samples during shipment. Field and rinse blanks measure contamination of samples during field operations.

Several compounds were detected in the associated blanks. Sample results which were below the blank action level were qualified as non-detect for carbon disulfide and methylene chloride associated with sample locations RB-4 and DUP-2, 1,2-dichlorobenzene, 1,3-dichlorobenzene and 1,2,4-trichlorobenzene associated with sample location DUP-2, acetone associated with sample location RB-3 and methylene chloride associated with sample locations RB-3 and TS-3.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

4. Calibration

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

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows two outliers. A technical review of the data applies limits to all compounds with no exceptions.

The %RSD was within the 30% control limit for all initial calibrations.

4.2 Continuing Calibration

The method species percent drift (%D) criteria for select compounds only. A technical review applies limits to all compounds with no exceptions.

The continuing calibration %D was within 25% of the initial calibration for all compounds with the exception of the following. Sample results were qualified as estimated associated with sample locations:

- Dichlorodifluoromethane: RB-4, DUP-2
- Trichlofluoromethane, 4-methyl-2-pentanone: TS-3, RB-3

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

All internal standard responses and retention times were within established limits.

7. Compound Identification

Compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD data are used to assess the precision and accuracy of the analytical method.

The MS/MSD exhibited acceptable recoveries.

9. Laboratory Control Sample (LCS)

All LCS recoveries were within control limits.

10. Field Duplicates

Results for duplicate samples are summarized as follows:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
RB-3 / DUP-2	1,4-dichlorobenzene	ND (5.7)	0.42J	AC

ND = Not detected.
AC = The field duplicate RPD is acceptable when the RPD between parent sample and field duplicate sample is less than two times the RL and where the parent sample and/or duplicate concentration is less than five times the RL.

The field duplicate RPD are acceptable.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checklist

Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Was one or more surrogate recoveries outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 20			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of 10			
Blanks			
Is a method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every twelve hours for each system used?	X		
Do any method/instrument blanks have positive results?	X		
Are there trip/rinse blanks associated with every sample?		X	
Do any trip/rinse blanks have positive results?			X

	YES	NO	NA
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for BFB?	X		
Are the bar graph spectrum and mass/charge listing provided for each BFB?	X		
Has a BFB been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of ≥10% also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?	X		
Are the mass spectra for the tentatively identified compounds and their associated "best match" present?			X
Are any target compounds listed as TICs?		X	
Are all ions present in the reference mass spectrum with a relative intensity ≥10% also present in the sample mass spectrum?	X		
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and RICs present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are initial calibration forms present for each instrument used?	X		

	YES	NO	NA
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs ≥ minimum requirements?	X		
Are there any transcription/calculation errors in the reported RRFs or RSDs?		X	
Continuing Calibration			
Are continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in the reported RF or %D?		X	
Internal Standards			
Are the internal standard areas of every sample and blank within the upper and lower control limits?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Volatile Qualifier Summary
Holding Time, Surrogates, Internal Standards

Sample ID	Holding Time*	Surrogates*				Internal Standards*		
		DBF	TOL	BFB	DCE	FBZ	CBZ	DCB
TS-3								
RB-3								
RB-4								
DUP-2								

Surrogates:
DBF Dibromofluoromethane
TOL Toluene-d8
BFB Bromofluorobenzene
DCE 1,2-Dichloroethane-d4

Internal Standards:
FBZ Fluorobenzene
CBZ Chlorobenzene-d5
DCB 1,4-Dichlorobenzene-d4

Qualifiers:
D Diluted
↑ Recovery high
↓ Recovery low
↓↓ Recovery <25%

* Unless otherwise specified, all parameters are within acceptable limits.

SEMI-VOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

Introduction

Analyses were performed according to USEPA SW-846 Method 8270 as referenced in the NYSDEC-ASP.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

ND The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

NDJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for semivolatile analysis under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

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

Bis(2-ethylhexyl)phthalate was detected in the method blank. Sample results which were below the blank action level were qualified as non-detect for the listed compound associated with sample locations TS-3, RB-3, RB-4 and DUP-2.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

4. Calibration

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

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows four outliers. A technical review of the data applies limits to all compounds with no exceptions.

The %RSD was above 30% for 2,4-dinitrophenol. Sample results for the listed compound were qualified as estimated based on the deviation.

4.2 Continuing Calibration

The responses for all target compounds in the continuing calibration standards were within 25% difference (%D) of the initial calibration with the exception of hexachlorocyclopentadiene. Sample results for the listed compound were qualified as estimated based on the %D.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

All surrogates exhibited acceptable recoveries.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

All internal standard responses and retention times were within established limits.

7. Compound Identification

Compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. MS/MSD

MS/MSD data are used to assess the precision and accuracy of the analytical method.

The MS/MSD exhibited acceptable recoveries.

9. LCS

The LCS exhibited acceptable recoveries.

10. Field Duplicate

Results for duplicate samples are summarized as follows:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
RB-3 / DUP-2	All compounds	ND	ND	AC

ND = Not detected.
AC = The field duplicate RPD is acceptable when the RPD between parent sample and field duplicate sample is less than two times the RL and where the parent sample and/or duplicate concentration is less than five times the RL.

The field duplicate RPD are acceptable.

11. System Performance and Overall Assessment

Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checklists

Semivolatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Were two or more base-neutral or acid surrogate recoveries outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency	X		
How many spike recoveries were outside of QC limits?			
0 out of 11			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of 22			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each system used?	X		
Do any method blanks have positive results?		X	
Do any field/rinse blanks have positive results?			X
Are field/rinse blanks associated with every sample?		X	

	YES	NO	NA
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for DFTPP?	X		
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X		
Has a DFTPP been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?	X		
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X		
Are any target compounds listed as TICs?		X	
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
Do the TIC and "best match" spectrum agree within 20%?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present			

	YES	NO	NA
for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?		X	
Are the average RRF ≥ minimum requirements?	X		
Are there any transcription/calculation error in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Semivolatile Qualifier Summary
Holding Time, Surrogates, Internal Standards

Sample ID	Holding Time*	Surrogates*						Internal Standards*					
		2FP	PHL	NBZ	FBP	TBP	TPH	DCB	NPT	ANT	PHN	CRY	PRY
TS-3													
RB-3													
RB-4													
DUP-2													

Surrogates:
NBZ Nitrobenzene-d5
FBP 2-Fluorobiphenyl
TPH Terphenyl-d14
PHL Phenol-d6
2FP 2-Fluorophenol
TBP 2,4,6-Tribromophenol

Internal Standards:
DCB 1,4-Dichlorobenzene-d4
NPT Naphthalene-d8
ANT Acenaphthene-d10
PHN Phenanthrene-d10
CRY Chrysene-d12
PRY Perylene-d12

Qualifiers:
D Diluted
↓ Recovery low
↑ Recovery high
na not applicable
↓↓ Response <25%

* Unless otherwise specified, all parameters are within acceptable limits.

POLYCHLORINATED BIPHENYLS (PCBs) AND PESTICIDES ANALYSES

Introduction

Analyses were performed according to USEPA SW-846 Methods 8082 and 8081 as referenced in NYSDEC-ASP.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission. During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

ND The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

C Identification confirmed by GC/MS.

NDJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for PCB and Pesticides analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with the specified holding time.

2. Blank Contamination

Quality assurance 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 contamination of samples during field operations.

No Aroclors were detected in the associated blanks.

3. System Performance

System performance and column resolution were acceptable.

4. Calibration

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

4.1 Initial Calibration

A maximum RSD of 20% is allowed. The initial calibration was within the specified limit for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15% is allowed. All continuing calibration standards were within the specified limit with the exception of endrin and methoxychlor. Sample results for the listed compounds were qualified as estimated associated with sample location TS-3.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

All surrogates exhibited acceptable recoveries.

6. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

The %D exceeded the 40% control limit for beta-BHC, 4,4'-DDT and alpha chlordane, associated with sample location TS-3. Sample results were qualified as estimated for the listed compounds in the associated sample location.

7. MS/MSD

MS/MSD data are used to assess the precision and accuracy of the analytical method independent of matrix interferences.

The MS/MSD exhibited acceptable recoveries.

8. LCS

All LCS recoveries were within control limits.

9. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
RB-3 / DUP-2 (PCB)	Aroclor 1221	ND (38)	22 J	AC
	Aroclor 1248	ND (38)	9.6 J	AC
RB-3 / DUP-2 (Pesticides)	All Compounds	ND	ND	AC

ND = Not detected.
AC = The field duplicate RPD is acceptable when the RPD between parent sample and field duplicate sample is less than two times the RL and where the parent sample and/or duplicate concentration is less than five times the RL.

The field duplicate RPD were acceptable.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checklist

PCB/Pesticide Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Were recoveries of any surrogate outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 16			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of 8			
Blanks			
Is a method blank summary form present?	X		
Has a method blank been extracted for each set of samples or for each 20 samples, whichever is more frequent?	X		
Do any method/instrument blanks have positive results?		X	
Are field/rinse blanks associated with every sample?		X	
Do any field/rinse blanks have positive results?			X

	YES	NO	NA
Calibration and GC Performance			
Are the following calibration chromatograms and data printouts present?			
peak resolution check	X		
performance evaluation mixtures (PEM)	X		
Toxaphene	X		
INDA and INDB	X		
Aroclor 1016/1260	X		
Aroclors 1221, 1232, 1242, 1248, and 1254	X		
Is a calibration summary form present and complete for each analytical sequence?	X		
Are there any transcription/calculation errors between the raw data and the forms?		X	
Are the initial calibration %RSD within acceptable limits for all analytes?	X		
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	X		
Is a continuing calibration summary form present for each PEM analyzed?	X		
Has the individual % breakdown exceeded 20% on either column for either 4,4'-DDT or Endrin?		X	
Has the combined breakdown for 4,4'-DDT and Endrin exceeded 30% on any column?		X	
Are all % difference values for all PEM analytes ≤ 20%?	X		
Are all continuing calibration summary forms present and complete for each INDA and INDB analyzed?	X		
Are %D values for all INDA and INDB compounds ≤ 15%?	X		
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	X		
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	X		
Are there any transcription/calculation errors between the raw data and the form?		X	
Are all continuing calibration standard %D within acceptable limits?		X	
Analytical Sequence			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
Are percent recoveries of the compounds used to check the efficiency of			

	YES	NO	NA
the cleanup procedure within QC limits?	X		
PCB/Pesticide Identification			
Are RT of sample compounds within the established RT windows?	X		
Were all positively identified compounds confirmed on a second column?	X		
Was GC/MS confirmation provided when required?	X		
Were there any false negatives?		X	
Compound Quantitation and Reported Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Were field duplicates submitted with the samples?	X		

PCB/Pesticide Qualifier Summary
Holding Time and Surrogates

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
TS-3			
RB-3			
RB-4			
DUP-2			

Surrogates:
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogate diluted out
↑ Recovery high
↓ Recovery low
na Not applicable

* Unless otherwise noted, all parameters are within specified limits.

METALS ANALYSES

Introduction

Analyses were performed according to USEPA SW-846 6000/7000 methods.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

Concentration (C) qualifiers:

ND The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.

B The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).

Quantitation (Q) qualifiers:

E The reported value is estimated due to the presence of interference.

M Duplicate injection precision not met.

N Spiked sample recovery not within control limits.

S Reported value was determined by the method of standard additions (MSA).

W Post-digestion spike for Furnace-AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.

* Duplicate analysis not within control limits.

\+ Correlation coefficient for MSA is less than 0.995.

Validation qualifiers:

J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

NDJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for inorganic analyses under NYSASP protocols is as follows. All holding times are measured from validated time of sample receipt (VTSR).

Metals (other than mercury)	180 days
Mercury	26 days
Cyanide	12 days

The technical holding times for inorganic analyses is as follows. All holding times are measured from date of collection.

Metals (other than mercury)	180 days
Mercury	28 days
Cyanide	14 days

All samples were analyzed within specified holding times.

2. Blank Contamination

Quality assurance 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 (including initial and continuing calibration blanks and preparation blanks) measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

A few analytes were detected in the associated blanks. Sample results which were below the blank action level were qualified as non-detect for potassium associated with sample locations RB-3, RB-4 and DUP-2.

3. Calibration

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

3.1 Initial Calibration

The correct number and type of standards were analyzed and all initial calibration verification standard recoveries were within control limits.

3.2 Continuing Calibration

All continuing calibration verification standard recoveries were within control limits.

3.3 CRDL Standard

All CRDL standard recoveries were within control limits.

3.4 ICP Interference Control Sample

All ICS recoveries were acceptable.

4. MS/Laboratory Duplicate

MS and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 MS

The MS exhibited a recovery less than the control limit for antimony and greater than the control limit for calcium. All sample results for antimony and positive sample results for calcium were qualified as estimated based on the deviations.

4.2 Laboratory Duplicate

The laboratory duplicate exhibited acceptable results.

5. Field Duplicate

Results for duplicate samples are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
RB-3 / DUP-2	Aluminum	3270	4310	27.4%
	Arsenic	3.3	3.4	3.0%
	Lead	2.3	3.0	26.4%
	Barium	15.3 B	19.4 B	AC
	Beryllium	0.16 B	0.20 B	AC
	Cadmium	ND (0.57)	0.037 B	AC
	Calcium	18700	27200	37.0%
	Chromium	4.0	5.4	29.8%
	Cobalt	3.4 B	4.1 B	AC
	Copper	11.8	16.9	35.5%
	Iron	8370	10700	24.4%
	Magnesium	4860	7480	42.4%

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
RB-3 / DUP-2	Manganese	337	391	14.8%
	Nickel	6.5	8.3	24.3%
	Thallium	ND (1.1)	0.61 B	AC
	Sodium	50.1 B	63.9 B	AC
	Vanadium	5.4 B	7.3	AC
	Zinc	28.9	38.6	28.7%

ND = Not detected.
AC = The field duplicate RPD is acceptable when the RPD between parent sample and field duplicate sample is less than two times the RL and where the parent sample and/or duplicate concentration is less than five times the RL.

The field duplicate RPD were acceptable.

6. Laboratory Control Sample (LCS)

All LCS recoveries were within control limits.

7. Serial Dilution

The serial dilution exhibited results greater than the control limits for chromium, cobalt, copper, manganese, nickel, potassium, vanadium and zinc. Sample results were qualified as estimated for the listed analytes based on the deviations.

8. Furnace QC

No furnace analyses were performed on the samples in this data set.

9. Method of Standard Additions (MSA)

No samples were analyzed following the method of standard additions.

10. General Comments

The laboratory qualifier "J" has been removed from compounds which had concentrations greater than the blank action level.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Inorganic Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Raw Data			
Is the digestion log for flame AA/ICP present?	X		
Is the digestion log for furnace AA present?			X
Is the distillation log for mercury present?	X		
Are pH values listed?			X
pH for metals analyses <2 (waters)?			X
Percent solids calculation present for soils/sediments?	X		
Are preparation dates present on sample preparation logs/bench sheets?	X		
Are the measurement read out records present for:			
ICP	X		
Flame AA			X
Furnace AA			X
Mercury	X		
Is the data legible?	X		
Is the data properly labeled?	X		
Holding Times			
Were mercury analyses performed within 28 days?	X		
Were other metal analysis performed within 6 months?	X		
Form I (Final Data)			
Are all forms complete?	X		
Are correct units indicated on Form I's?	X		
Are soil sample results for each parameter corrected for percent solids?	X		
Are all "less than IDL" values coded as "U"?		X	
Are the correct concentration qualifiers on Form 1's?	X		
Is a physical description of samples given on Form I's?		X	

	YES	NO	NA
Calibration			
Is a record of at least 2 point calibration present for ICP analysis?	X		
Is a record of 5 point calibration present for Hg analysis?	X		
Is a record of 4 point calibration present for:			
Flame AA?			X
Furnace AA?			X
Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses?	X		
Is correlation coefficient less than .995 for:			
Mercury Analysis?		X	
Atomic Absorption Analysis?			X
Form II A (Initial and Continuing Calibration Verification)			
Present and complete for all analytes?	X		
Are all calibration standards (initial and continuing) within control limits for:			
Metals (90-110%)?	X		
Hg (80-120%)?	X		
Was continuing calibration performed every 10 samples or every 2 hours?	X		
Form II B (CRDL Standards for AA and ICP)			
Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)?			X
Was a 2xCRDL (or 2xIDL when IDL>CRDL) standard (CRI) analyzed for each ICP run?	X		
Was CRI analyzed after the ICV/ICB and before the final CCV/CCB, and twice every eight hours for each ICP run?	X		
Are CRA and CRI standards within control limits for metals (60-120%)?	X		
Form III (Initial and Continuing Calibration Blanks)			
Present and complete?	X		
Was an initial calibration blank analyzed?	X		
Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?	X		
Are all calibration blanks (when IDL<CRDL) less than or equal to the Contract Required Detection Limits (CRDLs)?		X	
Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)?			X
Form III (Preparation Blank)			
Was one prep. blank analyzed for:			

	YES	NO	NA
each batch of digested samples?	X		
each matrix type?	X		
Is concentration of prep. blank value less than the CRDL (when IDL≤CRDL)?	X		
If no, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank?			X
Is concentration of prep. blank value less than two times IDL (when IDL>CRDL)?			X
Is concentration of prep. blank below the negative CRDL?		X	
Form IV (ICP Interference Check Sample)			
Present and complete?	X		
Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)?	X		
Are all ICS results inside the control limits (±20%)?	X		
If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS?			X
Form V A (Spiked Sample Recovery - Pre-Digestion/Pre-Distillation)			
Present and complete for:			
each batch?	X		
each matrix type?	X		
Was field blank used for spiked sample?		X	
Are all recoveries for analytes with sample concentrations less than four times the spike concentration within control limits (75-125)?		X	
Are results outside the control limits (75-125%) flagged with "N" on Form I's and Form VA?		X	
Aqueous			
Are any spike recoveries:			
less than 30%?			X
between 30-74%?			X
between 126-150%?			X
greater then 150%?			X
Soil/Sediment			
Are any spike recoveries:			
less than 10%?		X	
between 10-74%?	X		

	YES	NO	NA
between 126-200%?	X		
greater than 200%?		X	
Form VI (Lab Duplicates)			
Present and complete for:			
each batch?	X		
each matrix type?	X		
Was field blank used for duplicate analysis?		X	
Are all values within control limits (RPD 20% or difference ≤ ±CRDL)?	X		
If no, are all results outside the control limits flagged with an * on Form I's and VI?			X
Aqueous			
Is any RPD greater than 20% where sample and duplicate are both greater than or equal to 5 times CRDL?			X
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?			X
Soil/Sediment			
Is any RPD (where sample and duplicate are both greater than or equal to 5 times CRDL) > 100%?		X	
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5xCRDL) > 2xCRDL?		X	
Field Duplicates			
Were field duplicates analyzed?	X		
Aqueous			
is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5xCRDL?			X
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5xCRDL?			X
Soil/Sediment			
Is any RPD (where sample and duplicate are both greater than 5 times CRDL) > 100%?		X	
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x CRDL) >2xCRDL?		X	
Form VII (Laboratory Control Sample)			
Was one LCS prepared and analyzed for:			
each matrix?	X		
each batch samples digested/distilled?	X		

	YES	NO	NA
Aqueous LCS			
Is any LCS recovery:			
less than 50%?			X
between 50% and 79%?			X
between 121% and 150%?			X
greater than 150%?			X
Solid LCS			
Is LCS "Found" value higher than the control limits?		X	
Is LCS "Found" lower than the control limits?		X	
Form IX (ICP Serial Dilution)			
Was Serial Dilution analysis performed for:			
each SDG?	X		
each matrix type?	X		
Was field blank(s) used for Serial Dilution Analysis?		X	
Are results outside control limit flagged with an "E" on Form I's and Form IX when initial concentration on Form IX is equal to 50 times IDL or greater.	X		
Are any required % difference values:			
> 10%?	X		
≥100%?		X	
Furnace Atomic Absorption (AA) QC Analysis			
Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed by GFAA?			X
Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or coefficient of Variation (CV) for concentrations greater than CRDL?			X
Were dilutions analyzed for samples with analytical spike recovery less than 40%?			X
Is analytical spike recovery outside the control limits (85-115%) for any sample?			X
Form VIII (Method of Standard Addition Results)			
Present?			X
If no, is any Form I result coded with "S" or "+"?			X
Was MSA required for any sample but not performed?			X
Is the coefficient of correlation for MSA less than 0.995 for any sample?			X
Is the coefficient of correlation for MSA less than 0.990 for any sample?			X

	YES	NO	NA
Was proper quantitation procedure followed?			X
Dissolved/Total for Inorganic/Total Analytes			
Were any analyses performed for dissolved as well as total analytes on the same sample.		X	
Is the concentration of any dissolved analyte greater than its total concentration by more than 10%? (if >CRDL)			X
Is the concentration of any dissolved analyte greater than its total concentration by more than 50%?			X
Field Blank			
Is the field blank concentration less than CRDL (or 2xIDL when IDL>CRDL) for all analytes?			X
If no, was field blank value already rejected due to other QC criteria?			X
Form X, XI, XII (Verification of Instrumental Parameters)			
Is verification report present for :			
Instrument Detection Limits (quarterly)?	X		
ICP Interelement Correlation Factors (annually)?	X		
ICP Linear Ranges (quarterly)?	X		
Is IDL greater than CRDL for any analyte?		X	
If yes, are the concentrations of the samples analyzed on the instrument whose IDL exceeds CRDL, greater than 5xIDL.			X
Was any sample result higher than the linear range of ICP.		X	
Was any sample result higher than the highest calibration standard for non-ICP parameters?		X	
If yes for any of the above, was the sample diluted to obtain the result on Form I?			X
Percent Solids			
Are the percent solids in soil/sediment(s):			
< 50%?		X	
< 10%?		X	

SUPPLEMENTAL PARAMETERS

Introduction

Analyses were performed according to the following method:

Total Cyanide	SW846 9012A
pH	SW846 9045C

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

ND The analyte was analyzed for but not detected. The associated value is the analyte reporting limit.

N Spiked sample recovery not within control limits.

* Duplicate analysis not within control limits.

J The associated numerical value is an estimated concentration only.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The holding times are as follows. All holding times are measured from date of receipt.

Cyanide	14 days
pH	ASAP

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance 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 (including initial and continuing calibration blanks and preparation blanks) measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

All calibration, method and field blanks were found to be acceptable, with no analytes detected above reporting limits.

3. Calibration

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

All required initial and continuing calibration verification standard recoveries were within acceptable limits.

4. MS/Laboratory Duplicate

MS and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 MS

The MS exhibited a recovery greater than the control limit for cyanide. Positive sample results for cyanide were qualified as estimated based on the deviation.

4.2 Laboratory Duplicate

All laboratory duplicate results were within control limits.

5. Field Duplicate

Results for duplicate samples are summarized below:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
RB-3 / DUP-2	Cyanide Total	ND (0.57)	0.54 B	AC
	pH	9.0	8.9	1.1%

ND = Not detected.
AC = The field duplicate RPD is acceptable when the RPD between parent sample and field duplicate sample is less than two times the RL and where the parent sample and/or duplicate concentration is less than five times the RL.

The duplicate results are acceptable.

6. Laboratory Control Sample (LCS)

All LCS recoveries were within control limits.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Supplemental Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Raw Data			
Percent solids calculations present for soils/sediments?	X		
Are the preparation dates present on sample preparation logs/bench sheets?	X		
Are the measurement read out records present?	X		
Is the data legible?	X		
Is the data properly labeled?	X		
Holding Times			
Were all analyses performed within the specified holding times?	X		
Sample Data			
Are the units indicated on Form I's?	X		
Are soil sample results corrected for percent solids?	X		
Are all "less than IDL" values coded with "U"	X		
Calibration			
Is a record of calibration present for all applicable analyses?	X		
Is the correlation coefficient less than .995?	X		
Initial and Continuing Calibration Verification			
Summary forms present and complete for all analytes?	X		
Are all calibration standards (initial and continuing) within control limits?	X		
Initial and Continuing Calibration Blanks			
Summary forms present and complete?		X	
Was an initial calibration blank analyzed?	X		
Was a continuing calibration blank analyzed everyday or after every 10 samples?	X		
Were any target analytes present above the reporting limit in the calibration blanks?		X	
If yes, were the concentrations in all associated samples greater than 5			

	YES	NO	NA
times that in the blank?			X
Preparation Blank			
Was a preparation blank analyzed for each batch of samples?	X		
Were any target analytes detected in the preparation blanks?		X	
If so, were the concentration in all associated samples greater than 5 times that in the blank?			X
Matrix Spike			
Is a matrix spike summary form present and complete for each preparation batch and matrix type?	X		
Are all recoveries for analytes within control limits?		X	
Laboratory Duplicates			
Was a laboratory duplicate analyzed for each preparation batch and matrix type?	X		
Were all values within control limits?	X		
Field Duplicates			
Were field duplicates analyzed?	X		
Is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5 times CRDL?		X	
Is any difference between sample and duplicate greater than RL where sample and/or duplicate is less than 5 times RL?		X	
Laboratory Control Sample			
Was one LCS prepared and analyzed for each batch samples prepared and each matrix?	X		
Were all LCS recoveries within control limits?	X		
Dissolved/Total for Inorganic/Total Analytes			
Were any analyses performed for dissolved as well as total analytes on the same sample?		X	
Is the concentration of any dissolved analyte greater than its total concentration by more than 20% (or is the difference greater than RL if one or both concentrations are less than the RL)?			X
Is the concentration of any dissolved analyte greater than its total concentration by more than 100% (or greater than 2x the RL)?			X
Field Blank			
Were any analytes detected above the reporting limit in the field blank.		X	
If yes, were concentrations in all associated samples greater than 5 times the blank?		X	

Corrected Sample Analysis Data Sheets

Corrected Sample Analysis Data Sheets

Northrop Grumman Corp

Client Sample ID: TS-3

GC/MS Volatiles

Lot-Sample #...: A5J050155-001 Work Order #...: HL2QP1AC Matrix.....: SO
Date Sampled...: 10/04/05 10:10 Date Received..: 10/05/05
Prep Date.....: 10/10/05 Analysis Date..: 10/10/05
Prep Batch #...: 5284232
Dilution Factor: 1 Initial Wgt/Vol: 5 g Final Wgt/Vol..: 5 mL
% Moisture.....: 17 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	24	ug/kg
Benzene	ND	6.0	ug/kg
Bromodichloromethane	ND	6.0	ug/kg
Bromoform	ND	6.0	ug/kg
Bromomethane	ND	12	ug/kg
2-Butanone	ND	24	ug/kg
Carbon disulfide	ND	6.0	ug/kg
Carbon tetrachloride	ND	6.0	ug/kg
Chlorobenzene	ND	6.0	ug/kg
Chloroethane	ND	12	ug/kg
Chloroform	ND	6.0	ug/kg
Chloromethane	ND	12	ug/kg
Cyclohexane	ND	12	ug/kg
Dibromochloromethane	ND	6.0	ug/kg
1,2-Dibromo-3-chloro-propane	ND	12	ug/kg
1,2-Dibromoethane	ND	6.0	ug/kg
1,2-Dichlorobenzene	**0.41 J**	**6.0**	**ug/kg**
1,3-Dichlorobenzene	ND	6.0	ug/kg
1,4-Dichlorobenzene	ND	6.0	ug/kg
Dichlorodifluoromethane	ND	12	ug/kg
1,1-Dichloroethane	ND	6.0	ug/kg
1,2-Dichloroethane	ND	6.0	ug/kg
1,1-Dichloroethene	ND	6.0	ug/kg
cis-1,2-Dichloroethene	ND	3.0	ug/kg
trans-1,2-Dichloroethene	ND	3.0	ug/kg
1,2-Dichloropropane	ND	6.0	ug/kg
cis-1,3-Dichloropropene	ND	6.0	ug/kg
trans-1,3-Dichloropropene	ND	6.0	ug/kg
Ethylbenzene	ND	6.0	ug/kg
2-Hexanone	ND	24	ug/kg
Isopropylbenzene	ND	6.0	ug/kg
Methyl acetate	ND	12	ug/kg
Methylene chloride	~~5.9 J,B~~ ND	**6.0**	**ug/kg**
Methylcyclohexane	ND	12	ug/kg
4-Methyl-2-pentanone	ND J	24	ug/kg
Methyl tert-butyl ether	ND	24	ug/kg
Styrene	ND	6.0	ug/kg

(Continued on next page)

Northrop Grumman Corp

Client Sample ID: TS-3

GC/MS Volatiles

Lot-Sample #...: A5J050155-001 Work Order #...: HL2QP1AC Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	6.0	ug/kg
Tetrachloroethene	ND	6.0	ug/kg
Toluene	ND	6.0	ug/kg
1,2,4-Trichloro-benzene	1.2 J	6.0	ug/kg
1,1,1-Trichloroethane	ND	6.0	ug/kg
1,1,2-Trichloroethane	ND	6.0	ug/kg
Trichloroethene	ND	6.0	ug/kg
Trichlorofluoromethane	ND J	12	ug/kg
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	6.0	ug/kg
Vinyl chloride	ND	12	ug/kg
Xylenes (total)	ND	6.0	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(59 - 138)
1,2-Dichloroethane-d4	107	(61 - 130)
Toluene-d8	106	(60 - 143)
4-Bromofluorobenzene	88	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northrop Grumman Corp

TS-3

GC/MS Volatiles

Lot-Sample #: A5J050155-001 Work Order #: HL2QP1AC Matrix: SO

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

Northrop Grumman Corp

Client Sample ID: RB-3

GC/MS Volatiles

Lot-Sample #...: A5J050155-002 Work Order #...: HL2Q01AN Matrix.....: SO
Date Sampled...: 10/04/05 09:45 Date Received..: 10/05/05
Prep Date.....: 10/10/05 Analysis Date..: 10/10/05
Prep Batch #...: 5284232
Dilution Factor: 1 Initial Wgt/Vol: 5 g Final Wgt/Vol..: 5 mL
% Moisture.....: 12 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	~~3.8 J,B~~ ND	23	ug/kg
Benzene	ND	5.7	ug/kg
Bromodichloromethane	ND	5.7	ug/kg
Bromoform	ND	5.7	ug/kg
Bromomethane	ND	11	ug/kg
2-Butanone	ND	23	ug/kg
Carbon disulfide	ND	5.7	ug/kg
Carbon tetrachloride	ND	5.7	ug/kg
Chlorobenzene	ND	5.7	ug/kg
Chloroethane	ND	11	ug/kg
Chloroform	ND	5.7	ug/kg
Chloromethane	ND	11	ug/kg
Cyclohexane	ND	11	ug/kg
Dibromochloromethane	ND	5.7	ug/kg
1,2-Dibromo-3-chloro-propane	ND	11	ug/kg
1,2-Dibromoethane	ND	5.7	ug/kg
1,2-Dichlorobenzene	ND	5.7	ug/kg
1,3-Dichlorobenzene	ND	5.7	ug/kg
1,4-Dichlorobenzene	ND	5.7	ug/kg
Dichlorodifluoromethane	ND	11	ug/kg
1,1-Dichloroethane	ND	5.7	ug/kg
1,2-Dichloroethane	ND	5.7	ug/kg
1,1-Dichloroethene	ND	5.7	ug/kg
cis-1,2-Dichloroethene	ND	2.8	ug/kg
trans-1,2-Dichloroethene	ND	2.8	ug/kg
1,2-Dichloropropane	ND	5.7	ug/kg
cis-1,3-Dichloropropene	ND	5.7	ug/kg
trans-1,3-Dichloropropene	ND	5.7	ug/kg
Ethylbenzene	ND	5.7	ug/kg
2-Hexanone	ND	23	ug/kg
Isopropylbenzene	ND	5.7	ug/kg
Methyl acetate	ND	11	ug/kg
Methylene chloride	9.0 B ND	~~5.7~~	ug/kg
Methylcyclohexane	ND	11	ug/kg
4-Methyl-2-pentanone	ND J	23	ug/kg
Methyl tert-butyl ether	ND	23	ug/kg
Styrene	ND	5.7	ug/kg

(Continued on next page)

Northrop Grumman Corp

Client Sample ID: RB-3

GC/MS Volatiles

Lot-Sample #...: A5J050155-002 Work Order #...: HL2Q01AN Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	5.7	ug/kg
Tetrachloroethene	ND	5.7	ug/kg
Toluene	ND	5.7	ug/kg
1,2,4-Trichloro-benzene	ND	5.7	ug/kg
1,1,1-Trichloroethane	ND	5.7	ug/kg
1,1,2-Trichloroethane	ND	5.7	ug/kg
Trichloroethene	ND	5.7	ug/kg
Trichlorofluoromethane	ND J	11	ug/kg
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.7	ug/kg
Vinyl chloride	ND	11	ug/kg
Xylenes (total)	ND	5.7	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(59 - 138)
1,2-Dichloroethane-d4	102	(61 - 130)
Toluene-d8	107	(60 - 143)
4-Bromofluorobenzene	89	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northrop Grumman Corp

RB-3

GC/MS Volatiles

Lot-Sample #: A5J050155-002 Work Order #: HL2Q01AN Matrix: SO

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

Northrop Grumman Corp

Client Sample ID: RB-4

GC/MS Volatiles

Lot-Sample #...: A5J050155-003 Work Order #...: HL2Q31AN Matrix.....: SO
Date Sampled...: 10/04/05 10:00 Date Received..: 10/05/05
Prep Date.....: 10/08/05 Analysis Date..: 10/08/05
Prep Batch #...: 5284206
Dilution Factor: 1 Initial Wgt/Vol: 5 g Final Wgt/Vol..: 5 mL
% Moisture.....: 9.2 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	22	ug/kg
Benzene	ND	5.5	ug/kg
Bromodichloromethane	ND	5.5	ug/kg
Bromoform	ND	5.5	ug/kg
Bromomethane	ND	11	ug/kg
2-Butanone	ND	22	ug/kg
Carbon disulfide	~~0.31 J,B~~ ND	5.5	**ug/kg**
Carbon tetrachloride	ND	5.5	ug/kg
Chlorobenzene	ND	5.5	ug/kg
Chloroethane	ND	11	ug/kg
Chloroform	ND	5.5	ug/kg
Chloromethane	ND	11	ug/kg
Cyclohexane	ND	11	ug/kg
Dibromochloromethane	ND	5.5	ug/kg
1,2-Dibromo-3-chloro-propane	ND	11	ug/kg
1,2-Dibromoethane	ND	5.5	ug/kg
1,2-Dichlorobenzene	ND	5.5	ug/kg
1,3-Dichlorobenzene	ND	5.5	ug/kg
1,4-Dichlorobenzene	ND	5.5	ug/kg
Dichlorodifluoromethane	ND J	11	ug/kg
1,1-Dichloroethane	ND	5.5	ug/kg
1,2-Dichloroethane	ND	5.5	ug/kg
1,1-Dichloroethene	ND	5.5	ug/kg
cis-1,2-Dichloroethene	ND	2.8	ug/kg
trans-1,2-Dichloroethene	ND	2.8	ug/kg
1,2-Dichloropropane	ND	5.5	ug/kg
cis-1,3-Dichloropropene	ND	5.5	ug/kg
trans-1,3-Dichloropropene	ND	5.5	ug/kg
Ethylbenzene	ND	5.5	ug/kg
2-Hexanone	ND	22	ug/kg
Isopropylbenzene	ND	5.5	ug/kg
Methyl acetate	ND	11	ug/kg
Methylene chloride	6.0 B ND	~~5.5~~	**ug/kg**
Methylcyclohexane	ND	11	ug/kg
4-Methyl-2-pentanone	ND	22	ug/kg
Methyl tert-butyl ether	ND	22	ug/kg
Styrene	ND	5.5	ug/kg

(Continued on next page)

Northrop Grumman Corp

Client Sample ID: RB-4

GC/MS Volatiles

Lot-Sample #...: A5J050155-003 Work Order #...: HL2Q31AN Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	5.5	ug/kg
Tetrachloroethene	ND	5.5	ug/kg
Toluene	ND	5.5	ug/kg
1,2,4-Trichloro-benzene	ND	5.5	ug/kg
1,1,1-Trichloroethane	ND	5.5	ug/kg
1,1,2-Trichloroethane	ND	5.5	ug/kg
Trichloroethene	ND	5.5	ug/kg
Trichlorofluoromethane	ND	11	ug/kg
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.5	ug/kg
Vinyl chloride	ND	11	ug/kg
Xylenes (total)	ND	5.5	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(59 - 138)
1,2-Dichloroethane-d4	97	(61 - 130)
Toluene-d8	94	(60 - 143)
4-Bromofluorobenzene	81	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northrop Grumman Corp

RB-4

GC/MS Volatiles

Lot-Sample #: A5J050155-003 Work Order #: HL2Q31AN Matrix: SO

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

Northrop Grumman Corp

Client Sample ID: DUP-2

GC/MS Volatiles

Lot-Sample #...: A5J050155-004 Work Order #...: HL2RD1AN Matrix.....: SO
Date Sampled...: 10/04/05 Date Received..: 10/05/05
Prep Date.....: 10/08/05 Analysis Date..: 10/08/05
Prep Batch #...: 5284206
Dilution Factor: 1 Initial Wgt/Vol: 5 g Final Wgt/Vol..: 5 mL
% Moisture.....: 8.4 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	22	ug/kg
Benzene	ND	5.5	ug/kg
Bromodichloromethane	ND	5.5	ug/kg
Bromoform	ND	5.5	ug/kg
Bromomethane	ND	11	ug/kg
2-Butanone	ND	22	ug/kg
Carbon disulfide	~~0.30 J,B~~ ND	5.5	**ug/kg**
Carbon tetrachloride	ND	5.5	ug/kg
Chlorobenzene	ND	5.5	ug/kg
Chloroethane	ND	11	ug/kg
Chloroform	ND	5.5	ug/kg
Chloromethane	ND	11	ug/kg
Cyclohexane	ND	11	ug/kg
Dibromochloromethane	ND	5.5	ug/kg
1,2-Dibromo-3-chloro-propane	ND	11	ug/kg
1,2-Dibromoethane	ND	5.5	ug/kg
1,2-Dichlorobenzene	~~0.36 J,B~~ ND	5.5	**ug/kg**
1,3-Dichlorobenzene	~~0.35 J,B~~ ND	5.5	**ug/kg**
1,4-Dichlorobenzene	0.42 J	5.5	**ug/kg**
Dichlorodifluoromethane	ND J	11	ug/kg
1,1-Dichloroethane	ND	5.5	ug/kg
1,2-Dichloroethane	ND	5.5	ug/kg
1,1-Dichloroethene	ND	5.5	ug/kg
cis-1,2-Dichloroethene	ND	2.7	ug/kg
trans-1,2-Dichloroethene	ND	2.7	ug/kg
1,2-Dichloropropane	ND	5.5	ug/kg
cis-1,3-Dichloropropene	ND	5.5	ug/kg
trans-1,3-Dichloropropene	ND	5.5	ug/kg
Ethylbenzene	ND	5.5	ug/kg
2-Hexanone	ND	22	ug/kg
Isopropylbenzene	ND	5.5	ug/kg
Methyl acetate	ND	11	ug/kg
Methylene chloride	6.4 ~~B~~ ND	~~5.5~~	**ug/kg**
Methylcyclohexane	ND	11	ug/kg
4-Methyl-2-pentanone	ND	22	ug/kg
Methyl tert-butyl ether	ND	22	ug/kg
Styrene	ND	5.5	ug/kg

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Northrop Grumman Corp

Client Sample ID: DUP-2

GC/MS Volatiles

Lot-Sample #...: A5J050155-004 Work Order #...: HL2RD1AN Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	5.5	ug/kg
Tetrachloroethene	ND	5.5	ug/kg
Toluene	ND	5.5	ug/kg
1,2,4-Trichloro-benzene	~~1.2 J,B~~ ND	5.5	ug/kg
1,1,1-Trichloroethane	ND	5.5	ug/kg
1,1,2-Trichloroethane	ND	5.5	ug/kg
Trichloroethene	ND	5.5	ug/kg
Trichlorofluoromethane	ND	11	ug/kg
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.5	ug/kg
Vinyl chloride	ND	11	ug/kg
Xylenes (total)	ND	5.5	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(59 - 138)
1,2-Dichloroethane-d4	100	(61 - 130)
Toluene-d8	95	(60 - 143)
4-Bromofluorobenzene	83	(47 - 158)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northrop Grumman Corp

DUP-2

GC/MS Volatiles

Lot-Sample #: A5J050155-004 Work Order #: HL2RD1AN Matrix: SO

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/kg

Northrop Grumman Corp

Client Sample ID: TS-3

GC/MS Semivolatiles

Lot-Sample #...: A5J050155-001 Work Order #...: HL2QP1AD Matrix.....: SO
Date Sampled...: 10/04/05 10:10 Date Received..: 10/05/05
Prep Date.....: 10/05/05 Analysis Date..: 10/06/05
Prep Batch #...: 5278371
Dilution Factor: 1 Initial Wgt/Vol: 30.19 g Final Wgt/Vol..: 2 mL
% Moisture.....: 17 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	400	ug/kg
Acenaphthylene	ND	400	ug/kg
Acetophenone	ND	400	ug/kg
Anthracene	21 J	400	ug/kg
Atrazine	ND	400	ug/kg
Benzo(a)anthracene	75 J	400	ug/kg
Benzo(a)pyrene	61 J	400	ug/kg
Benzo(b)fluoranthene	84 J	400	ug/kg
Benzo(ghi)perylene	40 J	400	ug/kg
Benzo(k)fluoranthene	27 J	400	ug/kg
Benzaldehyde	ND	400	ug/kg
1,1'-Biphenyl	ND	400	ug/kg
bis(2-Chloroethoxy) methane	ND	400	ug/kg
bis(2-Chloroethyl)-ether	ND	400	ug/kg
bis(2-Ethylhexyl) phthalate	ND ~~31 J,B~~	400	ug/kg
4-Bromophenyl phenyl ether	ND	400	ug/kg
Butyl benzyl phthalate	ND	400	ug/kg
Caprolactam	ND	400	ug/kg
Carbazole	19 J	400	ug/kg
4-Chloroaniline	ND	400	ug/kg
4-Chloro-3-methylphenol	ND	400	ug/kg
2-Chloronaphthalene	ND	400	ug/kg
2-Chlorophenol	ND	400	ug/kg
4-Chlorophenyl phenyl ether	ND	400	ug/kg
Chrysene	74 J	400	ug/kg
Dibenz(a,h)anthracene	ND	400	ug/kg
Dibenzofuran	ND	400	ug/kg
3,3'-Dichlorobenzidine	ND	1900	ug/kg
2,4-Dichlorophenol	ND	400	ug/kg
Diethyl phthalate	ND	400	ug/kg
2,4-Dimethylphenol	ND	400	ug/kg
Dimethyl phthalate	ND	400	ug/kg
Di-n-butyl phthalate	ND	400	ug/kg

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Northrop Grumman Corp

Client Sample ID: TS-3

GC/MS Semivolatiles

Lot-Sample #...: A5J050155-001 Work Order #...: HL2QP1AD Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4,6-Dinitro-2-methylphenol	ND	1900	ug/kg
2,4-Dinitrophenol	ND J	1900	ug/kg
2,4-Dinitrotoluene	ND	400	ug/kg
2,6-Dinitrotoluene	ND	400	ug/kg
Di-n-octyl phthalate	ND	400	ug/kg
Fluoranthene	**150 J**	**400**	**ug/kg**
Fluorene	ND	400	ug/kg
Hexachlorobenzene	ND	400	ug/kg
Hexachlorobutadiene	ND	400	ug/kg
Hexachlorocyclopentadiene	ND J	1900	ug/kg
Hexachloroethane	ND	400	ug/kg
Indeno(1,2,3-cd)pyrene	**35 J**	**400**	**ug/kg**
Isophorone	ND	400	ug/kg
2-Methylnaphthalene	ND	400	ug/kg
2-Methylphenol	ND	400	ug/kg
4-Methylphenol	ND	400	ug/kg
Naphthalene	ND	400	ug/kg
2-Nitroaniline	ND	1900	ug/kg
3-Nitroaniline	ND	1900	ug/kg
4-Nitroaniline	ND	1900	ug/kg
Nitrobenzene	ND	400	ug/kg
2-Nitrophenol	ND	400	ug/kg
4-Nitrophenol	ND	1900	ug/kg
N-Nitrosodi-n-propylamine	ND	400	ug/kg
N-Nitrosodiphenylamine	ND	400	ug/kg
2,2'-oxybis(1-Chloropropane)	ND	400	ug/kg
Pentachlorophenol	ND	400	ug/kg
Phenanthrene	**110 J**	**400**	**ug/kg**
Phenol	ND	400	ug/kg
Pyrene	**120 J**	**400**	**ug/kg**
2,4,5-Trichlorophenol	ND	400	ug/kg
2,4,6-Trichlorophenol	ND	400	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	86	(42 - 110)
2-Fluorobiphenyl	79	(43 - 110)
Terphenyl-d14	69	(37 - 137)
Phenol-d5	76	(25 - 115)
2-Fluorophenol	69	(11 - 116)
2,4,6-Tribromophenol	78	(35 - 116)

(Continued on next page)

Northrop Grumman Corp

Client Sample ID: TS-3

GC/MS Semivolatiles

Lot-Sample #...: A5J050155-001 Work Order #...: HL2QP1AD Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northrop Grumman Corp

TS-3

GC/MS Semivolatiles

Lot-Sample #: A5J050155-001 Work Order #: HL2QP1AD Matrix: SO

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown Aldol Condensate		8900 JA	M	2.4486	ug/kg
Unknown		72 J	M	8.0716	ug/kg
Unknown Hydrocarbon		37 J	M	8.9764	ug/kg
Unknown		46 J	M	9.2761	ug/kg
Unknown		98 J	M	9.3583	ug/kg
Unknown		100 J	M	9.423	ug/kg
Unknown Hydrocarbon		260 J	M	10.451	ug/kg

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

Northrop Grumman Corp

Client Sample ID: RB-3

GC/MS Semivolatiles

Lot-Sample #...: A5J050155-002 Work Order #...: HL2Q01AP Matrix.....: SO
Date Sampled...: 10/04/05 09:45 Date Received..: 10/05/05
Prep Date.....: 10/05/05 Analysis Date..: 10/06/05
Prep Batch #...: 5278371
Dilution Factor: 1 Initial Wgt/Vol: 30.19 g Final Wgt/Vol..: 2 mL
% Moisture.....: 12 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	380	ug/kg
Acenaphthylene	ND	380	ug/kg
Acetophenone	ND	380	ug/kg
Anthracene	ND	380	ug/kg
Atrazine	ND	380	ug/kg
Benzo(a)anthracene	ND	380	ug/kg
Benzo(a)pyrene	ND	380	ug/kg
Benzo(b)fluoranthene	ND	380	ug/kg
Benzo(ghi)perylene	ND	380	ug/kg
Benzo(k)fluoranthene	ND	380	ug/kg
Benzaldehyde	ND	380	ug/kg
1,1'-Biphenyl	ND	380	ug/kg
bis(2-Chloroethoxy) methane	ND	380	ug/kg
bis(2-Chloroethyl)-ether	ND	380	ug/kg
bis(2-Ethylhexyl) phthalate	ND ~~31 J,B~~	**380**	**ug/kg**
4-Bromophenyl phenyl ether	ND	380	ug/kg
Butyl benzyl phthalate	ND	380	ug/kg
Caprolactam	ND	380	ug/kg
Carbazole	ND	380	ug/kg
4-Chloroaniline	ND	380	ug/kg
4-Chloro-3-methylphenol	ND	380	ug/kg
2-Chloronaphthalene	ND	380	ug/kg
2-Chlorophenol	ND	380	ug/kg
4-Chlorophenyl phenyl ether	ND	380	ug/kg
Chrysene	ND	380	ug/kg
Dibenz(a,h)anthracene	ND	380	ug/kg
Dibenzofuran	ND	380	ug/kg
3,3'-Dichlorobenzidine	ND	1800	ug/kg
2,4-Dichlorophenol	ND	380	ug/kg
Diethyl phthalate	ND	380	ug/kg
2,4-Dimethylphenol	ND	380	ug/kg
Dimethyl phthalate	ND	380	ug/kg
Di-n-butyl phthalate	ND	380	ug/kg

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Northrop Grumman Corp

Client Sample ID: RB-3

GC/MS Semivolatiles

Lot-Sample #...: A5J050155-002 Work Order #...: HL2Q01AP Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4,6-Dinitro-2-methylphenol	ND	1800	ug/kg
2,4-Dinitrophenol	ND J	1800	ug/kg
2,4-Dinitrotoluene	ND	380	ug/kg
2,6-Dinitrotoluene	ND	380	ug/kg
Di-n-octyl phthalate	ND	380	ug/kg
Fluoranthene	ND	380	ug/kg
Fluorene	ND	380	ug/kg
Hexachlorobenzene	ND	380	ug/kg
Hexachlorobutadiene	ND	380	ug/kg
Hexachlorocyclopentadiene	ND J	1800	ug/kg
Hexachloroethane	ND	380	ug/kg
Indeno(1,2,3-cd)pyrene	ND	380	ug/kg
Isophorone	ND	380	ug/kg
2-Methylnaphthalene	ND	380	ug/kg
2-Methylphenol	ND	380	ug/kg
4-Methylphenol	ND	380	ug/kg
Naphthalene	ND	380	ug/kg
2-Nitroaniline	ND	1800	ug/kg
3-Nitroaniline	ND	1800	ug/kg
4-Nitroaniline	ND	1800	ug/kg
Nitrobenzene	ND	380	ug/kg
2-Nitrophenol	ND	380	ug/kg
4-Nitrophenol	ND	1800	ug/kg
N-Nitrosodi-n-propylamine	ND	380	ug/kg
N-Nitrosodiphenylamine	ND	380	ug/kg
2,2'-oxybis(1-Chloropropane)	ND	380	ug/kg
Pentachlorophenol	ND	380	ug/kg
Phenanthrene	ND	380	ug/kg
Phenol	ND	380	ug/kg
Pyrene	ND	380	ug/kg
2,4,5-Trichlorophenol	ND	380	ug/kg
2,4,6-Trichlorophenol	ND	380	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	89	(42 - 110)
2-Fluorobiphenyl	69	(43 - 110)
Terphenyl-d14	69	(37 - 137)
Phenol-d5	74	(25 - 115)
2-Fluorophenol	70	(11 - 116)
2,4,6-Tribromophenol	71	(35 - 116)

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Northrop Grumman Corp

Client Sample ID: RB-3

GC/MS Semivolatiles

Lot-Sample #...: A5J050155-002 Work Order #...: HL2Q01AP Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northrop Grumman Corp

RB-3

GC/MS Semivolatiles

Lot-Sample #: A5J050155-002 Work Order #: HL2Q01AP Matrix: SO

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown Aldol Condensate		7500 JA	M	2.4486	ug/kg
Unknown		290 J	M	7.4311	ug/kg
Unknown		93 J	M	8.0715	ug/kg
Unknown		54 J	M	9.276	ug/kg

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

Northrop Grumman Corp

Client Sample ID: RB-4

GC/MS Semivolatiles

Lot-Sample #...: A5J050155-003 Work Order #...: HL2Q31AP Matrix.....: SO
Date Sampled...: 10/04/05 10:00 Date Received..: 10/05/05
Prep Date.....: 10/05/05 Analysis Date..: 10/06/05
Prep Batch #...: 5278371
Dilution Factor: 1 Initial Wgt/Vol: 30 g Final Wgt/Vol..: 2 mL
% Moisture.....: 9.2 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	360	ug/kg
Acenaphthylene	ND	360	ug/kg
Acetophenone	ND	360	ug/kg
Anthracene	ND	360	ug/kg
Atrazine	ND	360	ug/kg
Benzo(a)anthracene	ND	360	ug/kg
Benzo(a)pyrene	ND	360	ug/kg
Benzo(b)fluoranthene	ND	360	ug/kg
Benzo(ghi)perylene	ND	360	ug/kg
Benzo(k)fluoranthene	ND	360	ug/kg
Benzaldehyde	ND	360	ug/kg
1,1'-Biphenyl	ND	360	ug/kg
bis(2-Chloroethoxy) methane	ND	360	ug/kg
bis(2-Chloroethyl)-ether	ND	360	ug/kg
bis(2-Ethylhexyl) phthalate	ND ~~27 J,B~~	**360**	**ug/kg**
4-Bromophenyl phenyl ether	ND	360	ug/kg
Butyl benzyl phthalate	ND	360	ug/kg
Caprolactam	ND	360	ug/kg
Carbazole	ND	360	ug/kg
4-Chloroaniline	ND	360	ug/kg
4-Chloro-3-methylphenol	ND	360	ug/kg
2-Chloronaphthalene	ND	360	ug/kg
2-Chlorophenol	ND	360	ug/kg
4-Chlorophenyl phenyl ether	ND	360	ug/kg
Chrysene	ND	360	ug/kg
Dibenz(a,h)anthracene	ND	360	ug/kg
Dibenzofuran	ND	360	ug/kg
3,3'-Dichlorobenzidine	ND	1800	ug/kg
2,4-Dichlorophenol	ND	360	ug/kg
Diethyl phthalate	ND	360	ug/kg
2,4-Dimethylphenol	ND	360	ug/kg
Dimethyl phthalate	ND	360	ug/kg
Di-n-butyl phthalate	ND	360	ug/kg

(Continued on next page)

Northrop Grumman Corp

Client Sample ID: RB-4

GC/MS Semivolatiles

Lot-Sample #...: A5J050155-003 Work Order #...: HL2Q31AP Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4,6-Dinitro-2-methylphenol	ND	1800	ug/kg
2,4-Dinitrophenol	ND J	1800	ug/kg
2,4-Dinitrotoluene	ND	360	ug/kg
2,6-Dinitrotoluene	ND	360	ug/kg
Di-n-octyl phthalate	ND	360	ug/kg
Fluoranthene	ND	360	ug/kg
Fluorene	ND	360	ug/kg
Hexachlorobenzene	ND	360	ug/kg
Hexachlorobutadiene	ND	360	ug/kg
Hexachlorocyclopentadiene	ND J	1800	ug/kg
Hexachloroethane	ND	360	ug/kg
Indeno(1,2,3-cd)pyrene	ND	360	ug/kg
Isophorone	ND	360	ug/kg
2-Methylnaphthalene	ND	360	ug/kg
2-Methylphenol	ND	360	ug/kg
4-Methylphenol	ND	360	ug/kg
Naphthalene	ND	360	ug/kg
2-Nitroaniline	ND	1800	ug/kg
3-Nitroaniline	ND	1800	ug/kg
4-Nitroaniline	ND	1800	ug/kg
Nitrobenzene	ND	360	ug/kg
2-Nitrophenol	ND	360	ug/kg
4-Nitrophenol	ND	1800	ug/kg
N-Nitrosodi-n-propylamine	ND	360	ug/kg
N-Nitrosodiphenylamine	ND	360	ug/kg
2,2'-oxybis(1-Chloropropane)	ND	360	ug/kg
Pentachlorophenol	ND	360	ug/kg
Phenanthrene	ND	360	ug/kg
Phenol	ND	360	ug/kg
Pyrene	ND	360	ug/kg
2,4,5-Trichlorophenol	ND	360	ug/kg
2,4,6-Trichlorophenol	ND	360	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	80	(42 - 110)
2-Fluorobiphenyl	63	(43 - 110)
Terphenyl-d14	85	(37 - 137)
Phenol-d5	67	(25 - 115)
2-Fluorophenol	61	(11 - 116)
2,4,6-Tribromophenol	70	(35 - 116)

(Continued on next page)

Northrop Grumman Corp

Client Sample ID: RB-4

GC/MS Semivolatiles

Lot-Sample #...: A5J050155-003 Work Order #...: HL2Q31AP Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northrop Grumman Corp

RB-4

GC/MS Semivolatiles

Lot-Sample #: A5J050155-003 Work Order #: HL2Q31AP Matrix: SO

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown Aldol Condensate		8400 JA	M	2.4546	ug/kg
Unknown		32 J	M	5.8742	ug/kg
Unknown		39 J	M	8.0717	ug/kg
Unknown Hydrocarbon		29 J	M	8.9765	ug/kg
Unknown		140 J	M	9.2762	ug/kg
Unknown Hydrocarbon		44 J	M	9.6111	ug/kg
Unknown Hydrocarbon		44 J	M	9.9989	ug/kg

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

Northrop Grumman Corp

Client Sample ID: DUP-2

GC/MS Semivolatiles

Lot-Sample #...: A5J050155-004 Work Order #...: HL2RD1AP Matrix.....: SO
Date Sampled...: 10/04/05 Date Received..: 10/05/05
Prep Date.....: 10/05/05 Analysis Date..: 10/06/05
Prep Batch #...: 5278371
Dilution Factor: 1 Initial Wgt/Vol: 30.02 g Final Wgt/Vol..: 2 mL
% Moisture.....: 8.4 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	360	ug/kg
Acenaphthylene	ND	360	ug/kg
Acetophenone	ND	360	ug/kg
Anthracene	ND	360	ug/kg
Atrazine	ND	360	ug/kg
Benzo(a)anthracene	ND	360	ug/kg
Benzo(a)pyrene	ND	360	ug/kg
Benzo(b)fluoranthene	ND	360	ug/kg
Benzo(ghi)perylene	ND	360	ug/kg
Benzo(k)fluoranthene	ND	360	ug/kg
Benzaldehyde	ND	360	ug/kg
1,1'-Biphenyl	ND	360	ug/kg
bis(2-Chloroethoxy) methane	ND	360	ug/kg
bis(2-Chloroethyl)-ether	ND	360	ug/kg
bis(2-Ethylhexyl) phthalate	ND ~~26 J,B~~	**360**	**ug/kg**
4-Bromophenyl phenyl ether	ND	360	ug/kg
Butyl benzyl phthalate	ND	360	ug/kg
Caprolactam	ND	360	ug/kg
Carbazole	ND	360	ug/kg
4-Chloroaniline	ND	360	ug/kg
4-Chloro-3-methylphenol	ND	360	ug/kg
2-Chloronaphthalene	ND	360	ug/kg
2-Chlorophenol	ND	360	ug/kg
4-Chlorophenyl phenyl ether	ND	360	ug/kg
Chrysene	ND	360	ug/kg
Dibenz(a,h)anthracene	ND	360	ug/kg
Dibenzofuran	ND	360	ug/kg
3,3'-Dichlorobenzidine	ND	1700	ug/kg
2,4-Dichlorophenol	ND	360	ug/kg
Diethyl phthalate	ND	360	ug/kg
2,4-Dimethylphenol	ND	360	ug/kg
Dimethyl phthalate	ND	360	ug/kg
Di-n-butyl phthalate	ND	360	ug/kg

(Continued on next page)

Northrop Grumman Corp

Client Sample ID: DUP-2

GC/MS Semivolatiles

Lot-Sample #...: A5J050155-004 Work Order #...: HL2RD1AP Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4,6-Dinitro-2-methylphenol	ND	1700	ug/kg
2,4-Dinitrophenol	ND J	1700	ug/kg
2,4-Dinitrotoluene	ND	360	ug/kg
2,6-Dinitrotoluene	ND	360	ug/kg
Di-n-octyl phthalate	ND	360	ug/kg
Fluoranthene	ND	360	ug/kg
Fluorene	ND	360	ug/kg
Hexachlorobenzene	ND	360	ug/kg
Hexachlorobutadiene	ND	360	ug/kg
Hexachlorocyclopenta-diene	ND J	1700	ug/kg
Hexachloroethane	ND	360	ug/kg
Indeno(1,2,3-cd)pyrene	ND	360	ug/kg
Isophorone	ND	360	ug/kg
2-Methylnaphthalene	ND	360	ug/kg
2-Methylphenol	ND	360	ug/kg
4-Methylphenol	ND	360	ug/kg
Naphthalene	ND	360	ug/kg
2-Nitroaniline	ND	1700	ug/kg
3-Nitroaniline	ND	1700	ug/kg
4-Nitroaniline	ND	1700	ug/kg
Nitrobenzene	ND	360	ug/kg
2-Nitrophenol	ND	360	ug/kg
4-Nitrophenol	ND	1700	ug/kg
N-Nitrosodi-n-propyl-amine	ND	360	ug/kg
N-Nitrosodiphenylamine	ND	360	ug/kg
2,2'-oxybis(1-Chloropropane)	ND	360	ug/kg
Pentachlorophenol	ND	360	ug/kg
Phenanthrene	ND	360	ug/kg
Phenol	ND	360	ug/kg
Pyrene	ND	360	ug/kg
2,4,5-Trichloro-phenol	ND	360	ug/kg
2,4,6-Trichloro-phenol	ND	360	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	96	(42 - 110)
2-Fluorobiphenyl	76	(43 - 110)
Terphenyl-d14	93	(37 - 137)
Phenol-d5	79	(25 - 115)
2-Fluorophenol	74	(11 - 116)
2,4,6-Tribromophenol	38	(35 - 116)

(Continued on next page)

Northrop Grumman Corp

Client Sample ID: DUP-2

GC/MS Semivolatiles

Lot-Sample #...: A5J050155-004 Work Order #...: HL2RD1AP Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northrop Grumman Corp

DUP-2

GC/MS Semivolatiles

Lot-Sample #: A5J050155-004 Work Order #: HL2RD1AP Matrix: SO

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown Aldol Condensate		8700 JA	M	2.4485	ug/kg
Unknown		29 J	M	5.874	ug/kg
Unknown Hydrocarbon		33 J	M	9.2759	ug/kg

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

Northrop Grumman Corp

Client Sample ID: TS-3

GC Semivolatiles

Lot-Sample #...: A5J050155-001 Work Order #...: HL2QP1A7 Matrix.....: SO
Date Sampled...: 10/04/05 10:10 Date Received..: 10/05/05
Prep Date.....: 10/05/05 Analysis Date..: 10/12/05
Prep Batch #...: 5278409
Dilution Factor: 1 Initial Wgt/Vol: 30.13 g Final Wgt/Vol..: 10 mL
% Moisture.....: 17 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	2.0	ug/kg
beta-BHC	4.4 ~~PG~~ J	2.0	ug/kg
delta-BHC	ND	2.0	ug/kg
gamma-BHC (Lindane)	ND	2.0	ug/kg
Heptachlor	ND	2.0	ug/kg
Aldrin	ND	2.0	ug/kg
Heptachlor epoxide	ND	2.0	ug/kg
Endosulfan I	ND	2.0	ug/kg
Dieldrin	27	2.0	ug/kg
4,4'-DDE	11	2.0	ug/kg
Endrin	ND J	2.0	ug/kg
Endosulfan II	ND	2.0	ug/kg
4,4'-DDD	1.9 J	2.0	ug/kg
Endosulfan sulfate	ND	2.0	ug/kg
4,4'-DDT	6.0 ~~PG~~ J	2.0	ug/kg
Methoxychlor	ND J	4.0	ug/kg
Endrin ketone	ND	2.0	ug/kg
Endrin aldehyde	ND	2.0	ug/kg
alpha-Chlordane	16 ~~PG~~ J	2.0	ug/kg
gamma-Chlordane	5.5	2.0	ug/kg
Toxaphene	ND	81	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(31 - 131)
Decachlorobiphenyl	59	(18 - 145)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

PG The percent difference between the original and confirmation analyses is greater than 40%.

J Estimated result. Result is less than RL.

Northrop Grumman Corp

Client Sample ID: RB-3

GC Semivolatiles

Lot-Sample #...: A5J050155-002 Work Order #...: HL2Q01AJ Matrix.....: SO
Date Sampled...: 10/04/05 09:45 Date Received..: 10/05/05
Prep Date.....: 10/05/05 Analysis Date..: 10/09/05
Prep Batch #...: 5278409
Dilution Factor: 1 Initial Wgt/Vol: 30.19 g Final Wgt/Vol..: 10 mL
% Moisture.....: 12 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.9	ug/kg
beta-BHC	ND	1.9	ug/kg
delta-BHC	ND	1.9	ug/kg
gamma-BHC (Lindane)	ND	1.9	ug/kg
Heptachlor	ND	1.9	ug/kg
Aldrin	ND	1.9	ug/kg
Heptachlor epoxide	ND	1.9	ug/kg
Endosulfan I	ND	1.9	ug/kg
Dieldrin	ND	1.9	ug/kg
4,4'-DDE	ND	1.9	ug/kg
Endrin	ND	1.9	ug/kg
Endosulfan II	ND	1.9	ug/kg
4,4'-DDD	ND	1.9	ug/kg
Endosulfan sulfate	ND	1.9	ug/kg
4,4'-DDT	ND	1.9	ug/kg
Methoxychlor	ND	3.8	ug/kg
Endrin ketone	ND	1.9	ug/kg
Endrin aldehyde	ND	1.9	ug/kg
alpha-Chlordane	ND	1.9	ug/kg
gamma-Chlordane	ND	1.9	ug/kg
Toxaphene	ND	76	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	75	(31 - 131)
Decachlorobiphenyl	81	(18 - 145)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Northrop Grumman Corp

Client Sample ID: RB-4

GC Semivolatiles

Lot-Sample #...: A5J050155-003	Work Order #...: HL2Q31AJ		Matrix.....: SO
Date Sampled...: 10/04/05 10:00	Date Received..: 10/05/05		
Prep Date.....: 10/05/05	Analysis Date..: 10/09/05		
Prep Batch #...: 5278409			
Dilution Factor: 1	Initial Wgt/Vol: 30.2 g		Final Wgt/Vol..: 10 mL
% Moisture.....: 9.2	Method.....: SW846 8081A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.9	ug/kg
beta-BHC	ND	1.9	ug/kg
delta-BHC	ND	1.9	ug/kg
gamma-BHC (Lindane)	ND	1.9	ug/kg
Heptachlor	ND	1.9	ug/kg
Aldrin	ND	1.9	ug/kg
Heptachlor epoxide	ND	1.9	ug/kg
Endosulfan I	ND	1.9	ug/kg
Dieldrin	ND	1.9	ug/kg
4,4'-DDE	ND	1.9	ug/kg
Endrin	ND	1.9	ug/kg
Endosulfan II	ND	1.9	ug/kg
4,4'-DDD	ND	1.9	ug/kg
Endosulfan sulfate	ND	1.9	ug/kg
4,4'-DDT	ND	1.9	ug/kg
Methoxychlor	ND	3.6	ug/kg
Endrin ketone	ND	1.9	ug/kg
Endrin aldehyde	ND	1.9	ug/kg
alpha-Chlordane	ND	1.9	ug/kg
gamma-Chlordane	ND	1.9	ug/kg
Toxaphene	ND	74	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	87	(31 - 131)
Decachlorobiphenyl	82	(18 - 145)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Northrop Grumman Corp

Client Sample ID: DUP-2

GC Semivolatiles

Lot-Sample #...: A5J050155-004 Work Order #...: HL2RD1AJ Matrix.....: SO
Date Sampled...: 10/04/05 Date Received..: 10/05/05
Prep Date.....: 10/05/05 Analysis Date..: 10/09/05
Prep Batch #...: 5278409
Dilution Factor: 1 Initial Wgt/Vol: 30.04 g Final Wgt/Vol..: 10 mL
% Moisture.....: 8.4 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.9	ug/kg
beta-BHC	ND	1.9	ug/kg
delta-BHC	ND	1.9	ug/kg
gamma-BHC (Lindane)	ND	1.9	ug/kg
Heptachlor	ND	1.9	ug/kg
Aldrin	ND	1.9	ug/kg
Heptachlor epoxide	ND	1.9	ug/kg
Endosulfan I	ND	1.9	ug/kg
Dieldrin	ND	1.9	ug/kg
4,4'-DDE	ND	1.9	ug/kg
Endrin	ND	1.9	ug/kg
Endosulfan II	ND	1.9	ug/kg
4,4'-DDD	ND	1.9	ug/kg
Endosulfan sulfate	ND	1.9	ug/kg
4,4'-DDT	ND	1.9	ug/kg
Methoxychlor	ND	3.6	ug/kg
Endrin ketone	ND	1.9	ug/kg
Endrin aldehyde	ND	1.9	ug/kg
alpha-Chlordane	ND	1.9	ug/kg
gamma-Chlordane	ND	1.9	ug/kg
Toxaphene	ND	73	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	81	(31 - 131)
Decachlorobiphenyl	73	(18 - 145)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Northrop Grumman Corp

Client Sample ID: TS-3

GC Semivolatiles

Lot-Sample #...: A5J050155-001 Work Order #...: HL2QP1AA Matrix.....: SO
Date Sampled...: 10/04/05 10:10 Date Received..: 10/05/05
Prep Date.....: 10/05/05 Analysis Date..: 10/10/05
Prep Batch #...: 5278399
Dilution Factor: 1 Initial Wgt/Vol: 30.13 g Final Wgt/Vol..: 10 mL
% Moisture.....: 17 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	50	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	13 J	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	103	(10 - 127)
Decachlorobiphenyl	81	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Northrop Grumman Corp

Client Sample ID: RB-3

GC Semivolatiles

Lot-Sample #...: A5J050155-002	Work Order #...: HL2Q01AM	Matrix.....: SO	
Date Sampled...: 10/04/05 09:45	Date Received..: 10/05/05		
Prep Date.....: 10/05/05	Analysis Date..: 10/10/05		
Prep Batch #...: 5278399			
Dilution Factor: 1	Initial Wgt/Vol: 30.19 g	Final Wgt/Vol..: 10 mL	
% Moisture.....: 12	Method.....: SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	101	(10 - 127)
Decachlorobiphenyl	67	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Northrop Grumman Corp

Client Sample ID: RB-4

GC Semivolatiles

Lot-Sample #...: A5J050155-003	Work Order #...: HL2Q31AM	Matrix.....: SO
Date Sampled...: 10/04/05 10:00	Date Received..: 10/05/05	
Prep Date.....: 10/05/05	Analysis Date..: 10/10/05	
Prep Batch #...: 5278399		
Dilution Factor: 1	Initial Wgt/Vol: 30.2 g	Final Wgt/Vol..: 10 mL
% Moisture.....: 9.2	Method.....: SW846 8082	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	112	(10 - 127)
Decachlorobiphenyl	76	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Northrop Grumman Corp

Client Sample ID: DUP-2

GC Semivolatiles

Lot-Sample #...: A5J050155-004
Date Sampled...: 10/04/05
Prep Date.....: 10/05/05
Prep Batch #...: 5278399
Dilution Factor: 1
% Moisture.....: 8.4

Work Order #...: HL2RD1AM
Date Received..: 10/05/05
Analysis Date..: 10/11/05

Initial Wgt/Vol: 30.04 g
Method.....: SW846 8082

Matrix.....: SO

Final Wgt/Vol..: 10 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	**22 J**	**36**	**ug/kg**
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	**9.6 J**	**36**	**ug/kg**
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	127	(10 - 127)
Decachlorobiphenyl	93	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Northrop Grumman Corp

Client Sample ID: TS-3

TOTAL Metals

Lot-Sample #...: A5J050155-001
Date Sampled...: 10/04/05 10:10 Date Received..: 10/05/05
% Moisture.....: 17

Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5279034						
Aluminum	10100	24.1	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AK
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Arsenic	9.8	1.2	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AF
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Lead	24.8	0.36	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AG
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Antimony	ND J	7.2	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AL
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Barium	66.3	24.1	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AM
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Selenium	0.45 B	0.60	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AH
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Beryllium	0.53 B	0.60	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AN
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Thallium	0.82 B	1.2	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AJ
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Cadmium	0.19 B	0.60	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AP
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Calcium	4830 J J	601	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AQ
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				

(Continued on next page)

Northrop Grumman Corp

Client Sample ID: TS-3

TOTAL Metals

Lot-Sample #...: A5J050155-001 Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Chromium	13.6 ~~E~~ J	1.2	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AR
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Cobalt	10.5 ~~E~~ J	6.0	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AT
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Copper	42.4 ~~E~~ J	3.0	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AU
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Iron	25300	12.0	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AV
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Magnesium	3210 J	601	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AW
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Manganese	746 ~~J,E~~ J	1.8	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1AX
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Nickel	18.5 ~~E~~ J	4.8	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1A0
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Potassium	1020 ~~J,E~~ J	601	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1A1
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Silver	ND	1.2	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1A2
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Sodium	ND	601	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1A3
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				

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Northrop Grumman Corp

Client Sample ID: TS-3

TOTAL Metals

Lot-Sample #...: A5J050155-001 Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	15.7 ~~B~~ J	6.0	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1A4
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Zinc	58.1 ~~J,B~~ J	2.4	mg/kg	SW846 6010B	10/06-10/07/05	HL2QP1A5
		Dilution Factor: 1		Analysis Time..: 11:33	Analyst ID.....: 001637	
		Instrument ID..: I5				
Mercury	0.087 B	0.12	mg/kg	SW846 7471A	10/06/05	HL2QP1AE
		Dilution Factor: 1		Analysis Time..: 11:48	Analyst ID.....: 001619	
		Instrument ID..: H1				

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

E Matrix interference.

Northrop Grumman Corp

Client Sample ID: RB-3

TOTAL Metals

Lot-Sample #...: A5J050155-002
Date Sampled...: 10/04/05 09:45 Date Received..: 10/05/05
% Moisture.....: 12

Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5279034						
Aluminum	3270	22.8	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01AW
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Arsenic	3.3	1.1	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01AR
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Lead	2.3	0.34	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01AT
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Antimony	ND J	6.8	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01AX
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Barium	15.3 B	22.8	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01A0
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Selenium	ND	0.57	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01AU
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Beryllium	0.16 B	0.57	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01A1
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Thallium	ND	1.1	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01AV
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Cadmium	ND	0.57	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01A2
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Calcium	18700 J	569	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01A3
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				

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Northrop Grumman Corp

Client Sample ID: RB-3

TOTAL Metals

Lot-Sample #...: A5J050155-002 Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Chromium	4.0 J	1.1	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01A4
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Cobalt	3.4 B J	5.7	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01A5
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Copper	11.8 J	2.8	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01A6
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Iron	8370	11.4	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01A7
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Magnesium	4860 J	569	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01A8
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Manganese	337 J J	1.7	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01A9
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Nickel	6.5 J	4.6	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01AA
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Potassium	ND ~~518 B,J~~ J	569	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01AC
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Silver	ND	1.1	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01AD
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Sodium	50.1 B	569	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01AE
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				

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Northrop Grumman Corp

Client Sample ID: RB-3

TOTAL Metals

Lot-Sample #...: A5J050155-002

Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	5.4 B J	5.7	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01AF
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Zinc	28.9 J J	2.3	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q01AG
		Dilution Factor: 1		Analysis Time..: 11:43	Analyst ID.....: 001637	
		Instrument ID..: I5				
Mercury	ND	0.11	mg/kg	SW846 7471A	10/06/05	HL2Q01AQ
		Dilution Factor: 1		Analysis Time..: 11:41	Analyst ID.....: 001619	
		Instrument ID..: H1				

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northrop Grumman Corp

Client Sample ID: RB-4

TOTAL Metals

Lot-Sample #...: A5J050155-003
Date Sampled...: 10/04/05 10:00 Date Received..: 10/05/05
% Moisture.....: 9.2
Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5279034						
Aluminum	2900	22.0 Dilution Factor: 1 Instrument ID..: I5	mg/kg	SW846 6010B Analysis Time..: 12:01	10/06-10/07/05 Analyst ID.....: 001637	HL2Q31AW
Arsenic	2.8	1.1 Dilution Factor: 1 Instrument ID..: I5	mg/kg	SW846 6010B Analysis Time..: 12:01	10/06-10/07/05 Analyst ID.....: 001637	HL2Q31AR
Lead	2.0	0.33 Dilution Factor: 1 Instrument ID..: I5	mg/kg	SW846 6010B Analysis Time..: 12:01	10/06-10/07/05 Analyst ID.....: 001637	HL2Q31AT
Antimony	ND J	6.6 Dilution Factor: 1 Instrument ID..: I5	mg/kg	SW846 6010B Analysis Time..: 12:01	10/06-10/07/05 Analyst ID.....: 001637	HL2Q31AX
Barium	12.9 B	22.0 Dilution Factor: 1 Instrument ID..: I5	mg/kg	SW846 6010B Analysis Time..: 12:01	10/06-10/07/05 Analyst ID.....: 001637	HL2Q31A0
Selenium	ND	0.55 Dilution Factor: 1 Instrument ID..: I5	mg/kg	SW846 6010B Analysis Time..: 12:01	10/06-10/07/05 Analyst ID.....: 001637	HL2Q31AU
Beryllium	0.15 B	0.55 Dilution Factor: 1 Instrument ID..: I5	mg/kg	SW846 6010B Analysis Time..: 12:01	10/06-10/07/05 Analyst ID.....: 001637	HL2Q31A1
Thallium	ND	1.1 Dilution Factor: 1 Instrument ID..: I5	mg/kg	SW846 6010B Analysis Time..: 12:01	10/06-10/07/05 Analyst ID.....: 001637	HL2Q31AV
Cadmium	ND	0.55 Dilution Factor: 1 Instrument ID..: I5	mg/kg	SW846 6010B Analysis Time..: 12:01	10/06-10/07/05 Analyst ID.....: 001637	HL2Q31A2
Calcium	16100 J J	551 Dilution Factor: 1 Instrument ID..: I5	mg/kg	SW846 6010B Analysis Time..: 12:01	10/06-10/07/05 Analyst ID.....: 001637	HL2Q31A3

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Northrop Grumman Corp

Client Sample ID: RB-4

TOTAL Metals

Lot-Sample #...: A5J050155-003 Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Chromium	3.6 J	1.1	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q31A4
		Dilution Factor: 1		Analysis Time..: 12:01	Analyst ID.....: 001637	
		Instrument ID..: I5				
Cobalt	3.0 B J	5.5	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q31A5
		Dilution Factor: 1		Analysis Time..: 12:01	Analyst ID.....: 001637	
		Instrument ID..: I5				
Copper	9.7 J	2.8	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q31A6
		Dilution Factor: 1		Analysis Time..: 12:01	Analyst ID.....: 001637	
		Instrument ID..: I5				
Iron	7290	11.0	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q31A7
		Dilution Factor: 1		Analysis Time..: 12:01	Analyst ID.....: 001637	
		Instrument ID..: I5				
Magnesium	3430 J	551	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q31A8
		Dilution Factor: 1		Analysis Time..: 12:01	Analyst ID.....: 001637	
		Instrument ID..: I5				
Manganese	276 J J	1.7	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q31A9
		Dilution Factor: 1		Analysis Time..: 12:01	Analyst ID.....: 001637	
		Instrument ID..: I5				
Nickel	5.9 J	4.4	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q31AA
		Dilution Factor: 1		Analysis Time..: 12:01	Analyst ID.....: 001637	
		Instrument ID..: I5				
Potassium	ND ~~471 B,J~~ J	551	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q31AC
		Dilution Factor: 1		Analysis Time..: 12:01	Analyst ID.....: 001637	
		Instrument ID..: I5				
Silver	ND	1.1	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q31AD
		Dilution Factor: 1		Analysis Time..: 12:01	Analyst ID.....: 001637	
		Instrument ID..: I5				
Sodium	46.9 B	551	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q31AE
		Dilution Factor: 1		Analysis Time..: 12:01	Analyst ID.....: 001637	
		Instrument ID..: I5				

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Northrop Grumman Corp

Client Sample ID: RB-4

TOTAL Metals

Lot-Sample #...: A5J050155-003 Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	5.1 B J	5.5	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q31AF
		Dilution Factor: 1		Analysis Time..: 12:01	Analyst ID.....: 001637	
		Instrument ID..: I5				
Zinc	19.6 J J	2.2	mg/kg	SW846 6010B	10/06-10/07/05	HL2Q31AG
		Dilution Factor: 1		Analysis Time..: 12:01	Analyst ID.....: 001637	
		Instrument ID..: I5				
Mercury	ND	0.11	mg/kg	SW846 7471A	10/06/05	HL2Q31AQ
		Dilution Factor: 1		Analysis Time..: 11:42	Analyst ID.....: 001619	
		Instrument ID..: H1				

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northrop Grumman Corp

Client Sample ID: DUP-2

TOTAL Metals

Lot-Sample #...: A5J050155-004
Date Sampled...: 10/04/05 Date Received..: 10/05/05 Matrix.....: SO
% Moisture.....: 8.4

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5279034						
Aluminum	4310	21.8	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1AW
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Arsenic	3.4	1.1	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1AR
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Lead	3.0	0.33	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1AT
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Antimony	ND J	6.6	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1AX
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Barium	19.4 B	21.8	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1A0
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Selenium	ND	0.55	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1AU
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Beryllium	0.20 B	0.55	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1A1
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Thallium	0.61 B	1.1	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1AV
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Cadmium	0.037 B	0.55	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1A2
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Calcium	27200 J J	546	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1A3
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				

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Northrop Grumman Corp

Client Sample ID: DUP-2

TOTAL Metals

Lot-Sample #...: A5J050155-004 Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Chromium	5.4 J	1.1	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1A4
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Cobalt	4.1 B J	5.5	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1A5
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Copper	16.9 J	2.7	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1A6
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Iron	10700	10.9	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1A7
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Magnesium	7480 J	546	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1A8
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Manganese	391 J J	1.6	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1A9
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Nickel	8.3 J	4.4	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1AA
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Potassium	711 J (ND) J	~~546~~	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1AC
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Silver	ND	1.1	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1AD
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Sodium	63.9 B	546	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1AE
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				

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Northrop Grumman Corp

Client Sample ID: DUP-2

TOTAL Metals

Lot-Sample #...: A5J050155-004 Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	7.3 J	5.5	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1AF
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Zinc	38.6 J	2.2	mg/kg	SW846 6010B	10/06-10/07/05	HL2RD1AG
		Dilution Factor: 1		Analysis Time..: 12:14	Analyst ID.....: 001637	
		Instrument ID..: I5				
Mercury	ND	0.11	mg/kg	SW846 7471A	10/06/05	HL2RD1AQ
		Dilution Factor: 1		Analysis Time..: 11:49	Analyst ID.....: 001619	
		Instrument ID..: H1				

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northrop Grumman Corp

Client Sample ID: TS-3

General Chemistry

Lot-Sample #...: A5J050155-001 Work Order #...: HL2QP Matrix.....: SO
Date Sampled...: 10/04/05 10:10 Date Received..: 10/05/05
% Moisture.....: 17

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
pH (solid)	7.4		No Units	SW846 9045C	10/05/05	5279098
	Dilution Factor: 1					
Cyanide, Total	ND	0.60	mg/kg	SW846 9012A	10/10/05	5283334
	Dilution Factor: 1					
Percent Solids	83.2	10.0	%	MCAWW 160.3 MOD	10/05-10/06/05	5278463
	Dilution Factor: 1					

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Northrop Grumman Corp

Client Sample ID: RB-3

General Chemistry

Lot-Sample #...: A5J050155-002 Work Order #...: HL2Q0 Matrix.....: SO
Date Sampled...: 10/04/05 09:45 Date Received..: 10/05/05
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
pH (solid)	9.0		No Units	SW846 9045C	10/05/05	5279098
		Dilution Factor: 1				
Cyanide, Total	ND	0.57	mg/kg	SW846 9012A	10/10/05	5283334
		Dilution Factor: 1				
Percent Solids	87.9	10.0	%	MCAWW 160.3 MOD	10/05-10/06/05	5278463
		Dilution Factor: 1				

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Northrop Grumman Corp

Client Sample ID: RB-4

General Chemistry

Lot-Sample #...: A5J050155-003 Work Order #...: HL2Q3 Matrix.....: SO
Date Sampled...: 10/04/05 10:00 Date Received..: 10/05/05
% Moisture.....: 9.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
pH (solid)	9.0		No Units	SW846 9045C	10/05/05	5279098
		Dilution Factor: 1				
Cyanide, Total	ND	0.55	mg/kg	SW846 9012A	10/10/05	5283334
		Dilution Factor: 1				
Percent Solids	90.8	10.0	%	MCAWW 160.3 MOD	10/05-10/06/05	5278463
		Dilution Factor: 1				

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Northrop Grumman Corp

Client Sample ID: DUP-2

General Chemistry

Lot-Sample #...: A5J050155-004 Work Order #...: HL2RD Matrix.....: SO
Date Sampled...: 10/04/05 Date Received..: 10/05/05
% Moisture.....: 8.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
pH (solid)	8.9		No Units	SW846 9045C	10/05/05	5279098
	Dilution Factor: 1					
Cyanide, Total	0.54 B J	0.55	mg/kg	SW846 9012A	10/10/05	5283334
	Dilution Factor: 1					
Percent Solids	91.6	10.0	%	MCAWW 160.3 MOD	10/05-10/06/05	5278463
	Dilution Factor: 1					

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

Laboratory Narrative

CASE NARRATIVE

5J05155

The following report contains the analytical results for four solid samples submitted to STL North Canton by Northrop Grumman Corp. from the Former TRW, Utica, NY Site, project number 37117.010. The samples were received October 05, 2005, according to documented sample acceptance procedures.

This SDG consists of (1) laboratory ID's: A5J050155.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Kurt Batsel, P.E., IPM, Christopher Angier, John C. Brussel, P.E., and David Gerber on October 12, 2005. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.3°C.

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

GC/MS SEMIVOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

PESTICIDES-8081

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

CASE NARRATIVE (continued)

PESTICIDES-8081 (continued)

The analyses reported herein were performed using an instrument that has two columns(GC) or detectors(HPLC), one of which is used to confirm the results of the other. Peak interferences may result in some cases, which cause a quantitation difference between the two columns/detectors. If the difference between the two results is greater than 40%, the higher of the two results or the primary column/detector is normally reported. The reported results are flagged with "PG".

POLYCHLORINATED BIPHENYLS-8082

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

METALS

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive of mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

Serial dilution of a sample in this lot indicates that physical and chemical interferences were present. Refer to the sample report pages for the affected analytes flagged with "E".

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analyte(s).

Matrix spike recovery and relative percent difference (RPD) data were not calculated for some analytes for RB-4 due to the sample concentration reading greater than four times the spike amount. See the Matrix Spike Report for the affected analytes which will be flagged with "NC, MSB".

The matrix spike/matrix spike duplicate(s) for RB-4 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

CASE NARRATIVE (continued)

GENERAL CHEMISTRY

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive of mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

The matrix spike/matrix spike duplicate(s) for RB-4 had RPD's outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	PCB/ Pest	MET	MISC	
A5J050155	10/04/05	2000	TS-3	Soil	No	No	No	No	Yes	VOC – blank, ccal SVOC – blank, ical, ccal PEST – ccal, %D MET – ms, serial dilution
A5J050155	10/04/05	2000	RB-3	Soil	No	No	Yes	No	Yes	VOC – blank, ccal SVOC – blank, ical, ccal MET – ms, blank, serial dilution
A5J050155	10/04/05	2000	RB-4	Soil	No	No	Yes	No	Yes	VOC – blank, ccal SVOC – blank, ical, ccal MET – ms, blank, serial dilution
A5J050155	10/04/05	2000	DUP-2	Soil	No	No	Yes	No	No	VOC – blank, ccal SVOC – blank, ical, ccal MET – ms, blank, serial dilution MISC - ms

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

2 The deviation resulted in no qualification of data.

Appendix E

Air Monitoring Logs

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

AIR MONITORING SUMMARY

ICM BARRIER LAYER CONSTRUCTION CERTIFICATION REPORT
FORMER TRW AERONAUTICAL SYSTEMS FACILITY
211 SEWARD AVENUE
UTICA, NEW YORK

Week Beginning	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
10/31/05	✔	✔	No Soil Handling Activities	✔	✔	✔
11/7/05	✔	✔	✔	No Soil Handling Activities	No Soil Handling Activities	No Soil Handling Activities
11/14/05	✔	No Air Monitoring Due to Rain	No Soil Handling Activities	No Soil Handling Activities	No Air Monitoring Due to Snow Cover	No Soil Handling Activities
11/21/05	✔	No Soil Handling Activities	No Soil Handling Activities	No Soil Handling Activities	No Soil Handling Activities	No Soil Handling Activities

Notes:

1. Checkmark signifies air monitoring was performed on the indicated day.
2. Sampling locations identified on the attached air monitoring logs and data reports are as follows:
   - Location A = Downwind sampling location;
   - Location B = Downwind sampling location; and
   - Location C = Upwind sampling location.

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Air Monitoring

Project: FORMER TRW, UTICA, NY

Date: 10/31/05

Monitoring Instruments: pDR-1000 AN

Air Monitor: A. ENIGK

Activity: GRADING OF RUN-OF-BANK GRAVEL

Level of Protection: MOD. LEVEL D

Time	Location (SEE FIGURE)	Instrument Reading (mg/m³)	Comments
830	A	0.010	
830	B	0.009	
830	C	0.011	
900	A	0.000	
900	B	0.000	
900	C	0.000	
1000	A	0.000	
1000	B	0.000	
1000	C	0.000	
1100	A	0.006	
1100	B	0.000	
1100	C	0.000	
1200	A	0.000	
1200	B	0.006	
1200	C	0.000	
1300	A	0.000	
1300	B	0.006	
1300	C	0.000	
1400	A-2	0.006	MOVED LOCATIONS TO ADJUST FOR WIND SHIFT & WORK AREA CHANGE. WORK MOVED TO CHEM. ST. BLDG & FORM. NE CORNER OF PARKIN LOT NO. 2. (SEE FIG.)
1400	B-2	0.000	
1400	C-2	0.000	

pDR-1000 S/N: 06083
User ID: Location A
Tag Number: 01
Number of logged points: 65
Start time and date: 09:11:29 31-Oct
Elapsed time: 05:25:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 1.709 mg/m³
Time at maximum: 12:35:14 Oct 31
Max STEL Concentration: 0.005 mg/m³
Time at max STEL: 09:24:59 Oct 31
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	31-Oct	09:16:29	0.006
2	31-Oct	09:21:29	0.005
3	31-Oct	09:26:29	0.008
4	31-Oct	09:31:29	0.004
5	31-Oct	09:36:29	0.001
6	31-Oct	09:41:29	0
7	31-Oct	09:46:29	0.001
8	31-Oct	09:51:29	0
9	31-Oct	09:56:29	0
10	31-Oct	10:01:29	0.002
11	31-Oct	10:06:29	0
12	31-Oct	10:11:29	0
13	31-Oct	10:16:29	0.001
14	31-Oct	10:21:29	0.001
15	31-Oct	10:26:29	0
16	31-Oct	10:31:29	0
17	31-Oct	10:36:29	0
18	31-Oct	10:41:29	0.002
19	31-Oct	10:46:29	0.002
20	31-Oct	10:51:29	0
21	31-Oct	10:56:29	0.001
22	31-Oct	11:01:29	0
23	31-Oct	11:06:29	0
24	31-Oct	11:11:29	0.005
25	31-Oct	11:16:29	0
26	31-Oct	11:21:29	0
27	31-Oct	11:26:29	0
28	31-Oct	11:31:29	0.001
29	31-Oct	11:36:29	0
30	31-Oct	11:41:29	0
31	31-Oct	11:46:29	0
32	31-Oct	11:51:29	0
33	31-Oct	11:56:29	0
34	31-Oct	12:01:29	0.001
35	31-Oct	12:06:29	0
36	31-Oct	12:11:29	0
37	31-Oct	12:16:29	0

38	31-Oct	12:21:29	0
39	31-Oct	12:26:29	0
40	31-Oct	12:31:29	0.003
41	31-Oct	12:36:29	0.064
42	31-Oct	12:41:29	0
43	31-Oct	12:46:29	0.003
44	31-Oct	12:51:29	0
45	31-Oct	12:56:29	0
46	31-Oct	13:01:29	0
47	31-Oct	13:06:29	0
48	31-Oct	13:11:29	0
49	31-Oct	13:16:29	0
50	31-Oct	13:21:29	0
51	31-Oct	13:26:29	0
52	31-Oct	13:31:29	0
53	31-Oct	13:36:29	0
54	31-Oct	13:41:29	0
55	31-Oct	13:46:29	0
56	31-Oct	13:51:29	0
57	31-Oct	13:56:29	0
58	31-Oct	14:01:29	0
59	31-Oct	14:06:29	0
60	31-Oct	14:11:29	0
61	31-Oct	14:16:29	0
62	31-Oct	14:21:29	0
63	31-Oct	14:26:29	0
64	31-Oct	14:31:29	0
65	31-Oct	14:36:29	0

00053230300006000803}

pDR-1000 S/N: 06131
User ID: Location B
Tag Number: 01
Number of logged points: 324
Start time and date: 09:16:21 31-Oct
Elapsed time: 05:24:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 0.085 mg/m³
Time at maximum: 09:26:35 Oct 31
Max STEL Concentration: 0.023 mg/m³
Time at max STEL: 09:31:21 Oct 31
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	31-Oct	09:17:21	0.021
2	31-Oct	09:18:21	0.026
3	31-Oct	09:19:21	0.023
4	31-Oct	09:20:21	0.024
5	31-Oct	09:21:21	0.018
6	31-Oct	09:22:21	0.025
7	31-Oct	09:23:21	0.021
8	31-Oct	09:24:21	0.025
9	31-Oct	09:25:21	0.031
10	31-Oct	09:26:21	0.029
11	31-Oct	09:27:21	0.033
12	31-Oct	09:28:21	0.016
13	31-Oct	09:29:21	0.02
14	31-Oct	09:30:21	0.016
15	31-Oct	09:31:21	0.017
16	31-Oct	09:32:21	0.01
17	31-Oct	09:33:21	0.008
18	31-Oct	09:34:21	0.013
19	31-Oct	09:35:21	0.007
20	31-Oct	09:36:21	0.002
21	31-Oct	09:37:21	0.001
22	31-Oct	09:38:21	0.005
23	31-Oct	09:39:21	0.004
24	31-Oct	09:40:21	0.002
25	31-Oct	09:41:21	0.003
26	31-Oct	09:42:21	0.003
27	31-Oct	09:43:21	0.003
28	31-Oct	09:44:21	0.004
29	31-Oct	09:45:21	0.003
30	31-Oct	09:46:21	0.002
31	31-Oct	09:47:21	0
32	31-Oct	09:48:21	0.003
33	31-Oct	09:49:21	0.002
34	31-Oct	09:50:21	0.003
35	31-Oct	09:51:21	0.003
36	31-Oct	09:52:21	0.001
37	31-Oct	09:53:21	0.001

38	31-Oct	09:54:21	0.003
39	31-Oct	09:55:21	0.003
40	31-Oct	09:56:21	0.001
41	31-Oct	09:57:21	0.002
42	31-Oct	09:58:21	0.001
43	31-Oct	09:59:21	0.001
44	31-Oct	10:00:21	0.004
45	31-Oct	10:01:21	0
46	31-Oct	10:02:21	0.002
47	31-Oct	10:03:21	0.001
48	31-Oct	10:04:21	0
49	31-Oct	10:05:21	0.003
50	31-Oct	10:06:21	0
51	31-Oct	10:07:21	0
52	31-Oct	10:08:21	0
53	31-Oct	10:09:21	0
54	31-Oct	10:10:21	0.005
55	31-Oct	10:11:21	0.006
56	31-Oct	10:12:21	0.003
57	31-Oct	10:13:21	0.002
58	31-Oct	10:14:21	0
59	31-Oct	10:15:21	0
60	31-Oct	10:16:21	0.001
61	31-Oct	10:17:21	0
62	31-Oct	10:18:21	0.005
63	31-Oct	10:19:21	0
64	31-Oct	10:20:21	0.001
65	31-Oct	10:21:21	0
66	31-Oct	10:22:21	0.001
67	31-Oct	10:23:21	0
68	31-Oct	10:24:21	0
69	31-Oct	10:25:21	0.001
70	31-Oct	10:26:21	0
71	31-Oct	10:27:21	0
72	31-Oct	10:28:21	0
73	31-Oct	10:29:21	0
74	31-Oct	10:30:21	0
75	31-Oct	10:31:21	0
76	31-Oct	10:32:21	0
77	31-Oct	10:33:21	0
78	31-Oct	10:34:21	0
79	31-Oct	10:35:21	0
80	31-Oct	10:36:21	0
81	31-Oct	10:37:21	0
82	31-Oct	10:38:21	0
83	31-Oct	10:39:21	0
84	31-Oct	10:40:21	0
85	31-Oct	10:41:21	0
86	31-Oct	10:42:21	0
87	31-Oct	10:43:21	0
88	31-Oct	10:44:21	0
89	31-Oct	10:45:21	0

90	31-Oct	10:46:21	0
91	31-Oct	10:47:21	0
92	31-Oct	10:48:21	0
93	31-Oct	10:49:21	0
94	31-Oct	10:50:21	0
95	31-Oct	10:51:21	0
96	31-Oct	10:52:21	0
97	31-Oct	10:53:21	0
98	31-Oct	10:54:21	0
99	31-Oct	10:55:21	0
100	31-Oct	10:56:21	0
101	31-Oct	10:57:21	0
102	31-Oct	10:58:21	0
103	31-Oct	10:59:21	0
104	31-Oct	11:00:21	0
105	31-Oct	11:01:21	0
106	31-Oct	11:02:21	0
107	31-Oct	11:03:21	0
108	31-Oct	11:04:21	0
109	31-Oct	11:05:21	0
110	31-Oct	11:06:21	0
111	31-Oct	11:07:21	0
112	31-Oct	11:08:21	0
113	31-Oct	11:09:21	0
114	31-Oct	11:10:21	0
115	31-Oct	11:11:21	0
116	31-Oct	11:12:21	0
117	31-Oct	11:13:21	0.003
118	31-Oct	11:14:21	0
119	31-Oct	11:15:21	0
120	31-Oct	11:16:21	0
121	31-Oct	11:17:21	0
122	31-Oct	11:18:21	0
123	31-Oct	11:19:21	0
124	31-Oct	11:20:21	0
125	31-Oct	11:21:21	0
126	31-Oct	11:22:21	0
127	31-Oct	11:23:21	0
128	31-Oct	11:24:21	0.001
129	31-Oct	11:25:21	0
130	31-Oct	11:26:21	0
131	31-Oct	11:27:21	0
132	31-Oct	11:28:21	0.001
133	31-Oct	11:29:21	0.001
134	31-Oct	11:30:21	0
135	31-Oct	11:31:21	0
136	31-Oct	11:32:21	0
137	31-Oct	11:33:21	0
138	31-Oct	11:34:21	0
139	31-Oct	11:35:21	0
140	31-Oct	11:36:21	0
141	31-Oct	11:37:21	0

142	31-Oct	11:38:21	0
143	31-Oct	11:39:21	0
144	31-Oct	11:40:21	0
145	31-Oct	11:41:21	0
146	31-Oct	11:42:21	0
147	31-Oct	11:43:21	0
148	31-Oct	11:44:21	0
149	31-Oct	11:45:21	0
150	31-Oct	11:46:21	0
151	31-Oct	11:47:21	0
152	31-Oct	11:48:21	0
153	31-Oct	11:49:21	0
154	31-Oct	11:50:21	0
155	31-Oct	11:51:21	0.001
156	31-Oct	11:52:21	0
157	31-Oct	11:53:21	0
158	31-Oct	11:54:21	0
159	31-Oct	11:55:21	0
160	31-Oct	11:56:21	0
161	31-Oct	11:57:21	0
162	31-Oct	11:58:21	0
163	31-Oct	11:59:21	0
164	31-Oct	12:00:21	0
165	31-Oct	12:01:21	0
166	31-Oct	12:02:21	0
167	31-Oct	12:03:21	0
168	31-Oct	12:04:21	0
169	31-Oct	12:05:21	0
170	31-Oct	12:06:21	0
171	31-Oct	12:07:21	0
172	31-Oct	12:08:21	0
173	31-Oct	12:09:21	0
174	31-Oct	12:10:21	0
175	31-Oct	12:11:21	0
176	31-Oct	12:12:21	0
177	31-Oct	12:13:21	0
178	31-Oct	12:14:21	0
179	31-Oct	12:15:21	0
180	31-Oct	12:16:21	0
181	31-Oct	12:17:21	0.002
182	31-Oct	12:18:21	0
183	31-Oct	12:19:21	0
184	31-Oct	12:20:21	0
185	31-Oct	12:21:21	0
186	31-Oct	12:22:21	0.002
187	31-Oct	12:23:21	0
188	31-Oct	12:24:21	0
189	31-Oct	12:25:21	0
190	31-Oct	12:26:21	0
191	31-Oct	12:27:21	0
192	31-Oct	12:28:21	0
193	31-Oct	12:29:21	0

194	31-Oct	12:30:21	0
195	31-Oct	12:31:21	0
196	31-Oct	12:32:21	0
197	31-Oct	12:33:21	0
198	31-Oct	12:34:21	0
199	31-Oct	12:35:21	0
200	31-Oct	12:36:21	0
201	31-Oct	12:37:21	0
202	31-Oct	12:38:21	0
203	31-Oct	12:39:21	0
204	31-Oct	12:40:21	0
205	31-Oct	12:41:21	0.003
206	31-Oct	12:42:21	0
207	31-Oct	12:43:21	0
208	31-Oct	12:44:21	0
209	31-Oct	12:45:21	0
210	31-Oct	12:46:21	0
211	31-Oct	12:47:21	0
212	31-Oct	12:48:21	0
213	31-Oct	12:49:21	0
214	31-Oct	12:50:21	0
215	31-Oct	12:51:21	0
216	31-Oct	12:52:21	0
217	31-Oct	12:53:21	0
218	31-Oct	12:54:21	0
219	31-Oct	12:55:21	0
220	31-Oct	12:56:21	0
221	31-Oct	12:57:21	0
222	31-Oct	12:58:21	0
223	31-Oct	12:59:21	0
224	31-Oct	13:00:21	0.001
225	31-Oct	13:01:21	0.007
226	31-Oct	13:02:21	0
227	31-Oct	13:03:21	0
228	31-Oct	13:04:21	0
229	31-Oct	13:05:21	0
230	31-Oct	13:06:21	0
231	31-Oct	13:07:21	0
232	31-Oct	13:08:21	0
233	31-Oct	13:09:21	0
234	31-Oct	13:10:21	0
235	31-Oct	13:11:21	0
236	31-Oct	13:12:21	0
237	31-Oct	13:13:21	0
238	31-Oct	13:14:21	0
239	31-Oct	13:15:21	0
240	31-Oct	13:16:21	0.001
241	31-Oct	13:17:21	0
242	31-Oct	13:18:21	0
243	31-Oct	13:19:21	0.001
244	31-Oct	13:20:21	0
245	31-Oct	13:21:21	0

246	31-Oct	13:22:21	0
247	31-Oct	13:23:21	0
248	31-Oct	13:24:21	0
249	31-Oct	13:25:21	0
250	31-Oct	13:26:21	0
251	31-Oct	13:27:21	0
252	31-Oct	13:28:21	0
253	31-Oct	13:29:21	0
254	31-Oct	13:30:21	0
255	31-Oct	13:31:21	0
256	31-Oct	13:32:21	0
257	31-Oct	13:33:21	0
258	31-Oct	13:34:21	0
259	31-Oct	13:35:21	0
260	31-Oct	13:36:21	0
261	31-Oct	13:37:21	0
262	31-Oct	13:38:21	0
263	31-Oct	13:39:21	0
264	31-Oct	13:40:21	0
265	31-Oct	13:41:21	0
266	31-Oct	13:42:21	0.003
267	31-Oct	13:43:21	0
268	31-Oct	13:44:21	0
269	31-Oct	13:45:21	0
270	31-Oct	13:46:21	0
271	31-Oct	13:47:21	0
272	31-Oct	13:48:21	0
273	31-Oct	13:49:21	0
274	31-Oct	13:50:21	0
275	31-Oct	13:51:21	0
276	31-Oct	13:52:21	0
277	31-Oct	13:53:21	0
278	31-Oct	13:54:21	0
279	31-Oct	13:55:21	0
280	31-Oct	13:56:21	0
281	31-Oct	13:57:21	0
282	31-Oct	13:58:21	0.001
283	31-Oct	13:59:21	0.002
284	31-Oct	14:00:21	0
285	31-Oct	14:01:21	0
286	31-Oct	14:02:21	0
287	31-Oct	14:03:21	0
288	31-Oct	14:04:21	0
289	31-Oct	14:05:21	0
290	31-Oct	14:06:21	0.001
291	31-Oct	14:07:21	0
292	31-Oct	14:08:21	0
293	31-Oct	14:09:21	0.003
294	31-Oct	14:10:21	0
295	31-Oct	14:11:21	0.002
296	31-Oct	14:12:21	0
297	31-Oct	14:13:21	0

298	31-Oct	14:14:21	0
299	31-Oct	14:15:21	0
300	31-Oct	14:16:21	0
301	31-Oct	14:17:21	0
302	31-Oct	14:18:21	0
303	31-Oct	14:19:21	0
304	31-Oct	14:20:21	0
305	31-Oct	14:21:21	0
306	31-Oct	14:22:21	0
307	31-Oct	14:23:21	0
308	31-Oct	14:24:21	0
309	31-Oct	14:25:21	0
310	31-Oct	14:26:21	0
311	31-Oct	14:27:21	0
312	31-Oct	14:28:21	0
313	31-Oct	14:29:21	0
314	31-Oct	14:30:21	0
315	31-Oct	14:31:21	0
316	31-Oct	14:32:21	0.001
317	31-Oct	14:33:21	0
318	31-Oct	14:34:21	0
319	31-Oct	14:35:21	0
320	31-Oct	14:36:21	0
321	31-Oct	14:37:21	0
322	31-Oct	14:38:21	0
323	31-Oct	14:39:21	0
324	31-Oct	14:40:21	0.002

00053230300006010301}

pDR-1000 S/N: 06133
User ID: Location C
Tag Number: 01
Number of logged points: 324
Start time and date: 09:18:12 31-Oct
Elapsed time: 05:24:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 0.040 mg/m³
Time at maximum: 14:03:57 Oct 31
Max STEL Concentration: 0.006 mg/m³
Time at max STEL: 09:27:12 Oct 31
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	31-Oct	09:19:12	0.019
2	31-Oct	09:20:12	0.014
3	31-Oct	09:21:12	0.009
4	31-Oct	09:22:12	0.01
5	31-Oct	09:23:12	0.014
6	31-Oct	09:24:12	0.012
7	31-Oct	09:25:12	0.005
8	31-Oct	09:26:12	0.007
9	31-Oct	09:27:12	0.007
10	31-Oct	09:28:12	0.005
11	31-Oct	09:29:12	0.003
12	31-Oct	09:30:12	0.001
13	31-Oct	09:31:12	0.002
14	31-Oct	09:32:12	0.004
15	31-Oct	09:33:12	0
16	31-Oct	09:34:12	0.002
17	31-Oct	09:35:12	0
18	31-Oct	09:36:12	0
19	31-Oct	09:37:12	0.002
20	31-Oct	09:38:12	0
21	31-Oct	09:39:12	0
22	31-Oct	09:40:12	0
23	31-Oct	09:41:12	0.003
24	31-Oct	09:42:12	0.001
25	31-Oct	09:43:12	0.002
26	31-Oct	09:44:12	0
27	31-Oct	09:45:12	0
28	31-Oct	09:46:12	0.001
29	31-Oct	09:47:12	0
30	31-Oct	09:48:12	0.001
31	31-Oct	09:49:12	0.001
32	31-Oct	09:50:12	0
33	31-Oct	09:51:12	0
34	31-Oct	09:52:12	0
35	31-Oct	09:53:12	0
36	31-Oct	09:54:12	0
37	31-Oct	09:55:12	0

38	31-Oct	09:56:12	0
39	31-Oct	09:57:12	0
40	31-Oct	09:58:12	0
41	31-Oct	09:59:12	0
42	31-Oct	10:00:12	0
43	31-Oct	10:01:12	0
44	31-Oct	10:02:12	0
45	31-Oct	10:03:12	0.001
46	31-Oct	10:04:12	0.001
47	31-Oct	10:05:12	0
48	31-Oct	10:06:12	0.001
49	31-Oct	10:07:12	0
50	31-Oct	10:08:12	0
51	31-Oct	10:09:12	0
52	31-Oct	10:10:12	0
53	31-Oct	10:11:12	0
54	31-Oct	10:12:12	0
55	31-Oct	10:13:12	0
56	31-Oct	10:14:12	0
57	31-Oct	10:15:12	0
58	31-Oct	10:16:12	0.003
59	31-Oct	10:17:12	0
60	31-Oct	10:18:12	0
61	31-Oct	10:19:12	0
62	31-Oct	10:20:12	0
63	31-Oct	10:21:12	0
64	31-Oct	10:22:12	0
65	31-Oct	10:23:12	0
66	31-Oct	10:24:12	0
67	31-Oct	10:25:12	0
68	31-Oct	10:26:12	0
69	31-Oct	10:27:12	0
70	31-Oct	10:28:12	0.001
71	31-Oct	10:29:12	0
72	31-Oct	10:30:12	0
73	31-Oct	10:31:12	0.002
74	31-Oct	10:32:12	0
75	31-Oct	10:33:12	0
76	31-Oct	10:34:12	0
77	31-Oct	10:35:12	0.001
78	31-Oct	10:36:12	0
79	31-Oct	10:37:12	0
80	31-Oct	10:38:12	0
81	31-Oct	10:39:12	0
82	31-Oct	10:40:12	0.006
83	31-Oct	10:41:12	0
84	31-Oct	10:42:12	0
85	31-Oct	10:43:12	0
86	31-Oct	10:44:12	0.001
87	31-Oct	10:45:12	0
88	31-Oct	10:46:12	0
89	31-Oct	10:47:12	0

90	31-Oct	10:48:12	0
91	31-Oct	10:49:12	0
92	31-Oct	10:50:12	0
93	31-Oct	10:51:12	0
94	31-Oct	10:52:12	0
95	31-Oct	10:53:12	0
96	31-Oct	10:54:12	0
97	31-Oct	10:55:12	0
98	31-Oct	10:56:12	0
99	31-Oct	10:57:12	0.007
100	31-Oct	10:58:12	0
101	31-Oct	10:59:12	0
102	31-Oct	11:00:12	0
103	31-Oct	11:01:12	0
104	31-Oct	11:02:12	0
105	31-Oct	11:03:12	0
106	31-Oct	11:04:12	0.003
107	31-Oct	11:05:12	0.004
108	31-Oct	11:06:12	0
109	31-Oct	11:07:12	0.001
110	31-Oct	11:08:12	0
111	31-Oct	11:09:12	0.001
112	31-Oct	11:10:12	0
113	31-Oct	11:11:12	0
114	31-Oct	11:12:12	0
115	31-Oct	11:13:12	0
116	31-Oct	11:14:12	0
117	31-Oct	11:15:12	0
118	31-Oct	11:16:12	0
119	31-Oct	11:17:12	0
120	31-Oct	11:18:12	0
121	31-Oct	11:19:12	0
122	31-Oct	11:20:12	0
123	31-Oct	11:21:12	0.001
124	31-Oct	11:22:12	0
125	31-Oct	11:23:12	0
126	31-Oct	11:24:12	0
127	31-Oct	11:25:12	0
128	31-Oct	11:26:12	0
129	31-Oct	11:27:12	0
130	31-Oct	11:28:12	0
131	31-Oct	11:29:12	0
132	31-Oct	11:30:12	0
133	31-Oct	11:31:12	0
134	31-Oct	11:32:12	0
135	31-Oct	11:33:12	0
136	31-Oct	11:34:12	0
137	31-Oct	11:35:12	0
138	31-Oct	11:36:12	0
139	31-Oct	11:37:12	0.003
140	31-Oct	11:38:12	0
141	31-Oct	11:39:12	0

142	31-Oct	11:40:12	0
143	31-Oct	11:41:12	0
144	31-Oct	11:42:12	0
145	31-Oct	11:43:12	0
146	31-Oct	11:44:12	0
147	31-Oct	11:45:12	0
148	31-Oct	11:46:12	0
149	31-Oct	11:47:12	0
150	31-Oct	11:48:12	0
151	31-Oct	11:49:12	0
152	31-Oct	11:50:12	0
153	31-Oct	11:51:12	0
154	31-Oct	11:52:12	0
155	31-Oct	11:53:12	0
156	31-Oct	11:54:12	0
157	31-Oct	11:55:12	0
158	31-Oct	11:56:12	0
159	31-Oct	11:57:12	0
160	31-Oct	11:58:12	0
161	31-Oct	11:59:12	0
162	31-Oct	12:00:12	0
163	31-Oct	12:01:12	0
164	31-Oct	12:02:12	0
165	31-Oct	12:03:12	0
166	31-Oct	12:04:12	0
167	31-Oct	12:05:12	0
168	31-Oct	12:06:12	0
169	31-Oct	12:07:12	0
170	31-Oct	12:08:12	0
171	31-Oct	12:09:12	0
172	31-Oct	12:10:12	0
173	31-Oct	12:11:12	0
174	31-Oct	12:12:12	0
175	31-Oct	12:13:12	0
176	31-Oct	12:14:12	0
177	31-Oct	12:15:12	0
178	31-Oct	12:16:12	0
179	31-Oct	12:17:12	0.001
180	31-Oct	12:18:12	0
181	31-Oct	12:19:12	0
182	31-Oct	12:20:12	0
183	31-Oct	12:21:12	0
184	31-Oct	12:22:12	0
185	31-Oct	12:23:12	0
186	31-Oct	12:24:12	0
187	31-Oct	12:25:12	0
188	31-Oct	12:26:12	0
189	31-Oct	12:27:12	0
190	31-Oct	12:28:12	0
191	31-Oct	12:29:12	0
192	31-Oct	12:30:12	0
193	31-Oct	12:31:12	0

194	31-Oct	12:32:12	0
195	31-Oct	12:33:12	0.001
196	31-Oct	12:34:12	0
197	31-Oct	12:35:12	0
198	31-Oct	12:36:12	0
199	31-Oct	12:37:12	0
200	31-Oct	12:38:12	0
201	31-Oct	12:39:12	0
202	31-Oct	12:40:12	0
203	31-Oct	12:41:12	0
204	31-Oct	12:42:12	0
205	31-Oct	12:43:12	0
206	31-Oct	12:44:12	0
207	31-Oct	12:45:12	0
208	31-Oct	12:46:12	0
209	31-Oct	12:47:12	0
210	31-Oct	12:48:12	0
211	31-Oct	12:49:12	0
212	31-Oct	12:50:12	0
213	31-Oct	12:51:12	0
214	31-Oct	12:52:12	0
215	31-Oct	12:53:12	0
216	31-Oct	12:54:12	0
217	31-Oct	12:55:12	0
218	31-Oct	12:56:12	0
219	31-Oct	12:57:12	0
220	31-Oct	12:58:12	0
221	31-Oct	12:59:12	0
222	31-Oct	13:00:12	0
223	31-Oct	13:01:12	0
224	31-Oct	13:02:12	0
225	31-Oct	13:03:12	0
226	31-Oct	13:04:12	0
227	31-Oct	13:05:12	0
228	31-Oct	13:06:12	0
229	31-Oct	13:07:12	0
230	31-Oct	13:08:12	0
231	31-Oct	13:09:12	0
232	31-Oct	13:10:12	0
233	31-Oct	13:11:12	0
234	31-Oct	13:12:12	0
235	31-Oct	13:13:12	0
236	31-Oct	13:14:12	0
237	31-Oct	13:15:12	0
238	31-Oct	13:16:12	0
239	31-Oct	13:17:12	0
240	31-Oct	13:18:12	0
241	31-Oct	13:19:12	0
242	31-Oct	13:20:12	0
243	31-Oct	13:21:12	0
244	31-Oct	13:22:12	0
245	31-Oct	13:23:12	0

246	31-Oct	13:24:12	0
247	31-Oct	13:25:12	0
248	31-Oct	13:26:12	0
249	31-Oct	13:27:12	0
250	31-Oct	13:28:12	0
251	31-Oct	13:29:12	0
252	31-Oct	13:30:12	0
253	31-Oct	13:31:12	0
254	31-Oct	13:32:12	0
255	31-Oct	13:33:12	0
256	31-Oct	13:34:12	0
257	31-Oct	13:35:12	0
258	31-Oct	13:36:12	0
259	31-Oct	13:37:12	0
260	31-Oct	13:38:12	0
261	31-Oct	13:39:12	0
262	31-Oct	13:40:12	0
263	31-Oct	13:41:12	0
264	31-Oct	13:42:12	0
265	31-Oct	13:43:12	0
266	31-Oct	13:44:12	0
267	31-Oct	13:45:12	0
268	31-Oct	13:46:12	0
269	31-Oct	13:47:12	0
270	31-Oct	13:48:12	0
271	31-Oct	13:49:12	0
272	31-Oct	13:50:12	0
273	31-Oct	13:51:12	0
274	31-Oct	13:52:12	0
275	31-Oct	13:53:12	0
276	31-Oct	13:54:12	0
277	31-Oct	13:55:12	0
278	31-Oct	13:56:12	0
279	31-Oct	13:57:12	0
280	31-Oct	13:58:12	0
281	31-Oct	13:59:12	0
282	31-Oct	14:00:12	0
283	31-Oct	14:01:12	0.007
284	31-Oct	14:02:12	0
285	31-Oct	14:03:12	0
286	31-Oct	14:04:12	0.009
287	31-Oct	14:05:12	0
288	31-Oct	14:06:12	0
289	31-Oct	14:07:12	0
290	31-Oct	14:08:12	0
291	31-Oct	14:09:12	0
292	31-Oct	14:10:12	0
293	31-Oct	14:11:12	0
294	31-Oct	14:12:12	0
295	31-Oct	14:13:12	0
296	31-Oct	14:14:12	0
297	31-Oct	14:15:12	0

298	31-Oct	14:16:12	0
299	31-Oct	14:17:12	0
300	31-Oct	14:18:12	0
301	31-Oct	14:19:12	0
302	31-Oct	14:20:12	0
303	31-Oct	14:21:12	0
304	31-Oct	14:22:12	0
305	31-Oct	14:23:12	0
306	31-Oct	14:24:12	0
307	31-Oct	14:25:12	0
308	31-Oct	14:26:12	0
309	31-Oct	14:27:12	0
310	31-Oct	14:28:12	0
311	31-Oct	14:29:12	0
312	31-Oct	14:30:12	0
313	31-Oct	14:31:12	0
314	31-Oct	14:32:12	0
315	31-Oct	14:33:12	0
316	31-Oct	14:34:12	0
317	31-Oct	14:35:12	0
318	31-Oct	14:36:12	0
319	31-Oct	14:37:12	0
320	31-Oct	14:38:12	0
321	31-Oct	14:39:12	0
322	31-Oct	14:40:12	0
323	31-Oct	14:41:12	0
324	31-Oct	14:42:12	0

00053230300006010303}

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

Air Monitoring

Project: FIRMER TRW, UTICA, NY

Date: 11/01/05

Monitoring Instruments: pDR-1000 AN

Air Monitor: A. ENIGK

Activity: GRADING OF RUN-OF-BANK MATERIAL

Level of Protection: MOD. LEVEL D

Time	Location	Instrument Reading (mg/m3)	Comments
700	A	0.000	
700	B	0.000	
700	C	0.000	
806	A	0.000	
800	B	0.000	
800	C	0.000	
900	A	0.006	
900	B	0.000	
900	C	0.000	
1000	A-2	0.000	SWITCHED LOCATIONS TO ADJUST TO WIND & WORK AREA
1000	B-2	0.000	
1000	C-2	0.000	
1100	A-2	0.000	
1100	B-2	0.000	
1100	C-2	0.000	
1200	A-2	0.006	
1200	B-2		
1200	C-2		
1300	A-2		
1300	B-2		
1300	C-2		
1400	A-2		
1400	B-2		
1400	C-2		
1500	A-2		
1500	B-2		

pDR-1000 S/N: 06083
User ID: Location A
Tag Number: 02
Number of logged points: 97
Start time and date: 07:11:25 01-Nov
Elapsed time: 08:05:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.104 mg/m³
Time at maximum: 10:36:36 Nov 01
Max STEL Concentration: 0.024 mg/m³
Time at max STEL: 15:17:56 Nov 01
Overall Avg Conc: 0.002 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	1-Nov	07:16:25	0.004
2	1-Nov	07:21:25	0.008
3	1-Nov	07:26:25	0.007
4	1-Nov	07:31:25	0.006
5	1-Nov	07:36:25	0.01
6	1-Nov	07:41:25	0.004
7	1-Nov	07:46:25	0.007
8	1-Nov	07:51:25	0.006
9	1-Nov	07:56:25	0.004
10	1-Nov	08:01:25	0.005
11	1-Nov	08:06:25	0.008
12	1-Nov	08:11:25	0.005
13	1-Nov	08:16:25	0.004
14	1-Nov	08:21:25	0.004
15	1-Nov	08:26:25	0.003
16	1-Nov	08:31:25	0.007
17	1-Nov	08:36:25	0.002
18	1-Nov	08:41:25	0.004
19	1-Nov	08:46:25	0.002
20	1-Nov	08:51:25	0.001
21	1-Nov	08:56:25	0.001
22	1-Nov	09:01:25	0.002
23	1-Nov	09:06:25	0.001
24	1-Nov	09:11:25	0.002
25	1-Nov	09:16:25	0.002
26	1-Nov	09:21:25	0.001
27	1-Nov	09:26:25	0
28	1-Nov	09:31:25	0.001
29	1-Nov	09:36:25	0.001
30	1-Nov	09:41:25	0.001
31	1-Nov	09:46:25	0
32	1-Nov	09:51:25	0.001
33	1-Nov	09:56:25	0.001
34	1-Nov	10:01:25	0.001
35	1-Nov	10:06:25	0.002
36	1-Nov	10:11:25	0.001
37	1-Nov	10:16:25	0.002

38	1-Nov	10:21:25	0.005
39	1-Nov	10:26:25	0.004
40	1-Nov	10:31:25	0.006
41	1-Nov	10:36:25	0.015
42	1-Nov	10:41:25	0.01
43	1-Nov	10:46:25	0.001
44	1-Nov	10:51:25	0.001
45	1-Nov	10:56:25	0.004
46	1-Nov	11:01:25	0.012
47	1-Nov	11:06:25	0.014
48	1-Nov	11:11:25	0.015
49	1-Nov	11:16:25	0.006
50	1-Nov	11:21:25	0.004
51	1-Nov	11:26:25	0.003
52	1-Nov	11:31:25	0.003
53	1-Nov	11:36:25	0.005
54	1-Nov	11:41:25	0.004
55	1-Nov	11:46:25	0.007
56	1-Nov	11:51:25	0.003
57	1-Nov	11:56:25	0.002
58	1-Nov	12:01:25	0.002
59	1-Nov	12:06:25	0.004
60	1-Nov	12:11:25	0.002
61	1-Nov	12:16:25	0.003
62	1-Nov	12:21:25	0.002
63	1-Nov	12:26:25	0.001
64	1-Nov	12:31:25	0.002
65	1-Nov	12:36:25	0.001
66	1-Nov	12:41:25	0.001
67	1-Nov	12:46:25	0.001
68	1-Nov	12:51:25	0.003
69	1-Nov	12:56:25	0.002
70	1-Nov	13:01:25	0.002
71	1-Nov	13:06:25	0.005
72	1-Nov	13:11:25	0.002
73	1-Nov	13:16:25	0.001
74	1-Nov	13:21:25	0.002
75	1-Nov	13:26:25	0.001
76	1-Nov	13:31:25	0.004
77	1-Nov	13:36:25	0.002
78	1-Nov	13:41:25	0.003
79	1-Nov	13:46:25	0.005
80	1-Nov	13:51:25	0.001
81	1-Nov	13:56:25	0.002
82	1-Nov	14:01:25	0.002
83	1-Nov	14:06:25	0.004
84	1-Nov	14:11:25	0.002
85	1-Nov	14:16:25	0.002
86	1-Nov	14:21:25	0.002
87	1-Nov	14:26:25	0.002
88	1-Nov	14:31:25	0.003
89	1-Nov	14:36:25	0.003

90	1-Nov	14:41:25	0.003
91	1-Nov	14:46:25	0.003
92	1-Nov	14:51:25	0.004
93	1-Nov	14:56:25	0.007
94	1-Nov	15:01:25	0.008
95	1-Nov	15:06:25	0.009
96	1-Nov	15:11:25	0.015
97	1-Nov	15:16:25	0.041

00053230300006000803}

pDR-1000 S/N: 06131
User ID: Location B
Tag Number: 02
Number of logged points: 96
Start time and date: 07:17:38 01-Nov
Elapsed time: 08:00:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.637 mg/m³
Time at maximum: 12:05:02 Nov 01
Max STEL Concentration: 0.019 mg/m³
Time at max STEL: 12:12:08 Nov 01
Overall Avg Conc: 0.003 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	1-Nov	07:22:38	0.004
2	1-Nov	07:27:38	0.003
3	1-Nov	07:32:38	0.002
4	1-Nov	07:37:38	0.005
5	1-Nov	07:42:38	0
6	1-Nov	07:47:38	0.005
7	1-Nov	07:52:38	0
8	1-Nov	07:57:38	0
9	1-Nov	08:02:38	0.002
10	1-Nov	08:07:38	0.009
11	1-Nov	08:12:38	0.009
12	1-Nov	08:17:38	0.001
13	1-Nov	08:22:38	0.001
14	1-Nov	08:27:38	0.002
15	1-Nov	08:32:38	0
16	1-Nov	08:37:38	0.001
17	1-Nov	08:42:38	0.004
18	1-Nov	08:47:38	0.002
19	1-Nov	08:52:38	0.003
20	1-Nov	08:57:38	0
21	1-Nov	09:02:38	0.001
22	1-Nov	09:07:38	0.002
23	1-Nov	09:12:38	0
24	1-Nov	09:17:38	0.002
25	1-Nov	09:22:38	0.002
26	1-Nov	09:27:38	0.003
27	1-Nov	09:32:38	0.002
28	1-Nov	09:37:38	0.001
29	1-Nov	09:42:38	0.001
30	1-Nov	09:47:38	0.001
31	1-Nov	09:52:38	0
32	1-Nov	09:57:38	0.001
33	1-Nov	10:02:38	0.002
34	1-Nov	10:07:38	0.001
35	1-Nov	10:12:38	0
36	1-Nov	10:17:38	0
37	1-Nov	10:22:38	0.003

38	1-Nov	10:27:38	0.005
39	1-Nov	10:32:38	0.008
40	1-Nov	10:37:38	0.011
41	1-Nov	10:42:38	0.002
42	1-Nov	10:47:38	0.001
43	1-Nov	10:52:38	0.001
44	1-Nov	10:57:38	0.006
45	1-Nov	11:02:38	0.013
46	1-Nov	11:07:38	0.015
47	1-Nov	11:12:38	0.014
48	1-Nov	11:17:38	0.007
49	1-Nov	11:22:38	0.004
50	1-Nov	11:27:38	0.015
51	1-Nov	11:32:38	0.01
52	1-Nov	11:37:38	0.008
53	1-Nov	11:42:38	0.004
54	1-Nov	11:47:38	0.007
55	1-Nov	11:52:38	0.004
56	1-Nov	11:57:38	0.004
57	1-Nov	12:02:38	0.003
58	1-Nov	12:07:38	0.042
59	1-Nov	12:12:38	0.015
60	1-Nov	12:17:38	0.004
61	1-Nov	12:22:38	0.004
62	1-Nov	12:27:38	0.01
63	1-Nov	12:32:38	0.006
64	1-Nov	12:37:38	0.004
65	1-Nov	12:42:38	0.013
66	1-Nov	12:47:38	0.005
67	1-Nov	12:52:38	0.01
68	1-Nov	12:57:38	0.004
69	1-Nov	13:02:38	0.005
70	1-Nov	13:07:38	0.004
71	1-Nov	13:12:38	0.004
72	1-Nov	13:17:38	0.003
73	1-Nov	13:22:38	0.003
74	1-Nov	13:27:38	0.005
75	1-Nov	13:32:38	0.006
76	1-Nov	13:37:38	0.003
77	1-Nov	13:42:38	0.009
78	1-Nov	13:47:38	0.004
79	1-Nov	13:52:38	0.005
80	1-Nov	13:57:38	0.003
81	1-Nov	14:02:38	0.008
82	1-Nov	14:07:38	0.003
83	1-Nov	14:12:38	0.001
84	1-Nov	14:17:38	0.001
85	1-Nov	14:22:38	0.006
86	1-Nov	14:27:38	0.001
87	1-Nov	14:32:38	0
88	1-Nov	14:37:38	0.001
89	1-Nov	14:42:38	0.003

90	1-Nov	14:47:38	0.001
91	1-Nov	14:52:38	0.001
92	1-Nov	14:57:38	0.002
93	1-Nov	15:02:38	0.001
94	1-Nov	15:07:38	0.003
95	1-Nov	15:12:38	0.017
96	1-Nov	15:17:38	0.032

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pDR-1000 S/N: 06133
User ID: Location C
Tag Number: 02
Number of logged points: 95
Start time and date: 07:23:00 01-Nov
Elapsed time: 07:55:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 1.570 mg/m³
Time at maximum: 10:38:14 Nov 01
Max STEL Concentration: 0.031 mg/m³
Time at max STEL: 15:18:32 Nov 01
Overall Avg Conc: 0.001 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	1-Nov	07:28:00	0
2	1-Nov	07:33:00	0
3	1-Nov	07:38:00	0.001
4	1-Nov	07:43:00	0.001
5	1-Nov	07:48:00	0.002
6	1-Nov	07:53:00	0
7	1-Nov	07:58:00	0.002
8	1-Nov	08:03:00	0
9	1-Nov	08:08:00	0.001
10	1-Nov	08:13:00	0
11	1-Nov	08:18:00	0
12	1-Nov	08:23:00	0
13	1-Nov	08:28:00	0.002
14	1-Nov	08:33:00	0
15	1-Nov	08:38:00	0
16	1-Nov	08:43:00	0.001
17	1-Nov	08:48:00	0
18	1-Nov	08:53:00	0
19	1-Nov	08:58:00	0
20	1-Nov	09:03:00	0.004
21	1-Nov	09:08:00	0
22	1-Nov	09:13:00	0.009
23	1-Nov	09:18:00	0.005
24	1-Nov	09:23:00	0.004
25	1-Nov	09:28:00	0.001
26	1-Nov	09:33:00	0.002
27	1-Nov	09:38:00	0
28	1-Nov	09:43:00	0
29	1-Nov	09:48:00	0.001
30	1-Nov	09:53:00	0.006
31	1-Nov	09:58:00	0
32	1-Nov	10:03:00	0
33	1-Nov	10:08:00	0.002
34	1-Nov	10:13:00	0.001
35	1-Nov	10:18:00	0.006
36	1-Nov	10:23:00	0.001
37	1-Nov	10:28:00	0.003

38	1-Nov	10:33:00	0.008
39	1-Nov	10:38:00	0.011
40	1-Nov	10:43:00	0.064
41	1-Nov	10:48:00	0.001
42	1-Nov	10:53:00	0.009
43	1-Nov	10:58:00	0.019
44	1-Nov	11:03:00	0.014
45	1-Nov	11:08:00	0.033
46	1-Nov	11:13:00	0.01
47	1-Nov	11:18:00	0.004
48	1-Nov	11:23:00	0.001
49	1-Nov	11:28:00	0.001
50	1-Nov	11:33:00	0.007
51	1-Nov	11:38:00	0.005
52	1-Nov	11:43:00	0.006
53	1-Nov	11:48:00	0.002
54	1-Nov	11:53:00	0.003
55	1-Nov	11:58:00	0.035
56	1-Nov	12:03:00	0
57	1-Nov	12:08:00	0
58	1-Nov	12:13:00	0.004
59	1-Nov	12:18:00	0
60	1-Nov	12:23:00	0.007
61	1-Nov	12:28:00	0
62	1-Nov	12:33:00	0.005
63	1-Nov	12:38:00	0.003
64	1-Nov	12:43:00	0.002
65	1-Nov	12:48:00	0.001
66	1-Nov	12:53:00	0.003
67	1-Nov	12:58:00	0
68	1-Nov	13:03:00	0
69	1-Nov	13:08:00	0.001
70	1-Nov	13:13:00	0
71	1-Nov	13:18:00	0
72	1-Nov	13:23:00	0
73	1-Nov	13:28:00	0.004
74	1-Nov	13:33:00	0
75	1-Nov	13:38:00	0
76	1-Nov	13:43:00	0
77	1-Nov	13:48:00	0
78	1-Nov	13:53:00	0.003
79	1-Nov	13:58:00	0.001
80	1-Nov	14:03:00	0.004
81	1-Nov	14:08:00	0.025
82	1-Nov	14:13:00	0
83	1-Nov	14:18:00	0
84	1-Nov	14:23:00	0
85	1-Nov	14:28:00	0.003
86	1-Nov	14:33:00	0
87	1-Nov	14:38:00	0
88	1-Nov	14:43:00	0.001
89	1-Nov	14:48:00	0

90	1-Nov	14:53:00	0.016
91	1-Nov	14:58:00	0.009
92	1-Nov	15:03:00	0.004
93	1-Nov	15:08:00	0.001
94	1-Nov	15:13:00	0.046
95	1-Nov	15:18:00	0.053

0005323030000601030 3}

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Air Monitoring

Project: FORMER TRW, UTICA, NY
Date: 11/03/05
Monitoring Instruments: pDR-1000AN
Air Monitor: A. ENIGK
Activity: PLACEMENT OF R.O.B. MATERIAL
Level of Protection: MOD. LEVEL D

Time	(SEE FIG.) Location	(mg/m³) Instrument Reading	Comments
800	A	0.000	
800	B	0.000	
800	C	0.000	
900	A	0.000	
900	B	0.000	
900	C	0.000	@ LOC. A WAS
1008	A	0.005	1039a: METER BLOWN ONTO GROUND ATTEMPTED TO MOVE LOCATION (TIE TO A TREE) WHI
1000	B	0.000	CREATED DUST TRIGGERING ALARM. ALARM WAS NOT
1000	C	0.000	DUE TO SITE WORK OR BLOWING ONSITE DUST
1100	A	0.000	
1100	B	0.000	
1100	C	0.000	
1200	A	0.055	
1200	B	0.000	
1200	C	0.000	
1300	A		→ STARTED WATCHING ABNORMALLY HIGH
1300	B	0.000	READINGS & APPEARS THAT METER IS NOT
1300	C	0.000	FUNCTIONING PROPERLY HIGH READINGS CONTD
1400	A		→ EVEN WHEN PLACED NE TO ANOTHER METERS.
1400	B	0.000	TWO READING "0." METER WA
1400	C	0.000	CLEANED & RECALIB'D & PROBLEM PERSISTED.
1500	A		→ METER WAS REMOVED
1500	B	0.000	FROM USE UNTIL IT CAN
1500	C	0.000	BE CLEANED BETTER & RE ZEROED.

pDR-1000 S/N: 06083
User ID: Location A
Tag Number: 03
Number of logged points: 64
Start time and date: 08:01:25 03-Nov
Elapsed time: 05:20:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 400.795 mg/m³
Time at maximum: 13:19:53 Nov 03
Max STEL Concentration: 17.073 mg/m³
Time at max STEL: 12:46:25 Nov 03
Overall Avg Conc: 3.038 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	3-Nov	08:06:25	0.011
2	3-Nov	08:11:25	0.008
3	3-Nov	08:16:25	0.018
4	3-Nov	08:21:25	0.013
5	3-Nov	08:26:25	0.005
6	3-Nov	08:31:25	0.004
7	3-Nov	08:36:25	0.005
8	3-Nov	08:41:25	0.001
9	3-Nov	08:46:25	0.003
10	3-Nov	08:51:25	0.009
11	3-Nov	08:56:25	0.016
12	3-Nov	09:01:25	0.003
13	3-Nov	09:06:25	0.002
14	3-Nov	09:11:25	0.002
15	3-Nov	09:16:25	0.003
16	3-Nov	09:21:25	0.01
17	3-Nov	09:26:25	0
18	3-Nov	09:31:25	0.001
19	3-Nov	09:36:25	0.002
20	3-Nov	09:41:25	0.008
21	3-Nov	09:46:25	0.004
22	3-Nov	09:51:25	0.03
23	3-Nov	09:56:25	0
24	3-Nov	10:01:25	0
25	3-Nov	10:06:25	0
26	3-Nov	10:11:25	0.04
27	3-Nov	10:16:25	0.187
28	3-Nov	10:21:25	0.153
29	3-Nov	10:26:25	0.006
30	3-Nov	10:31:25	0.001
31	3-Nov	10:36:25	0.014
32	3-Nov	10:41:25	0.298
33	3-Nov	10:46:25	0
34	3-Nov	10:51:25	0
35	3-Nov	10:56:25	0
36	3-Nov	11:01:25	0.001
37	3-Nov	11:06:25	0.002

38	3-Nov	11:11:25	0.002
39	3-Nov	11:16:25	0
40	3-Nov	11:21:25	0
41	3-Nov	11:26:25	0.002
42	3-Nov	11:31:25	0
43	3-Nov	11:36:25	0
44	3-Nov	11:41:25	1.211
45	3-Nov	11:46:25	23.68
46	3-Nov	11:51:25	10.89
47	3-Nov	11:56:25	3.255
48	3-Nov	12:01:25	19.65
49	3-Nov	12:06:25	24.14
50	3-Nov	12:11:25	0.073
51	3-Nov	12:16:25	2.761
52	3-Nov	12:21:25	0.501
53	3-Nov	12:26:25	0.006
54	3-Nov	12:31:25	0.009
55	3-Nov	12:36:25	26.92
56	3-Nov	12:41:25	14.14
57	3-Nov	12:46:25	10.17
58	3-Nov	12:51:25	1.984
59	3-Nov	12:56:25	3.22
60	3-Nov	13:01:25	6.65
61	3-Nov	13:06:25	2.686
62	3-Nov	13:11:25	0.133
63	3-Nov	13:16:25	6.99
64	3-Nov	13:21:25	27.29

00053230300006000803}

pDR-1000 S/N: 06131
User ID: Location B
Tag Number: 03
Number of logged points: 83
Start time and date: 08:01:42 03-Nov
Elapsed time: 06:55:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.230 mg/m³
Time at maximum: 13:32:49 Nov 03
Max STEL Concentration: 0.004 mg/m³
Time at max STEL: 08:10:12 Nov 03
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	3-Nov	08:06:42	0.011
2	3-Nov	08:11:42	0.002
3	3-Nov	08:16:42	0
4	3-Nov	08:21:42	0.001
5	3-Nov	08:26:42	0
6	3-Nov	08:31:42	0.003
7	3-Nov	08:36:42	0.003
8	3-Nov	08:41:42	0.001
9	3-Nov	08:46:42	0
10	3-Nov	08:51:42	0
11	3-Nov	08:56:42	0.002
12	3-Nov	09:01:42	0.002
13	3-Nov	09:06:42	0
14	3-Nov	09:11:42	0
15	3-Nov	09:16:42	0
16	3-Nov	09:21:42	0
17	3-Nov	09:26:42	0
18	3-Nov	09:31:42	0
19	3-Nov	09:36:42	0
20	3-Nov	09:41:42	0
21	3-Nov	09:46:42	0
22	3-Nov	09:51:42	0.001
23	3-Nov	09:56:42	0
24	3-Nov	10:01:42	0
25	3-Nov	10:06:42	0
26	3-Nov	10:11:42	0.001
27	3-Nov	10:16:42	0
28	3-Nov	10:21:42	0
29	3-Nov	10:26:42	0
30	3-Nov	10:31:42	0
31	3-Nov	10:36:42	0
32	3-Nov	10:41:42	0.001
33	3-Nov	10:46:42	0
34	3-Nov	10:51:42	0.002
35	3-Nov	10:56:42	0
36	3-Nov	11:01:42	0
37	3-Nov	11:06:42	0

38	3-Nov	11:11:42	0.001
39	3-Nov	11:16:42	0
40	3-Nov	11:21:42	0
41	3-Nov	11:26:42	0.004
42	3-Nov	11:31:42	0.002
43	3-Nov	11:36:42	0
44	3-Nov	11:41:42	0
45	3-Nov	11:46:42	0.002
46	3-Nov	11:51:42	0
47	3-Nov	11:56:42	0.002
48	3-Nov	12:01:42	0.001
49	3-Nov	12:06:42	0.004
50	3-Nov	12:11:42	0
51	3-Nov	12:16:42	0
52	3-Nov	12:21:42	0.001
53	3-Nov	12:26:42	0.001
54	3-Nov	12:31:42	0
55	3-Nov	12:36:42	0
56	3-Nov	12:41:42	0.001
57	3-Nov	12:46:42	0
58	3-Nov	12:51:42	0.001
59	3-Nov	12:56:42	0
60	3-Nov	13:01:42	0.004
61	3-Nov	13:06:42	0.008
62	3-Nov	13:11:42	0.005
63	3-Nov	13:16:42	0.001
64	3-Nov	13:21:42	0.011
65	3-Nov	13:26:42	0.006
66	3-Nov	13:31:42	0.001
67	3-Nov	13:36:42	0.011
68	3-Nov	13:41:42	0.001
69	3-Nov	13:46:42	0.002
70	3-Nov	13:51:42	0.003
71	3-Nov	13:56:42	0.003
72	3-Nov	14:01:42	0.001
73	3-Nov	14:06:42	0.006
74	3-Nov	14:11:42	0
75	3-Nov	14:16:42	0.001
76	3-Nov	14:21:42	0
77	3-Nov	14:26:42	0.001
78	3-Nov	14:31:42	0.001
79	3-Nov	14:36:42	0.001
80	3-Nov	14:41:42	0.001
81	3-Nov	14:46:42	0.011
82	3-Nov	14:51:42	0
83	3-Nov	14:56:42	0

00053230300006010301}

pDR-1000 S/N: 06133
User ID: Location C
Tag Number: 03
Number of logged points: 83
Start time and date: 08:02:00 03-Nov
Elapsed time: 06:55:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.096 mg/m³
Time at maximum: 14:45:51 Nov 03
Max STEL Concentration: 0.000 mg/m³
Time at max STEL: 08:02:00 Nov 03
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	3-Nov	08:07:00	0.003
2	3-Nov	08:12:00	0
3	3-Nov	08:17:00	0
4	3-Nov	08:22:00	0.001
5	3-Nov	08:27:00	0
6	3-Nov	08:32:00	0
7	3-Nov	08:37:00	0.001
8	3-Nov	08:42:00	0
9	3-Nov	08:47:00	0
10	3-Nov	08:52:00	0.002
11	3-Nov	08:57:00	0
12	3-Nov	09:02:00	0
13	3-Nov	09:07:00	0
14	3-Nov	09:12:00	0.001
15	3-Nov	09:17:00	0
16	3-Nov	09:22:00	0
17	3-Nov	09:27:00	0
18	3-Nov	09:32:00	0.006
19	3-Nov	09:37:00	0
20	3-Nov	09:42:00	0.001
21	3-Nov	09:47:00	0
22	3-Nov	09:52:00	0
23	3-Nov	09:57:00	0
24	3-Nov	10:02:00	0
25	3-Nov	10:07:00	0.001
26	3-Nov	10:12:00	0.001
27	3-Nov	10:17:00	0
28	3-Nov	10:22:00	0
29	3-Nov	10:27:00	0
30	3-Nov	10:32:00	0
31	3-Nov	10:37:00	0.001
32	3-Nov	10:42:00	0
33	3-Nov	10:47:00	0
34	3-Nov	10:52:00	0
35	3-Nov	10:57:00	0
36	3-Nov	11:02:00	0.002
37	3-Nov	11:07:00	0.001

38	3-Nov	11:12:00	0
39	3-Nov	11:17:00	0.002
40	3-Nov	11:22:00	0
41	3-Nov	11:27:00	0.002
42	3-Nov	11:32:00	0
43	3-Nov	11:37:00	0
44	3-Nov	11:42:00	0.001
45	3-Nov	11:47:00	0
46	3-Nov	11:52:00	0.002
47	3-Nov	11:57:00	0
48	3-Nov	12:02:00	0
49	3-Nov	12:07:00	0
50	3-Nov	12:12:00	0
51	3-Nov	12:17:00	0
52	3-Nov	12:22:00	0
53	3-Nov	12:27:00	0
54	3-Nov	12:32:00	0
55	3-Nov	12:37:00	0.002
56	3-Nov	12:42:00	0
57	3-Nov	12:47:00	0
58	3-Nov	12:52:00	0.001
59	3-Nov	12:57:00	0
60	3-Nov	13:02:00	0.001
61	3-Nov	13:07:00	0.001
62	3-Nov	13:12:00	0.003
63	3-Nov	13:17:00	0
64	3-Nov	13:22:00	0
65	3-Nov	13:27:00	0.002
66	3-Nov	13:32:00	0
67	3-Nov	13:37:00	0
68	3-Nov	13:42:00	0
69	3-Nov	13:47:00	0
70	3-Nov	13:52:00	0
71	3-Nov	13:57:00	0
72	3-Nov	14:02:00	0.001
73	3-Nov	14:07:00	0.001
74	3-Nov	14:12:00	0
75	3-Nov	14:17:00	0
76	3-Nov	14:22:00	0
77	3-Nov	14:27:00	0
78	3-Nov	14:32:00	0
79	3-Nov	14:37:00	0
80	3-Nov	14:42:00	0
81	3-Nov	14:47:00	0.005
82	3-Nov	14:52:00	0
83	3-Nov	14:57:00	0

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BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

Air Monitoring

Project: FORMER TRW, UTICA, NY

Date: 11/04/05

Monitoring Instruments: pDR-1000AN

Air Monitor: A. ENGK

Activity: PLACEMENT / GRADING OF RUN-OF-BANK MATERIAL

Level of Protection: MOD. LEVEL D

Time	Location (SEE FIGURE)	Instrument Reading (mg/m3)	Comments
730	~~A~~ A	0.000	WORK AREA: SOUTHE PORTION OF AREA-5
730	B	0.000	
830	A	0.000	
830	B	0.000	
930	A	0.000	
930	B	0.000	
1030	A	0.000	
1030	B	0.000	
1030	C	0.000	CLEANED METER W/ COMPESSED AIR, CALIBRATE & RESTARTED. METER SEEMED TO FUNCTION
1130	A	0.000	PROPERLY SO IT WAS
1130	B	0.000	PLACED IN THE UPWIND
1130	C	0.000	LOCATION INDICATED ON THE FIG.
1230	A	0.000	
1230	B	0.000	
1230	C	0.005	
1330	A-2	0.000	WORK AREA CHANGED TO EASTERN PORTION OF AREA-3.
1330	B-2	0.000	
1330	C-2	0.001	
1430	A-2	0.000	
1430	B-2	0.000	
1430	C-2	0.004	
1530	A-2	0.000	
1530	B-2	0.010	
1530	C-2	0.043	METER CONTINUES TO HAVE ABNORMA HIGH READINGS
1630	A-2	0.000	
1630	B-2	0.000	
1630	C-2	0.024	

pDR-1000 S/N: 06133
User ID: Location A
Tag Number: 04
Number of logged points: 105
Start time and date: 07:31:38 04-Nov
Elapsed time: 08:45:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 1.588 mg/m³
Time at maximum: 12:09:03 Nov 04
Max STEL Concentration: 0.019 mg/m³
Time at max STEL: 12:22:39 Nov 04
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	4-Nov	07:36:38	0.001
2	4-Nov	07:41:38	0.002
3	4-Nov	07:46:38	0.003
4	4-Nov	07:51:38	0.002
5	4-Nov	07:56:38	0.002
6	4-Nov	08:01:38	0.003
7	4-Nov	08:06:38	0.004
8	4-Nov	08:11:38	0.001
9	4-Nov	08:16:38	0
10	4-Nov	08:21:38	0
11	4-Nov	08:26:38	0
12	4-Nov	08:31:38	0
13	4-Nov	08:36:38	0
14	4-Nov	08:41:38	0
15	4-Nov	08:46:38	0
16	4-Nov	08:51:38	0
17	4-Nov	08:56:38	0.001
18	4-Nov	09:01:38	0
19	4-Nov	09:06:38	0
20	4-Nov	09:11:38	0
21	4-Nov	09:16:38	0
22	4-Nov	09:21:38	0
23	4-Nov	09:26:38	0
24	4-Nov	09:31:38	0
25	4-Nov	09:36:38	0
26	4-Nov	09:41:38	0
27	4-Nov	09:46:38	0
28	4-Nov	09:51:38	0
29	4-Nov	09:56:38	0
30	4-Nov	10:01:38	0
31	4-Nov	10:06:38	0
32	4-Nov	10:11:38	0
33	4-Nov	10:16:38	0
34	4-Nov	10:21:38	0
35	4-Nov	10:26:38	0
36	4-Nov	10:31:38	0
37	4-Nov	10:36:38	0.006

38	4-Nov	10:41:38	0
39	4-Nov	10:46:38	0
40	4-Nov	10:51:38	0
41	4-Nov	10:56:38	0
42	4-Nov	11:01:38	0
43	4-Nov	11:06:38	0
44	4-Nov	11:11:38	0
45	4-Nov	11:16:38	0
46	4-Nov	11:21:38	0
47	4-Nov	11:26:38	0
48	4-Nov	11:31:38	0
49	4-Nov	11:36:38	0
50	4-Nov	11:41:38	0.001
51	4-Nov	11:46:38	0
52	4-Nov	11:51:38	0
53	4-Nov	11:56:38	0
54	4-Nov	12:01:38	0
55	4-Nov	12:06:38	0
56	4-Nov	12:11:38	0.133
57	4-Nov	12:16:38	0
58	4-Nov	12:21:38	0.002
59	4-Nov	12:26:38	0.005
60	4-Nov	12:31:38	0
61	4-Nov	12:36:38	0
62	4-Nov	12:41:38	0
63	4-Nov	12:46:38	0
64	4-Nov	12:51:38	0.002
65	4-Nov	12:56:38	0.017
66	4-Nov	13:01:38	0.028
67	4-Nov	13:06:38	0.017
68	4-Nov	13:11:38	0.016
69	4-Nov	13:16:38	0
70	4-Nov	13:21:38	0
71	4-Nov	13:26:38	0
72	4-Nov	13:31:38	0
73	4-Nov	13:36:38	0
74	4-Nov	13:41:38	0
75	4-Nov	13:46:38	0
76	4-Nov	13:51:38	0.016
77	4-Nov	13:56:38	0
78	4-Nov	14:01:38	0
79	4-Nov	14:06:38	0
80	4-Nov	14:11:38	0
81	4-Nov	14:16:38	0
82	4-Nov	14:21:38	0
83	4-Nov	14:26:38	0
84	4-Nov	14:31:38	0
85	4-Nov	14:36:38	0
86	4-Nov	14:41:38	0
87	4-Nov	14:46:38	0.004
88	4-Nov	14:51:38	0
89	4-Nov	14:56:38	0

90	4-Nov	15:01:38	0
91	4-Nov	15:06:38	0
92	4-Nov	15:11:38	0
93	4-Nov	15:16:38	0.006
94	4-Nov	15:21:38	0.016
95	4-Nov	15:26:38	0.001
96	4-Nov	15:31:38	0.001
97	4-Nov	15:36:38	0
98	4-Nov	15:41:38	0.001
99	4-Nov	15:46:38	0.001
100	4-Nov	15:51:38	0.005
101	4-Nov	15:56:38	0.015
102	4-Nov	16:01:38	0.009
103	4-Nov	16:06:38	0.013
104	4-Nov	16:11:38	0.005
105	4-Nov	16:16:38	0.004

0005323030000601030 3}

pDR-1000 S/N: 06131
User ID: Location B
Tag Number: 04
Number of logged points: 105
Start time and date: 07:32:18 04-Nov
Elapsed time: 08:45:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.513 mg/m³
Time at maximum: 15:05:56 Nov 04
Max STEL Concentration: 0.047 mg/m³
Time at max STEL: 15:19:48 Nov 04
Overall Avg Conc: 0.003 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	4-Nov	07:37:18	0.017
2	4-Nov	07:42:18	0.011
3	4-Nov	07:47:18	0.009
4	4-Nov	07:52:18	0.012
5	4-Nov	07:57:18	0.012
6	4-Nov	08:02:18	0.009
7	4-Nov	08:07:18	0.014
8	4-Nov	08:12:18	0.006
9	4-Nov	08:17:18	0.003
10	4-Nov	08:22:18	0.004
11	4-Nov	08:27:18	0.003
12	4-Nov	08:32:18	0.013
13	4-Nov	08:37:18	0.006
14	4-Nov	08:42:18	0.009
15	4-Nov	08:47:18	0.005
16	4-Nov	08:52:18	0.003
17	4-Nov	08:57:18	0.001
18	4-Nov	09:02:18	0.001
19	4-Nov	09:07:18	0.01
20	4-Nov	09:12:18	0.012
21	4-Nov	09:17:18	0
22	4-Nov	09:22:18	0.003
23	4-Nov	09:27:18	0.003
24	4-Nov	09:32:18	0.014
25	4-Nov	09:37:18	0.001
26	4-Nov	09:42:18	0.001
27	4-Nov	09:47:18	0
28	4-Nov	09:52:18	0
29	4-Nov	09:57:18	0.006
30	4-Nov	10:02:18	0.036
31	4-Nov	10:07:18	0.057
32	4-Nov	10:12:18	0.003
33	4-Nov	10:17:18	0.002
34	4-Nov	10:22:18	0.029
35	4-Nov	10:27:18	0.012
36	4-Nov	10:32:18	0.001
37	4-Nov	10:37:18	0.002

38	4-Nov	10:42:18	0
39	4-Nov	10:47:18	0
40	4-Nov	10:52:18	0
41	4-Nov	10:57:18	0
42	4-Nov	11:02:18	0.001
43	4-Nov	11:07:18	0
44	4-Nov	11:12:18	0
45	4-Nov	11:17:18	0.005
46	4-Nov	11:22:18	0
47	4-Nov	11:27:18	0.001
48	4-Nov	11:32:18	0.004
49	4-Nov	11:37:18	0.004
50	4-Nov	11:42:18	0
51	4-Nov	11:47:18	0.001
52	4-Nov	11:52:18	0.002
53	4-Nov	11:57:18	0.006
54	4-Nov	12:02:18	0
55	4-Nov	12:07:18	0.002
56	4-Nov	12:12:18	0.003
57	4-Nov	12:17:18	0.003
58	4-Nov	12:22:18	0.002
59	4-Nov	12:27:18	0.005
60	4-Nov	12:32:18	0.001
61	4-Nov	12:37:18	0.002
62	4-Nov	12:42:18	0.002
63	4-Nov	12:47:18	0.001
64	4-Nov	12:52:18	0
65	4-Nov	12:57:18	0.007
66	4-Nov	13:02:18	0.002
67	4-Nov	13:07:18	0.002
68	4-Nov	13:12:18	0.003
69	4-Nov	13:17:18	0.006
70	4-Nov	13:22:18	0.001
71	4-Nov	13:27:18	0.005
72	4-Nov	13:32:18	0.004
73	4-Nov	13:37:18	0.003
74	4-Nov	13:42:18	0
75	4-Nov	13:47:18	0.001
76	4-Nov	13:52:18	0.002
77	4-Nov	13:57:18	0.002
78	4-Nov	14:02:18	0.002
79	4-Nov	14:07:18	0.006
80	4-Nov	14:12:18	0.011
81	4-Nov	14:17:18	0.002
82	4-Nov	14:22:18	0.001
83	4-Nov	14:27:18	0.015
84	4-Nov	14:32:18	0.01
85	4-Nov	14:37:18	0.009
86	4-Nov	14:42:18	0.003
87	4-Nov	14:47:18	0.002
88	4-Nov	14:52:18	0.016
89	4-Nov	14:57:18	0.007

90	4-Nov	15:02:18	0.03
91	4-Nov	15:07:18	0.075
92	4-Nov	15:12:18	0.02
93	4-Nov	15:17:18	0.023
94	4-Nov	15:22:18	0.039
95	4-Nov	15:27:18	0.015
96	4-Nov	15:32:18	0.015
97	4-Nov	15:37:18	0.003
98	4-Nov	15:42:18	0.022
99	4-Nov	15:47:18	0.011
100	4-Nov	15:52:18	0.015
101	4-Nov	15:57:18	0.005
102	4-Nov	16:02:18	0.005
103	4-Nov	16:07:18	0.012
104	4-Nov	16:12:18	0.026
105	4-Nov	16:17:18	0.019

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engineers & scientists

Air Monitoring

Project: FORMER TRW, UTICA, NY

Date: 11/03/05

Monitoring Instruments: pDR-1000 AN

Air Monitor: A. ENGLK

Activity: PLACEMENT / GRADING OF TOPSOIL

Level of Protection: MOD. LEVEL D

Time	Location (SEE FIELD BOOK)	Instrument Reading (mg/m3)	Comments
800	A	0.000	
800	B		
800	C		
900	A		
900	B		
900	C		
1000	A		
1000	B		
1000	C		

pDR-1000 S/N: 06133
User ID: Location A
Tag Number: 05
Number of logged points: 21
Start time and date: 08:04:51 05-Nov
Elapsed time: 01:45:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.078 mg/m³
Time at maximum: 09:50:59 Nov 05
Max STEL Concentration: 0.000 mg/m³
Time at max STEL: 08:04:51 Nov 05
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	5-Nov	08:09:51	0.004
2	5-Nov	08:14:51	0.006
3	5-Nov	08:19:51	0
4	5-Nov	08:24:51	0.001
5	5-Nov	08:29:51	0
6	5-Nov	08:34:51	0
7	5-Nov	08:39:51	0
8	5-Nov	08:44:51	0.001
9	5-Nov	08:49:51	0.001
10	5-Nov	08:54:51	0.005
11	5-Nov	08:59:51	0.002
12	5-Nov	09:04:51	0.001
13	5-Nov	09:09:51	0
14	5-Nov	09:14:51	0.002
15	5-Nov	09:19:51	0.003
16	5-Nov	09:24:51	0.001
17	5-Nov	09:29:51	0.002
18	5-Nov	09:34:51	0.001
19	5-Nov	09:39:51	0.001
20	5-Nov	09:44:51	0
21	5-Nov	09:49:51	0.002

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pDR-1000 S/N: 06131
User ID: Location B
Tag Number: 05
Number of logged points: 21
Start time and date: 08:05:28 05-Nov
Elapsed time: 01:45:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.236 mg/m³
Time at maximum: 08:45:00 Nov 05
Max STEL Concentration: 0.000 mg/m³
Time at max STEL: 08:05:28 Nov 05
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	5-Nov	08:10:28	0.007
2	5-Nov	08:15:28	0.002
3	5-Nov	08:20:28	0.002
4	5-Nov	08:25:28	0.002
5	5-Nov	08:30:28	0.008
6	5-Nov	08:35:28	0
7	5-Nov	08:40:28	0.001
8	5-Nov	08:45:28	0.009
9	5-Nov	08:50:28	0.001
10	5-Nov	08:55:28	0.008
11	5-Nov	09:00:28	0.005
12	5-Nov	09:05:28	0.002
13	5-Nov	09:10:28	0.001
14	5-Nov	09:15:28	0.002
15	5-Nov	09:20:28	0.004
16	5-Nov	09:25:28	0.004
17	5-Nov	09:30:28	0.001
18	5-Nov	09:35:28	0.001
19	5-Nov	09:40:28	0.002
20	5-Nov	09:45:28	0.004
21	5-Nov	09:50:28	0.004

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pDR-1000 S/N: 06083
User ID: Location C
Tag Number: 04
Number of logged points: 21
Start time and date: 08:02:06 05-Nov
Elapsed time: 01:45:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.123 mg/m³
Time at maximum: 09:39:22 Nov 05
Max STEL Concentration: 0.001 mg/m³
Time at max STEL: 08:02:36 Nov 05
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	5-Nov	08:07:06	0.004
2	5-Nov	08:12:06	0.002
3	5-Nov	08:17:06	0.001
4	5-Nov	08:22:06	0
5	5-Nov	08:27:06	0.001
6	5-Nov	08:32:06	0
7	5-Nov	08:37:06	0
8	5-Nov	08:42:06	0
9	5-Nov	08:47:06	0.001
10	5-Nov	08:52:06	0.002
11	5-Nov	08:57:06	0.001
12	5-Nov	09:02:06	0
13	5-Nov	09:07:06	0.001
14	5-Nov	09:12:06	0.001
15	5-Nov	09:17:06	0
16	5-Nov	09:22:06	0
17	5-Nov	09:27:06	0
18	5-Nov	09:32:06	0.005
19	5-Nov	09:37:06	0.001
20	5-Nov	09:42:06	0.004
21	5-Nov	09:47:06	0.001

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Air Monitoring

Project: FORMER TRW, UTICA, NY
Date: 11/07/05
Monitoring Instruments: pDR-1000AN
Air Monitor: A. ENIGK
Activity: PLACEMENT/GRADING OF TOPSOIL
Level of Protection: MOD. LEVEL D

Time	(SEE FIELD BOOK) Location	(mg/m3) Instrument Reading	Comments
800	A	0.000	
800	B	0.000	
800	C	0.238	RECALIBRATED
900	A	0.000	
900	B	0.004	
900	C	0.010	
1000	A	0.000	
1000	B	0.005	
1000	C	0.000	
1100	A	0.007	
1100	B	0.000	
1100	C	0.000	
1200	A	0.006	
1200	B	0.021	
1200	C	0.000	
1300	A	0.004	
1300	B	0.010	
1300	C	0.000	
1400	A	0.008	
1400	B	0.006	
1400	C	0.000	
1500	A	0.008	
1500	B	0.006	
1500	C	0.000	
1600	A	0.000	
1600	B	0.000	
1600	C	0.000	

pDR-1000 S/N: 00000
User ID: Location A
Tag Number: 01
Number of logged points: 92
Start time and date: 08:04:00 07-Nov
Elapsed time: 07:40:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.213 mg/m³
Time at maximum: 10:47:04 Nov 07
Max STEL Concentration: 0.022 mg/m³
Time at max STEL: 10:50:31 Nov 07
Overall Avg Conc: 0.006 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	7-Nov	08:09:00	0.008
2	7-Nov	08:14:00	0.008
3	7-Nov	08:19:00	0.006
4	7-Nov	08:24:00	0.006
5	7-Nov	08:29:00	0.006
6	7-Nov	08:34:00	0.005
7	7-Nov	08:39:00	0.005
8	7-Nov	08:44:00	0.006
9	7-Nov	08:49:00	0.005
10	7-Nov	08:54:00	0.011
11	7-Nov	08:59:00	0.005
12	7-Nov	09:04:00	0.006
13	7-Nov	09:09:00	0.004
14	7-Nov	09:14:00	0.004
15	7-Nov	09:19:00	0.004
16	7-Nov	09:24:00	0.014
17	7-Nov	09:29:00	0.009
18	7-Nov	09:34:00	0.01
19	7-Nov	09:39:00	0.008
20	7-Nov	09:44:00	0.008
21	7-Nov	09:49:00	0.009
22	7-Nov	09:54:00	0.008
23	7-Nov	09:59:00	0.011
24	7-Nov	10:04:00	0.019
25	7-Nov	10:09:00	0.01
26	7-Nov	10:14:00	0.008
27	7-Nov	10:19:00	0.007
28	7-Nov	10:24:00	0.008
29	7-Nov	10:29:00	0.007
30	7-Nov	10:34:00	0.007
31	7-Nov	10:39:00	0.01
32	7-Nov	10:44:00	0.021
33	7-Nov	10:49:00	0.031
34	7-Nov	10:54:00	0.011
35	7-Nov	10:59:00	0.007
36	7-Nov	11:04:00	0.007
37	7-Nov	11:09:00	0.011

38	7-Nov	11:14:00	0.013
39	7-Nov	11:19:00	0.009
40	7-Nov	11:24:00	0.01
41	7-Nov	11:29:00	0.01
42	7-Nov	11:34:00	0.006
43	7-Nov	11:39:00	0.006
44	7-Nov	11:44:00	0.005
45	7-Nov	11:49:00	0.007
46	7-Nov	11:54:00	0.008
47	7-Nov	11:59:00	0.006
48	7-Nov	12:04:00	0.004
49	7-Nov	12:09:00	0.005
50	7-Nov	12:14:00	0.004
51	7-Nov	12:19:00	0.004
52	7-Nov	12:24:00	0.004
53	7-Nov	12:29:00	0.004
54	7-Nov	12:34:00	0.004
55	7-Nov	12:39:00	0.008
56	7-Nov	12:44:00	0.007
57	7-Nov	12:49:00	0.006
58	7-Nov	12:54:00	0.004
59	7-Nov	12:59:00	0.004
60	7-Nov	13:04:00	0.005
61	7-Nov	13:09:00	0.005
62	7-Nov	13:14:00	0.006
63	7-Nov	13:19:00	0.006
64	7-Nov	13:24:00	0.004
65	7-Nov	13:29:00	0.005
66	7-Nov	13:34:00	0.003
67	7-Nov	13:39:00	0.003
68	7-Nov	13:44:00	0.003
69	7-Nov	13:49:00	0.003
70	7-Nov	13:54:00	0.003
71	7-Nov	13:59:00	0.003
72	7-Nov	14:04:00	0.003
73	7-Nov	14:09:00	0.005
74	7-Nov	14:14:00	0.003
75	7-Nov	14:19:00	0.004
76	7-Nov	14:24:00	0.007
77	7-Nov	14:29:00	0.004
78	7-Nov	14:34:00	0.004
79	7-Nov	14:39:00	0.004
80	7-Nov	14:44:00	0.004
81	7-Nov	14:49:00	0.003
82	7-Nov	14:54:00	0.005
83	7-Nov	14:59:00	0.002
84	7-Nov	15:04:00	0.002
85	7-Nov	15:09:00	0.002
86	7-Nov	15:14:00	0.003
87	7-Nov	15:19:00	0.002
88	7-Nov	15:24:00	0.003
89	7-Nov	15:29:00	0.002

90	7-Nov	15:34:00	0.004
91	7-Nov	15:39:00	0.009
92	7-Nov	15:44:00	0.006

00053230300000000000}

pDR-1000 S/N: 06131
User ID: Location B
Tag Number: 01
Number of logged points: 91
Start time and date: 08:09:10 07-Nov
Elapsed time: 07:35:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.264 mg/m³
Time at maximum: 15:04:08 Nov 07
Max STEL Concentration: 0.010 mg/m³
Time at max STEL: 11:44:41 Nov 07
Overall Avg Conc: 0.001 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	7-Nov	08:14:10	0.002
2	7-Nov	08:19:10	0.001
3	7-Nov	08:24:10	0.002
4	7-Nov	08:29:10	0
5	7-Nov	08:34:10	0.001
6	7-Nov	08:39:10	0
7	7-Nov	08:44:10	0.001
8	7-Nov	08:49:10	0
9	7-Nov	08:54:10	0
10	7-Nov	08:59:10	0
11	7-Nov	09:04:10	0
12	7-Nov	09:09:10	0
13	7-Nov	09:14:10	0
14	7-Nov	09:19:10	0
15	7-Nov	09:24:10	0
16	7-Nov	09:29:10	0
17	7-Nov	09:34:10	0.001
18	7-Nov	09:39:10	0.001
19	7-Nov	09:44:10	0
20	7-Nov	09:49:10	0.001
21	7-Nov	09:54:10	0.001
22	7-Nov	09:59:10	0.002
23	7-Nov	10:04:10	0.001
24	7-Nov	10:09:10	0.001
25	7-Nov	10:14:10	0
26	7-Nov	10:19:10	0
27	7-Nov	10:24:10	0.001
28	7-Nov	10:29:10	0.003
29	7-Nov	10:34:10	0.001
30	7-Nov	10:39:10	0
31	7-Nov	10:44:10	0.001
32	7-Nov	10:49:10	0.001
33	7-Nov	10:54:10	0
34	7-Nov	10:59:10	0.001
35	7-Nov	11:04:10	0.001
36	7-Nov	11:09:10	0.001
37	7-Nov	11:14:10	0

38	7-Nov	11:19:10	0.002
39	7-Nov	11:24:10	0.001
40	7-Nov	11:29:10	0.003
41	7-Nov	11:34:10	0.005
42	7-Nov	11:39:10	0.01
43	7-Nov	11:44:10	0.016
44	7-Nov	11:49:10	0.003
45	7-Nov	11:54:10	0
46	7-Nov	11:59:10	0.001
47	7-Nov	12:04:10	0.001
48	7-Nov	12:09:10	0
49	7-Nov	12:14:10	0.001
50	7-Nov	12:19:10	0.001
51	7-Nov	12:24:10	0
52	7-Nov	12:29:10	0
53	7-Nov	12:34:10	0.003
54	7-Nov	12:39:10	0.001
55	7-Nov	12:44:10	0.003
56	7-Nov	12:49:10	0.006
57	7-Nov	12:54:10	0.008
58	7-Nov	12:59:10	0.009
59	7-Nov	13:04:10	0.007
60	7-Nov	13:09:10	0.004
61	7-Nov	13:14:10	0.001
62	7-Nov	13:19:10	0.003
63	7-Nov	13:24:10	0.002
64	7-Nov	13:29:10	0.009
65	7-Nov	13:34:10	0.002
66	7-Nov	13:39:10	0.003
67	7-Nov	13:44:10	0.004
68	7-Nov	13:49:10	0.005
69	7-Nov	13:54:10	0.004
70	7-Nov	13:59:10	0.004
71	7-Nov	14:04:10	0.001
72	7-Nov	14:09:10	0.005
73	7-Nov	14:14:10	0.001
74	7-Nov	14:19:10	0
75	7-Nov	14:24:10	0.002
76	7-Nov	14:29:10	0.001
77	7-Nov	14:34:10	0.001
78	7-Nov	14:39:10	0.001
79	7-Nov	14:44:10	0.003
80	7-Nov	14:49:10	0.004
81	7-Nov	14:54:10	0.006
82	7-Nov	14:59:10	0.002
83	7-Nov	15:04:10	0.013
84	7-Nov	15:09:10	0.001
85	7-Nov	15:14:10	0.001
86	7-Nov	15:19:10	0
87	7-Nov	15:24:10	0
88	7-Nov	15:29:10	0.001
89	7-Nov	15:34:10	0.004

90 7-Nov 15:39:10 0.005
91 7-Nov 15:44:10 0.005
00053230300006010301}

pDR-1000 S/N: 06083
User ID: Location C
Tag Number: 01
Number of logged points: 15
Start time and date: 08:03:44 07-Nov
Elapsed time: 01:15:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.243 mg/m³
Time at maximum: 08:05:29 Nov 07
Max STEL Concentration: 0.209 mg/m³
Time at max STEL: 08:18:44 Nov 07
Overall Avg Conc: 0.205 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	7-Nov	08:08:44	0.214
2	7-Nov	08:13:44	0.206
3	7-Nov	08:18:44	0.205
4	7-Nov	08:23:44	0.207
5	7-Nov	08:28:44	0.206
6	7-Nov	08:33:44	0.206
7	7-Nov	08:38:44	0.206
8	7-Nov	08:43:44	0.206
9	7-Nov	08:48:44	0.204
10	7-Nov	08:53:44	0.202
11	7-Nov	08:58:44	0.203
12	7-Nov	09:03:44	0.205
13	7-Nov	09:08:44	0.202
14	7-Nov	09:13:44	0.202
15	7-Nov	09:18:44	0.203

00053230300006000803}

pDR-1000 S/N: 06083
User ID: Location C
Tag Number: 02
Number of logged points: 76
Start time and date: 09:23:36 07-Nov
Elapsed time: 06:20:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.087 mg/m³
Time at maximum: 15:43:09 Nov 07
Max STEL Concentration: 0.006 mg/m³
Time at max STEL: 15:43:37 Nov 07
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	7-Nov	09:28:36	0.001
2	7-Nov	09:33:36	0
3	7-Nov	09:38:36	0
4	7-Nov	09:43:36	0.001
5	7-Nov	09:48:36	0.002
6	7-Nov	09:53:36	0.001
7	7-Nov	09:58:36	0
8	7-Nov	10:03:36	0.001
9	7-Nov	10:08:36	0.001
10	7-Nov	10:13:36	0
11	7-Nov	10:18:36	0.001
12	7-Nov	10:23:36	0.001
13	7-Nov	10:28:36	0.001
14	7-Nov	10:33:36	0.001
15	7-Nov	10:38:36	0.001
16	7-Nov	10:43:36	0.002
17	7-Nov	10:48:36	0.001
18	7-Nov	10:53:36	0.001
19	7-Nov	10:58:36	0.001
20	7-Nov	11:03:36	0.001
21	7-Nov	11:08:36	0.002
22	7-Nov	11:13:36	0.001
23	7-Nov	11:18:36	0.002
24	7-Nov	11:23:36	0
25	7-Nov	11:28:36	0.001
26	7-Nov	11:33:36	0.001
27	7-Nov	11:38:36	0.001
28	7-Nov	11:43:36	0.002
29	7-Nov	11:48:36	0.001
30	7-Nov	11:53:36	0.003
31	7-Nov	11:58:36	0.001
32	7-Nov	12:03:36	0.002
33	7-Nov	12:08:36	0.001
34	7-Nov	12:13:36	0.003
35	7-Nov	12:18:36	0.001
36	7-Nov	12:23:36	0.002
37	7-Nov	12:28:36	0.001

38	7-Nov	12:33:36	0.001
39	7-Nov	12:38:36	0.001
40	7-Nov	12:43:36	0.002
41	7-Nov	12:48:36	0.002
42	7-Nov	12:53:36	0.002
43	7-Nov	12:58:36	0.001
44	7-Nov	13:03:36	0.002
45	7-Nov	13:08:36	0.002
46	7-Nov	13:13:36	0.001
47	7-Nov	13:18:36	0.001
48	7-Nov	13:23:36	0.001
49	7-Nov	13:28:36	0
50	7-Nov	13:33:36	0.001
51	7-Nov	13:38:36	0.002
52	7-Nov	13:43:36	0.001
53	7-Nov	13:48:36	0.001
54	7-Nov	13:53:36	0.002
55	7-Nov	13:58:36	0.001
56	7-Nov	14:03:36	0.002
57	7-Nov	14:08:36	0.002
58	7-Nov	14:13:36	0.001
59	7-Nov	14:18:36	0.001
60	7-Nov	14:23:36	0.002
61	7-Nov	14:28:36	0.001
62	7-Nov	14:33:36	0.001
63	7-Nov	14:38:36	0.001
64	7-Nov	14:43:36	0.002
65	7-Nov	14:48:36	0.001
66	7-Nov	14:53:36	0.001
67	7-Nov	14:58:36	0.002
68	7-Nov	15:03:36	0.004
69	7-Nov	15:08:36	0.001
70	7-Nov	15:13:36	0.005
71	7-Nov	15:18:36	0.003
72	7-Nov	15:23:36	0.001
73	7-Nov	15:28:36	0.001
74	7-Nov	15:33:36	0.004
75	7-Nov	15:38:36	0.009
76	7-Nov	15:43:36	0.009

00053230300006000803}

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Air Monitoring

Project: FORMER TRW, UTICA, NY

Date: 11/08/05

Monitoring Instruments: pDR-1000 AN

Air Monitor: A. ENIGK

Activity: GRADING OF TOPSOIL ON AREA-5

Level of Protection: MOD. LEVEL D

Time	Location (SEE FIELD BOOK)	Instrument Reading (mg/m³)	Comments
700	A	0.000	
700	B	0.000	
700	C	0.000	
800	A	0.000	
800	B	0.000	
800	C	0.000	
900	A	0.000	
900	B	0.000	
900	C	0.000	
1000	A	0.000	
1000	B	0.006	
1000	C	0.000	
1100	A	0.000	
1100	B	0.000	
1100	C	0.000	
1200	A	0.006	
1200	B	0.000	
1200	C	0.000	
1300	A	0.000	
1300	B	0.000	
1300	C	0.000	
1400	A	0.000	
1400	B	0.000	
1400	C	0.000	
1500	A	0.006	
1500	B	0.006	
1500	C	0.000	

pDR-1000 S/N: 00000
User ID: Location A
Tag Number: 02
Number of logged points: 94
Start time and date: 07:21:09 08-Nov
Elapsed time: 07:50:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.170 mg/m³
Time at maximum: 07:47:01 Nov 08
Max STEL Concentration: 0.007 mg/m³
Time at max STEL: 08:30:09 Nov 08
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	8-Nov	07:26:09	0.003
2	8-Nov	07:31:09	0.003
3	8-Nov	07:36:09	0.002
4	8-Nov	07:41:09	0
5	8-Nov	07:46:09	0
6	8-Nov	07:51:09	0.009
7	8-Nov	07:56:09	0.001
8	8-Nov	08:01:09	0.002
9	8-Nov	08:06:09	0.001
10	8-Nov	08:11:09	0.002
11	8-Nov	08:16:09	0.003
12	8-Nov	08:21:09	0.005
13	8-Nov	08:26:09	0.007
14	8-Nov	08:31:09	0.01
15	8-Nov	08:36:09	0.005
16	8-Nov	08:41:09	0.006
17	8-Nov	08:46:09	0.007
18	8-Nov	08:51:09	0.005
19	8-Nov	08:56:09	0.005
20	8-Nov	09:01:09	0.005
21	8-Nov	09:06:09	0.003
22	8-Nov	09:11:09	0.003
23	8-Nov	09:16:09	0.002
24	8-Nov	09:21:09	0.002
25	8-Nov	09:26:09	0.001
26	8-Nov	09:31:09	0.001
27	8-Nov	09:36:09	0
28	8-Nov	09:41:09	0
29	8-Nov	09:46:09	0.001
30	8-Nov	09:51:09	0
31	8-Nov	09:56:09	0.001
32	8-Nov	10:01:09	0
33	8-Nov	10:06:09	0
34	8-Nov	10:11:09	0
35	8-Nov	10:16:09	0
36	8-Nov	10:21:09	0
37	8-Nov	10:26:09	0

38	8-Nov	10:31:09	0
39	8-Nov	10:36:09	0
40	8-Nov	10:41:09	0
41	8-Nov	10:46:09	0
42	8-Nov	10:51:09	0
43	8-Nov	10:56:09	0
44	8-Nov	11:01:09	0
45	8-Nov	11:06:09	0
46	8-Nov	11:11:09	0
47	8-Nov	11:16:09	0
48	8-Nov	11:21:09	0
49	8-Nov	11:26:09	0
50	8-Nov	11:31:09	0
51	8-Nov	11:36:09	0
52	8-Nov	11:41:09	0
53	8-Nov	11:46:09	0
54	8-Nov	11:51:09	0
55	8-Nov	11:56:09	0
56	8-Nov	12:01:09	0
57	8-Nov	12:06:09	0
58	8-Nov	12:11:09	0
59	8-Nov	12:16:09	0
60	8-Nov	12:21:09	0
61	8-Nov	12:26:09	0
62	8-Nov	12:31:09	0
63	8-Nov	12:36:09	0
64	8-Nov	12:41:09	0
65	8-Nov	12:46:09	0
66	8-Nov	12:51:09	0
67	8-Nov	12:56:09	0
68	8-Nov	13:01:09	0
69	8-Nov	13:06:09	0
70	8-Nov	13:11:09	0
71	8-Nov	13:16:09	0
72	8-Nov	13:21:09	0
73	8-Nov	13:26:09	0
74	8-Nov	13:31:09	0.002
75	8-Nov	13:36:09	0
76	8-Nov	13:41:09	0.005
77	8-Nov	13:46:09	0.002
78	8-Nov	13:51:09	0
79	8-Nov	13:56:09	0.001
80	8-Nov	14:01:09	0
81	8-Nov	14:06:09	0
82	8-Nov	14:11:09	0
83	8-Nov	14:16:09	0
84	8-Nov	14:21:09	0
85	8-Nov	14:26:09	0
86	8-Nov	14:31:09	0
87	8-Nov	14:36:09	0
88	8-Nov	14:41:09	0
89	8-Nov	14:46:09	0

90 8-Nov 14:51:09 0
91 8-Nov 14:56:09 0
92 8-Nov 15:01:09 0
93 8-Nov 15:06:09 0
94 8-Nov 15:11:09 0
00053230300000000000}

pDR-1000 S/N: 06131
User ID: Location B
Tag Number: 02
Number of logged points: 94
Start time and date: 07:23:41 08-Nov
Elapsed time: 07:50:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.072 mg/m³
Time at maximum: 08:24:37 Nov 08
Max STEL Concentration: 0.002 mg/m³
Time at max STEL: 08:33:41 Nov 08
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	8-Nov	07:28:41	0.002
2	8-Nov	07:33:41	0
3	8-Nov	07:38:41	0.001
4	8-Nov	07:43:41	0.001
5	8-Nov	07:48:41	0
6	8-Nov	07:53:41	0
7	8-Nov	07:58:41	0
8	8-Nov	08:03:41	0
9	8-Nov	08:08:41	0
10	8-Nov	08:13:41	0
11	8-Nov	08:18:41	0
12	8-Nov	08:23:41	0.002
13	8-Nov	08:28:41	0.006
14	8-Nov	08:33:41	0.002
15	8-Nov	08:38:41	0.001
16	8-Nov	08:43:41	0.003
17	8-Nov	08:48:41	0.001
18	8-Nov	08:53:41	0.001
19	8-Nov	08:58:41	0.001
20	8-Nov	09:03:41	0.003
21	8-Nov	09:08:41	0.001
22	8-Nov	09:13:41	0.002
23	8-Nov	09:18:41	0
24	8-Nov	09:23:41	0
25	8-Nov	09:28:41	0
26	8-Nov	09:33:41	0
27	8-Nov	09:38:41	0.001
28	8-Nov	09:43:41	0.001
29	8-Nov	09:48:41	0
30	8-Nov	09:53:41	0
31	8-Nov	09:58:41	0
32	8-Nov	10:03:41	0
33	8-Nov	10:08:41	0
34	8-Nov	10:13:41	0
35	8-Nov	10:18:41	0
36	8-Nov	10:23:41	0
37	8-Nov	10:28:41	0

38	8-Nov	10:33:41	0
39	8-Nov	10:38:41	0
40	8-Nov	10:43:41	0
41	8-Nov	10:48:41	0
42	8-Nov	10:53:41	0
43	8-Nov	10:58:41	0
44	8-Nov	11:03:41	0
45	8-Nov	11:08:41	0
46	8-Nov	11:13:41	0
47	8-Nov	11:18:41	0
48	8-Nov	11:23:41	0
49	8-Nov	11:28:41	0
50	8-Nov	11:33:41	0
51	8-Nov	11:38:41	0
52	8-Nov	11:43:41	0
53	8-Nov	11:48:41	0
54	8-Nov	11:53:41	0
55	8-Nov	11:58:41	0
56	8-Nov	12:03:41	0
57	8-Nov	12:08:41	0
58	8-Nov	12:13:41	0
59	8-Nov	12:18:41	0
60	8-Nov	12:23:41	0
61	8-Nov	12:28:41	0
62	8-Nov	12:33:41	0
63	8-Nov	12:38:41	0
64	8-Nov	12:43:41	0
65	8-Nov	12:48:41	0
66	8-Nov	12:53:41	0
67	8-Nov	12:58:41	0
68	8-Nov	13:03:41	0
69	8-Nov	13:08:41	0
70	8-Nov	13:13:41	0.001
71	8-Nov	13:18:41	0
72	8-Nov	13:23:41	0
73	8-Nov	13:28:41	0
74	8-Nov	13:33:41	0
75	8-Nov	13:38:41	0
76	8-Nov	13:43:41	0
77	8-Nov	13:48:41	0
78	8-Nov	13:53:41	0
79	8-Nov	13:58:41	0
80	8-Nov	14:03:41	0
81	8-Nov	14:08:41	0
82	8-Nov	14:13:41	0
83	8-Nov	14:18:41	0
84	8-Nov	14:23:41	0
85	8-Nov	14:28:41	0
86	8-Nov	14:33:41	0
87	8-Nov	14:38:41	0
88	8-Nov	14:43:41	0
89	8-Nov	14:48:41	0

90 8-Nov 14:53:41 0
91 8-Nov 14:58:41 0
92 8-Nov 15:03:41 0
93 8-Nov 15:08:41 0
94 8-Nov 15:13:41 0
00053230300006010301}

pDR-1000 S/N: 06083
User ID: Location C
Tag Number: 03
Number of logged points: 94
Start time and date: 07:19:47 08-Nov
Elapsed time: 07:50:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.022 mg/m³
Time at maximum: 12:13:07 Nov 08
Max STEL Concentration: 0.000 mg/m³
Time at max STEL: 07:19:47 Nov 08
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	8-Nov	07:24:47	0
2	8-Nov	07:29:47	0
3	8-Nov	07:34:47	0
4	8-Nov	07:39:47	0
5	8-Nov	07:44:47	0
6	8-Nov	07:49:47	0
7	8-Nov	07:54:47	0
8	8-Nov	07:59:47	0
9	8-Nov	08:04:47	0
10	8-Nov	08:09:47	0
11	8-Nov	08:14:47	0
12	8-Nov	08:19:47	0
13	8-Nov	08:24:47	0
14	8-Nov	08:29:47	0
15	8-Nov	08:34:47	0
16	8-Nov	08:39:47	0
17	8-Nov	08:44:47	0
18	8-Nov	08:49:47	0
19	8-Nov	08:54:47	0
20	8-Nov	08:59:47	0
21	8-Nov	09:04:47	0
22	8-Nov	09:09:47	0
23	8-Nov	09:14:47	0
24	8-Nov	09:19:47	0
25	8-Nov	09:24:47	0
26	8-Nov	09:29:47	0
27	8-Nov	09:34:47	0
28	8-Nov	09:39:47	0
29	8-Nov	09:44:47	0
30	8-Nov	09:49:47	0
31	8-Nov	09:54:47	0
32	8-Nov	09:59:47	0
33	8-Nov	10:04:47	0
34	8-Nov	10:09:47	0
35	8-Nov	10:14:47	0
36	8-Nov	10:19:47	0
37	8-Nov	10:24:47	0

38	8-Nov	10:29:47	0
39	8-Nov	10:34:47	0
40	8-Nov	10:39:47	0
41	8-Nov	10:44:47	0
42	8-Nov	10:49:47	0
43	8-Nov	10:54:47	0
44	8-Nov	10:59:47	0
45	8-Nov	11:04:47	0
46	8-Nov	11:09:47	0
47	8-Nov	11:14:47	0
48	8-Nov	11:19:47	0
49	8-Nov	11:24:47	0
50	8-Nov	11:29:47	0
51	8-Nov	11:34:47	0
52	8-Nov	11:39:47	0
53	8-Nov	11:44:47	0
54	8-Nov	11:49:47	0
55	8-Nov	11:54:47	0
56	8-Nov	11:59:47	0
57	8-Nov	12:04:47	0
58	8-Nov	12:09:47	0
59	8-Nov	12:14:47	0.001
60	8-Nov	12:19:47	0
61	8-Nov	12:24:47	0
62	8-Nov	12:29:47	0
63	8-Nov	12:34:47	0
64	8-Nov	12:39:47	0
65	8-Nov	12:44:47	0
66	8-Nov	12:49:47	0
67	8-Nov	12:54:47	0
68	8-Nov	12:59:47	0
69	8-Nov	13:04:47	0
70	8-Nov	13:09:47	0
71	8-Nov	13:14:47	0
72	8-Nov	13:19:47	0
73	8-Nov	13:24:47	0
74	8-Nov	13:29:47	0
75	8-Nov	13:34:47	0
76	8-Nov	13:39:47	0
77	8-Nov	13:44:47	0
78	8-Nov	13:49:47	0
79	8-Nov	13:54:47	0
80	8-Nov	13:59:47	0
81	8-Nov	14:04:47	0
82	8-Nov	14:09:47	0
83	8-Nov	14:14:47	0
84	8-Nov	14:19:47	0
85	8-Nov	14:24:47	0
86	8-Nov	14:29:47	0
87	8-Nov	14:34:47	0
88	8-Nov	14:39:47	0
89	8-Nov	14:44:47	0

90	8-Nov	14:49:47	0
91	8-Nov	14:54:47	0
92	8-Nov	14:59:47	0
93	8-Nov	15:04:47	0
94	8-Nov	15:09:47	0

00053230300006000803}

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engineers & scientists

Air Monitoring

Project: FORMER TRW, UTICA, NY

Date: 11/09/05

Monitoring Instruments: pDR-1000AN

Air Monitor: A. ENICK

Activity: GRADING OF TOPSOIL

Level of Protection: MOD. LEVEL D

Time	Location	Instrument Reading	Comments
800	A	0.005	
800	B	0.012	
800	C	0.000	
900	A	0.004	
900	B	0.017	
900	C	0.000	
1000	A	0.003	
1000	B	0.010	
1000	C	0.000	
1100	A	0.000	
1100	B	0.000	
1100	C	0.000	
1200	A	0.006	
1200	B	0.000	
1200	C	0.000	
			STOPPED AIR MONITORING DUE TO RAIN

pDR-1000 S/N: 00000
User ID: Location A
Tag Number: 03
Number of logged points: 31
Start time and date: 07:40:02 09-Nov
Elapsed time: 02:35:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.135 mg/m³
Time at maximum: 07:42:36 Nov 09
Max STEL Concentration: 0.000 mg/m³
Time at max STEL: 07:40:02 Nov 09
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	9-Nov	07:45:02	0.008
2	9-Nov	07:50:02	0
3	9-Nov	07:55:02	0
4	9-Nov	08:00:02	0
5	9-Nov	08:05:02	0
6	9-Nov	08:10:02	0
7	9-Nov	08:15:02	0
8	9-Nov	08:20:02	0
9	9-Nov	08:25:02	0
10	9-Nov	08:30:02	0
11	9-Nov	08:35:02	0
12	9-Nov	08:40:02	0
13	9-Nov	08:45:02	0
14	9-Nov	08:50:02	0
15	9-Nov	08:55:02	0
16	9-Nov	09:00:02	0
17	9-Nov	09:05:02	0
18	9-Nov	09:10:02	0
19	9-Nov	09:15:02	0
20	9-Nov	09:20:02	0
21	9-Nov	09:25:02	0
22	9-Nov	09:30:02	0
23	9-Nov	09:35:02	0
24	9-Nov	09:40:02	0
25	9-Nov	09:45:02	0
26	9-Nov	09:50:02	0
27	9-Nov	09:55:02	0
28	9-Nov	10:00:02	0
29	9-Nov	10:05:02	0
30	9-Nov	10:10:02	0
31	9-Nov	10:15:02	0

00053230300000000000}

pDR-1000 S/N: 06131
User ID: Location B
Tag Number: 03
Number of logged points: 31
Start time and date: 07:40:46 09-Nov
Elapsed time: 02:35:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.208 mg/m³
Time at maximum: 07:49:16 Nov 09
Max STEL Concentration: 0.025 mg/m³
Time at max STEL: 07:55:46 Nov 09
Overall Avg Conc: 0.015 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	9-Nov	07:45:46	0.029
2	9-Nov	07:50:46	0.024
3	9-Nov	07:55:46	0.021
4	9-Nov	08:00:46	0.016
5	9-Nov	08:05:46	0.016
6	9-Nov	08:10:46	0.017
7	9-Nov	08:15:46	0.016
8	9-Nov	08:20:46	0.016
9	9-Nov	08:25:46	0.015
10	9-Nov	08:30:46	0.013
11	9-Nov	08:35:46	0.011
12	9-Nov	08:40:46	0.011
13	9-Nov	08:45:46	0.012
14	9-Nov	08:50:46	0.016
15	9-Nov	08:55:46	0.013
16	9-Nov	09:00:46	0.013
17	9-Nov	09:05:46	0.013
18	9-Nov	09:10:46	0.012
19	9-Nov	09:15:46	0.011
20	9-Nov	09:20:46	0.012
21	9-Nov	09:25:46	0.012
22	9-Nov	09:30:46	0.013
23	9-Nov	09:35:46	0.012
24	9-Nov	09:40:46	0.013
25	9-Nov	09:45:46	0.013
26	9-Nov	09:50:46	0.013
27	9-Nov	09:55:46	0.014
28	9-Nov	10:00:46	0.017
29	9-Nov	10:05:46	0.015
30	9-Nov	10:10:46	0.012
31	9-Nov	10:15:46	0.012

00053230300006010301}

pDR-1000 S/N: 06083
User ID: Location C
Tag Number: 04
Number of logged points: 31
Start time and date: 07:41:47 09-Nov
Elapsed time: 02:35:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.104 mg/m³
Time at maximum: 07:44:43 Nov 09
Max STEL Concentration: 0.012 mg/m³
Time at max STEL: 07:55:47 Nov 09
Overall Avg Conc: 0.003 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	9-Nov	07:46:47	0.023
2	9-Nov	07:51:47	0.007
3	9-Nov	07:56:47	0.01
4	9-Nov	08:01:47	0.01
5	9-Nov	08:06:47	0.004
6	9-Nov	08:11:47	0.004
7	9-Nov	08:16:47	0.001
8	9-Nov	08:21:47	0.001
9	9-Nov	08:26:47	0.004
10	9-Nov	08:31:47	0.002
11	9-Nov	08:36:47	0.003
12	9-Nov	08:41:47	0.006
13	9-Nov	08:46:47	0.008
14	9-Nov	08:51:47	0.007
15	9-Nov	08:56:47	0.01
16	9-Nov	09:01:47	0.009
17	9-Nov	09:06:47	0.005
18	9-Nov	09:11:47	0.007
19	9-Nov	09:16:47	0.005
20	9-Nov	09:21:47	0.004
21	9-Nov	09:26:47	0.01
22	9-Nov	09:31:47	0.002
23	9-Nov	09:36:47	0.005
24	9-Nov	09:41:47	0.004
25	9-Nov	09:46:47	0.005
26	9-Nov	09:51:47	0.006
27	9-Nov	09:56:47	0.004
28	9-Nov	10:01:47	0.008
29	9-Nov	10:06:47	0.005
30	9-Nov	10:11:47	0.005
31	9-Nov	10:16:47	0.004

00053230300006000803}

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Air Monitoring

Project: FORMER TRW, UTICA, NY

Date: 11/14/05

Monitoring Instruments: pDR-1000 AN

Air Monitor: A. ENIGK

Activity: GRADING OF TOPSOIL & RUN-OF-BANK GRAVEL

Level of Protection: LEVEL D

Time	Location (SEE FIELD BOOK)	Instrument Reading (mg/m³)	Comments
900	0.000	A	
900	0.000	B	
900	0.000	C	
1000	0.000	A	
1000	0.000	B	
1000	0.000	C	
1100	0.015	A	
1100	0.000	B	
1100	0.005	C	
1200	0.000	A	
1200	0.000	B	
1200	0.002	C	
1300	0.000	A-2	CHANGED LOCATIONS OF METERS X
1300	—	B-2	BATTERY DIED
1300	0.004	C-2	
1400	0.000	A-2	
1400	0.000	B-2	RESTORED BATTERY POWER W/NEW "
1400	0.007	C-2	
1500	0.000	A-2	
1500	0.000	B-2	
1500	0.018	C-2	

pDR-1000 S/N: 00000
User ID: Location A
Tag Number: 01
Number of logged points: 75
Start time and date: 08:33:53 14-Nov
Elapsed time: 06:15:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 6.694 mg/m³
Time at maximum: 10:04:02 Nov 14
Max STEL Concentration: 0.194 mg/m³
Time at max STEL: 10:18:52 Nov 14
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	14-Nov	08:38:53	0.025
2	14-Nov	08:43:53	0
3	14-Nov	08:48:53	0
4	14-Nov	08:53:53	0.003
5	14-Nov	08:58:53	0.003
6	14-Nov	09:03:53	0.035
7	14-Nov	09:08:53	0.016
8	14-Nov	09:13:53	0.001
9	14-Nov	09:18:53	0.004
10	14-Nov	09:23:53	0
11	14-Nov	09:28:53	0.001
12	14-Nov	09:33:53	0
13	14-Nov	09:38:53	0.01
14	14-Nov	09:43:53	0.003
15	14-Nov	09:48:53	0.001
16	14-Nov	09:53:53	0.001
17	14-Nov	09:58:53	0.021
18	14-Nov	10:03:53	0.002
19	14-Nov	10:08:53	0.471
20	14-Nov	10:13:53	0.075
21	14-Nov	10:18:53	0.051
22	14-Nov	10:23:53	0.007
23	14-Nov	10:28:53	0.017
24	14-Nov	10:33:53	0.035
25	14-Nov	10:38:53	0.088
26	14-Nov	10:43:53	0.014
27	14-Nov	10:48:53	0
28	14-Nov	10:53:53	0
29	14-Nov	10:58:53	0.002
30	14-Nov	11:03:53	0
31	14-Nov	11:08:53	0.001
32	14-Nov	11:13:53	0.001
33	14-Nov	11:18:53	0.002
34	14-Nov	11:23:53	0.004
35	14-Nov	11:28:53	0
36	14-Nov	11:33:53	0.001
37	14-Nov	11:38:53	0

38	14-Nov	11:43:53	0
39	14-Nov	11:48:53	0.003
40	14-Nov	11:53:53	0
41	14-Nov	11:58:53	0
42	14-Nov	12:03:53	0
43	14-Nov	12:08:53	0
44	14-Nov	12:13:53	0.001
45	14-Nov	12:18:53	0
46	14-Nov	12:23:53	0
47	14-Nov	12:28:53	0
48	14-Nov	12:33:53	0
49	14-Nov	12:38:53	0.002
50	14-Nov	12:43:53	0
51	14-Nov	12:48:53	0
52	14-Nov	12:53:53	0
53	14-Nov	12:58:53	0
54	14-Nov	13:03:53	0
55	14-Nov	13:08:53	0
56	14-Nov	13:13:53	0
57	14-Nov	13:18:53	0
58	14-Nov	13:23:53	0
59	14-Nov	13:28:53	0
60	14-Nov	13:33:53	0
61	14-Nov	13:38:53	0.002
62	14-Nov	13:43:53	0.001
63	14-Nov	13:48:53	0
64	14-Nov	13:53:53	0.001
65	14-Nov	13:58:53	0.001
66	14-Nov	14:03:53	0
67	14-Nov	14:08:53	0.027
68	14-Nov	14:13:53	0.002
69	14-Nov	14:18:53	0.002
70	14-Nov	14:23:53	0.001
71	14-Nov	14:28:53	0
72	14-Nov	14:33:53	0.016
73	14-Nov	14:38:53	0.003
74	14-Nov	14:43:53	0.001
75	14-Nov	14:48:53	0.004

00053230300000000000}

pDR-1000 S/N: 06131
User ID: Location B
Tag Number: 04
Number of logged points: 38
Start time and date: 08:34:35 14-Nov
Elapsed time: 03:10:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 1.009 mg/m³
Time at maximum: 10:04:04 Nov 14
Max STEL Concentration: 0.007 mg/m³
Time at max STEL: 10:12:35 Nov 14
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	14-Nov	08:39:35	0.002
2	14-Nov	08:44:35	0
3	14-Nov	08:49:35	0
4	14-Nov	08:54:35	0
5	14-Nov	08:59:35	0.002
6	14-Nov	09:04:35	0
7	14-Nov	09:09:35	0
8	14-Nov	09:14:35	0
9	14-Nov	09:19:35	0.001
10	14-Nov	09:24:35	0
11	14-Nov	09:29:35	0
12	14-Nov	09:34:35	0
13	14-Nov	09:39:35	0
14	14-Nov	09:44:35	0
15	14-Nov	09:49:35	0
16	14-Nov	09:54:35	0
17	14-Nov	09:59:35	0
18	14-Nov	10:04:35	0.05
19	14-Nov	10:09:35	0.033
20	14-Nov	10:14:35	0
21	14-Nov	10:19:35	0
22	14-Nov	10:24:35	0
23	14-Nov	10:29:35	0.005
24	14-Nov	10:34:35	0.001
25	14-Nov	10:39:35	0.002
26	14-Nov	10:44:35	0
27	14-Nov	10:49:35	0.001
28	14-Nov	10:54:35	0
29	14-Nov	10:59:35	0
30	14-Nov	11:04:35	0
31	14-Nov	11:09:35	0
32	14-Nov	11:14:35	0
33	14-Nov	11:19:35	0
34	14-Nov	11:24:35	0
35	14-Nov	11:29:35	0
36	14-Nov	11:34:35	0
37	14-Nov	11:39:35	0

38 14-Nov 11:44:35 0
0005323030000601030 1}

pDR-1000 S/N: 06131
User ID: Location B
Tag Number: 05
Number of logged points: 13
Start time and date: 13:45:06 14-Nov
Elapsed time: 01:05:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.280 mg/m³
Time at maximum: 14:29:09 Nov 14
Max STEL Concentration: 0.000 mg/m³
Time at max STEL: 13:45:06 Nov 14
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	14-Nov	13:50:06	0.003
2	14-Nov	13:55:06	0
3	14-Nov	14:00:06	0
4	14-Nov	14:05:06	0
5	14-Nov	14:10:06	0.013
6	14-Nov	14:15:06	0.001
7	14-Nov	14:20:06	0
8	14-Nov	14:25:06	0
9	14-Nov	14:30:06	0.012
10	14-Nov	14:35:06	0.007
11	14-Nov	14:40:06	0.014
12	14-Nov	14:45:06	0.001
13	14-Nov	14:50:06	0.005

00053230300006010301}

pDR-1000 S/N: 06083
User ID: Location C
Tag Number: 05
Number of logged points: 75
Start time and date: 08:34:39 14-Nov
Elapsed time: 06:15:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 2.169 mg/m³
Time at maximum: 14:08:01 Nov 14
Max STEL Concentration: 0.122 mg/m³
Time at max STEL: 14:19:09 Nov 14
Overall Avg Conc: 0.027 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	14-Nov	08:39:39	0.008
2	14-Nov	08:44:39	0.011
3	14-Nov	08:49:39	0.008
4	14-Nov	08:54:39	0.011
5	14-Nov	08:59:39	0.007
6	14-Nov	09:04:39	0.006
7	14-Nov	09:09:39	0.006
8	14-Nov	09:14:39	0.009
9	14-Nov	09:19:39	0.008
10	14-Nov	09:24:39	0.005
11	14-Nov	09:29:39	0.007
12	14-Nov	09:34:39	0.007
13	14-Nov	09:39:39	0.007
14	14-Nov	09:44:39	0.011
15	14-Nov	09:49:39	0.006
16	14-Nov	09:54:39	0.014
17	14-Nov	09:59:39	0.01
18	14-Nov	10:04:39	0.011
19	14-Nov	10:09:39	0.006
20	14-Nov	10:14:39	0.007
21	14-Nov	10:19:39	0.009
22	14-Nov	10:24:39	0.015
23	14-Nov	10:29:39	0.011
24	14-Nov	10:34:39	0.02
25	14-Nov	10:39:39	0.016
26	14-Nov	10:44:39	0.013
27	14-Nov	10:49:39	0.016
28	14-Nov	10:54:39	0.024
29	14-Nov	10:59:39	0.02
30	14-Nov	11:04:39	0.013
31	14-Nov	11:09:39	0.012
32	14-Nov	11:14:39	0.012
33	14-Nov	11:19:39	0.007
34	14-Nov	11:24:39	0.012
35	14-Nov	11:29:39	0.014
36	14-Nov	11:34:39	0.057
37	14-Nov	11:39:39	0.021

38	14-Nov	11:44:39	0.02
39	14-Nov	11:49:39	0.027
40	14-Nov	11:54:39	0.015
41	14-Nov	11:59:39	0.014
42	14-Nov	12:04:39	0.013
43	14-Nov	12:09:39	0.024
44	14-Nov	12:14:39	0.092
45	14-Nov	12:19:39	0.069
46	14-Nov	12:24:39	0.021
47	14-Nov	12:29:39	0.016
48	14-Nov	12:34:39	0.019
49	14-Nov	12:39:39	0.058
50	14-Nov	12:44:39	0.026
51	14-Nov	12:49:39	0.014
52	14-Nov	12:54:39	0.093
53	14-Nov	12:59:39	0.153
54	14-Nov	13:04:39	0.066
55	14-Nov	13:09:39	0.022
56	14-Nov	13:14:39	0.034
57	14-Nov	13:19:39	0.066
58	14-Nov	13:24:39	0.017
59	14-Nov	13:29:39	0.011
60	14-Nov	13:34:39	0.117
61	14-Nov	13:39:39	0.113
62	14-Nov	13:44:39	0.029
63	14-Nov	13:49:39	0.036
64	14-Nov	13:54:39	0.015
65	14-Nov	13:59:39	0.032
66	14-Nov	14:04:39	0.024
67	14-Nov	14:09:39	0.252
68	14-Nov	14:14:39	0.056
69	14-Nov	14:19:39	0.058
70	14-Nov	14:24:39	0.055
71	14-Nov	14:29:39	0.069
72	14-Nov	14:34:39	0.029
73	14-Nov	14:39:39	0.029
74	14-Nov	14:44:39	0.02
75	14-Nov	14:49:39	0.025

00053230300006000803}

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Air Monitoring

Project: FORMER TRW, UTICA, NY Date: 11/21/05

Monitoring Instruments: pDR-1000 AN

Air Monitor: A. ENIGK Activity: GRADING OF TOPSOIL

Level of Protection: MOD. LEVEL D

Time	Location (SEE FIGURE)	Instrument Reading (mg/m3)	Comments
1000	A	0.000	
1000	B		
1000	C		
1100	A		
1100	B		
1100	C		
1200	A		
1200	B		
1200	C		
1300	A		
1300	B		
1300	C		
1400	A		
1400	B		
1400	C		

pDR-1000 S/N: 00000
User ID: Location A
Tag Number: 02
Number of logged points: 47
Start time and date: 10:12:27 21-Nov
Elapsed time: 03:55:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.068 mg/m³
Time at maximum: 10:15:24 Nov 21
Max STEL Concentration: 0.001 mg/m³
Time at max STEL: 10:15:27 Nov 21
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	21-Nov	10:17:27	0.004
2	21-Nov	10:22:27	0
3	21-Nov	10:27:27	0
4	21-Nov	10:32:27	0
5	21-Nov	10:37:27	0
6	21-Nov	10:42:27	0
7	21-Nov	10:47:27	0
8	21-Nov	10:52:27	0
9	21-Nov	10:57:27	0
10	21-Nov	11:02:27	0
11	21-Nov	11:07:27	0.001
12	21-Nov	11:12:27	0
13	21-Nov	11:17:27	0
14	21-Nov	11:22:27	0
15	21-Nov	11:27:27	0
16	21-Nov	11:32:27	0
17	21-Nov	11:37:27	0
18	21-Nov	11:42:27	0
19	21-Nov	11:47:27	0
20	21-Nov	11:52:27	0
21	21-Nov	11:57:27	0
22	21-Nov	12:02:27	0
23	21-Nov	12:07:27	0
24	21-Nov	12:12:27	0
25	21-Nov	12:17:27	0
26	21-Nov	12:22:27	0
27	21-Nov	12:27:27	0
28	21-Nov	12:32:27	0
29	21-Nov	12:37:27	0
30	21-Nov	12:42:27	0
31	21-Nov	12:47:27	0
32	21-Nov	12:52:27	0
33	21-Nov	12:57:27	0
34	21-Nov	13:02:27	0
35	21-Nov	13:07:27	0
36	21-Nov	13:12:27	0
37	21-Nov	13:17:27	0

38	21-Nov	13:22:27	0
39	21-Nov	13:27:27	0
40	21-Nov	13:32:27	0
41	21-Nov	13:37:27	0
42	21-Nov	13:42:27	0
43	21-Nov	13:47:27	0
44	21-Nov	13:52:27	0
45	21-Nov	13:57:27	0
46	21-Nov	14:02:27	0
47	21-Nov	14:07:27	0

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pDR-1000 S/N: 06131
User ID: Location B
Tag Number: 06
Number of logged points: 35
Start time and date: 10:12:47 21-Nov
Elapsed time: 02:55:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.033 mg/m³
Time at maximum: 12:09:28 Nov 21
Max STEL Concentration: 0.000 mg/m³
Time at max STEL: 10:12:47 Nov 21
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	21-Nov	10:17:47	0.004
2	21-Nov	10:22:47	0
3	21-Nov	10:27:47	0
4	21-Nov	10:32:47	0
5	21-Nov	10:37:47	0
6	21-Nov	10:42:47	0
7	21-Nov	10:47:47	0
8	21-Nov	10:52:47	0
9	21-Nov	10:57:47	0
10	21-Nov	11:02:47	0
11	21-Nov	11:07:47	0
12	21-Nov	11:12:47	0
13	21-Nov	11:17:47	0
14	21-Nov	11:22:47	0
15	21-Nov	11:27:47	0
16	21-Nov	11:32:47	0
17	21-Nov	11:37:47	0
18	21-Nov	11:42:47	0.004
19	21-Nov	11:47:47	0.001
20	21-Nov	11:52:47	0
21	21-Nov	11:57:47	0.001
22	21-Nov	12:02:47	0.002
23	21-Nov	12:07:47	0.001
24	21-Nov	12:12:47	0.004
25	21-Nov	12:17:47	0
26	21-Nov	12:22:47	0
27	21-Nov	12:27:47	0.001
28	21-Nov	12:32:47	0
29	21-Nov	12:37:47	0
30	21-Nov	12:42:47	0
31	21-Nov	12:47:47	0
32	21-Nov	12:52:47	0
33	21-Nov	12:57:47	0
34	21-Nov	13:02:47	0
35	21-Nov	13:07:47	0

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pDR-1000 S/N: 06083
User ID: Location C
Tag Number: 06
Number of logged points: 48
Start time and date: 10:12:49 21-Nov
Elapsed time: 04:00:00
Logging period (sec): 300
Calibration Factor (%): 100
Max Display Concentration: 0.067 mg/m³
Time at maximum: 12:55:03 Nov 21
Max STEL Concentration: 0.000 mg/m³
Time at max STEL: 10:12:49 Nov 21
Overall Avg Conc: 0.000 mg/m³
Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	21-Nov	10:17:49	0.001
2	21-Nov	10:22:49	0.002
3	21-Nov	10:27:49	0.003
4	21-Nov	10:32:49	0.001
5	21-Nov	10:37:49	0.001
6	21-Nov	10:42:49	0.003
7	21-Nov	10:47:49	0.001
8	21-Nov	10:52:49	0.001
9	21-Nov	10:57:49	0.001
10	21-Nov	11:02:49	0.001
11	21-Nov	11:07:49	0.002
12	21-Nov	11:12:49	0.002
13	21-Nov	11:17:49	0.003
14	21-Nov	11:22:49	0.001
15	21-Nov	11:27:49	0.006
16	21-Nov	11:32:49	0.001
17	21-Nov	11:37:49	0.002
18	21-Nov	11:42:49	0.001
19	21-Nov	11:47:49	0.002
20	21-Nov	11:52:49	0.001
21	21-Nov	11:57:49	0.001
22	21-Nov	12:02:49	0.002
23	21-Nov	12:07:49	0.002
24	21-Nov	12:12:49	0.001
25	21-Nov	12:17:49	0
26	21-Nov	12:22:49	0.002
27	21-Nov	12:27:49	0.001
28	21-Nov	12:32:49	0
29	21-Nov	12:37:49	0.001
30	21-Nov	12:42:49	0.001
31	21-Nov	12:47:49	0.002
32	21-Nov	12:52:49	0
33	21-Nov	12:57:49	0.003
34	21-Nov	13:02:49	0
35	21-Nov	13:07:49	0
36	21-Nov	13:12:49	0.003
37	21-Nov	13:17:49	0.001

38	21-Nov	13:22:49	0.002
39	21-Nov	13:27:49	0
40	21-Nov	13:32:49	0.001
41	21-Nov	13:37:49	0
42	21-Nov	13:42:49	0.004
43	21-Nov	13:47:49	0
44	21-Nov	13:52:49	0.002
45	21-Nov	13:57:49	0.001
46	21-Nov	14:02:49	0.003
47	21-Nov	14:07:49	0.001
48	21-Nov	14:12:49	0.002

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