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REMOVAL SUPPORT TEAM
EPA CONTRACT 68-W-00-113

May 19, 2003

Kevin Matheis, On-Scene Coordinator
U.S. Environmental Protection Agency - Region 2
Removal Action Branch
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**EPA CONTRACT NO: 68-W-00-113**
**TDD NO: 02-03-03-0016**
**DOCUMENT CONTROL NO: RST-02-F-00983**
**SUBJECT: DUSSAULT FOUNDRY, LOCKPORT, NEW YORK**
**REMEDIAL ACTION REPORT; CLOSURE OF THREE UNDERGROUND STORAGE TANKS**

Dear Mr. Matheis:

Enclosed please find the Remedial Action Report relating to the closure of the three underground storage tanks at the Dussault Foundry site located in Lockport, Niagara County, New York. If you have any questions or comments, please call me at (732) 225-6116, extension 213.

Very truly yours,

WESTON SOLUTIONS, INC.

M. Mahnkopf

Michael Mahnkopf
Project Manager

Enclosure

TDD File No. 02-03-03-0016

**REMEDIAL ACTION REPORT (RAR)**
**CLOSURE OF THREE UNDERGROUND STORAGE TANKS**

**DUSSAULT FOUNDRY SITE**
**LOCKPORT, NIAGARA COUNTY, NEW YORK**

Prepared by

Removal Support Team
Weston Solutions, Inc., Federal Programs Division, Edison, New Jersey 08837

Prepared for

U.S. Environmental Protection Agency
Region II - Removal Action Branch, Edison, New Jersey 08837

DCN #: RST-02-F-00983
TDD #: 02-03-03-0016

**Approved by**:

RST

M. Mahnkopf

Date: 5/19/03

Michael Mahnkopf
Project Manager

RST

for

Date: 5/14/03

Christoph Stannik
Group Leader

USEPA

_____

Date: _____

Kevin Matheis
On-Scene Coordinator

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## 1.0 BACKGROUND

The former Dussault Foundry site (Site) is located at 2 Washburn Street, Lockport, Niagara County, New York (Figure 1). The Dussault Foundry was in operation from approximately 1912 until 1995. Prior tenants at the Site from the 1880s until 1912 included the Charles Rake Mill Machinery Works and Levan Planing Mill and Cigar Box Manufacturing. The property has been vacant since 1995 and is still owned by Dussault Foundry.

The Site is located in a mixed industrial and residential area and comprises approximately 5.6 acres. Hazardous substances in drums and tanks are situated in and adjacent to the two on-site buildings known as the Cleaning Building and the Foundry Building. To the north of the site is Market Street, which is separated from the Dussault property by a 90-foot slope overlooking Market Street and the Erie Canal. Railroad tracks and a tourist train stop border the property to the south and west. Light industrial and residential properties are located within ¼ mile south of the site. To the east of the Site are residential properties and a tavern.

On October 1, 2002 , EPA and RST conducted an expedited removal assessment (ERA) with representatives of the New York State Department of Environmental Conservation (NYSDEC), Niagara County Health Department (NCHD) and the Niagara County Department of Planning. Field tests performed during the ERA identified 11 drums containing characteristic hazardous wastes. Composite samples generated from grab samples were collected from 20 of the 200 drums on site and submitted for laboratory analysis. Analytical results indicated the presence of various hazardous substances and wastes contained in the drums including reactive wastes, corrosive wastes, lead, chromium, pyrene and toxaphene. The Site contained five above ground storage tanks (ASTs) that were in poor condition, two of which leaked all or part of their contents. The Site contained one, 2,000 gallon, isopropanal underground storage tank (UST), one, 4,000 gallon, diesel fuel/No. 2 fuel oil, UST and one, 1,000 gallon UST that reportedly contained diesel fuel/No. 2 fuel oil.

RST's scope of work for this project involved oversight during the decommissioning and removal of the USTs by WRS Infrastructure & Environment, Inc. and implementation of the subsequent subsurface soils evaluation. The subsurface evaluation included the collection and laboratory analysis of post excavation soil samples.

This report discusses all activities associated with the removal of the three USTs mentioned above. UST removal activities were performed on April 17, 2003.

## 2.0 INTRODUCTION

WRS Infrastructure & Environment, Inc. (WRS), under contract to USEPA, removed the following USTs at the Dussault Foundry site. See Drawing 1 - General Site Plan.

- 1 X 2,000 gallon, isopropanol, UST, located along the southern exterior perimeter of the Foundry Building (UST-1);

  During UST decommissioning activities, it was observed that UST-1 measured 64" in diameter and 12' in length and contained approximately 2" of bottom residual.

- 1 X 4,000 gallon, diesel/No. 2 fuel oil UST, located along the northern exterior perimeter of the Foundry Building (UST-2);

  During UST decommissioning activities, it was observed that UST-2 measured 64" in diameter and 24' in length and contained approximately 12" of material.

- 1 X 1,000 gallon, diesel/No. 2 fuel oil, UST, located along the northern exterior perimeter of the Foundry Building (UST-3);

  During UST decommissioning activities, it was observed that UST-3 measured 48" in diameter and 10' 9" in length and was empty.

## 3.0 UST-1, 2,000 GALLON, ISOPROPANOL, UST

UST decommissioning activities for UST-1 were performed on April 17, 2003.

### 3.1 The Tank Closure Procedure

The subject UST was closed in accordance with API Bulletin 1604 "Recommended Practice for Abandonment or Removal of Used Underground Storage Tanks".

The basic procedures were as follows:

1. The overburden material (12") overlying the subject UST was removed and staged on polyethylene sheeting. The overburden material was field screened with a photoionization detector (PID). All PID measurements were negative (0 ppm).

2. A combustible gas indicator meter was used to measure oxygen concentration and level of flammable vapors as a percent of its lower explosive limit (LEL).

3. The tank interior was made "safe" by inerting its atmosphere with carbon dioxide gas (dry ice) at a rate of 2 pounds per 100 gallons of tank capacity. The concentration of oxygen inside the tank was reduced to a level insufficient to support combustion by replacing the oxygen with the carbon dioxide. Based on the capacity of the subject UST, approximately 40 pounds of dry ice was crushed and distributed evenly inside the tank.

4. The UST was excavated, staged on polyethylene sheeting and placed in a secure location with blocking around it to prevent movement.

5. Once it was determined the subject tank was safe for entry, it was opened and cleaned following API 2015 "Standards for Cleaning Petroleum Storage Tanks".

6. All bottom residual was removed from the tank and containerized in 55 gallon drums. The transportation and off-site disposal of the material will occur at a later date. See the project file for a copy of the disposal documentation.

7. UST-1 was rendered useless and labeled to warn against reuse, former contents and vapor state. The tank was cut up, added to, and disposed with the non-RCRA hazardous debris generated during site operations.

8. The subject UST excavation was backfilled with the previously staged overburden material.

### 3.2 Soils Assessment Procedure

Soils assessment procedures were performed on April 17, 2003 in accordance with the New York State Department of Environmental Conservation (NYSDEC), Division of Environmental Remediation, "Draft DER-10, Technical Guidance For Site Investigation And Remediation" document, dated December 2002.

Soil samples were analyzed by GLA Laboratories, 1008 W. Ninth Avenue, King of Prussia, PA 19406, (610) 337-9992, New York State Department of Health (NYSDOH) Certification No. 11593. GLA Laboratories was subcontracted by WRS.

During UST removal activities, visual observations of the subject UST indicated sound structural integrity of the subject UST system. Groundwater was encountered in the excavation at 6.33' below ground surface.

In accordance with NYSDEC guidance, four sidewall soil samples (DF-IPA-01 through DF-IPA-04) were collected at the 0-6" interval directly above the soil/water interface (5.83' - 6.33' depth interval below ground surface). See Drawing 2 for soil sample locations.

There was no pipe run associated with the subject UST. Therefore, the collection and analysis of pipe run samples was not required.

A total of four soil samples were analyzed for volatile organic compounds (VOCs) and isopropanol (IPA).

### 3.3 Analytical Results and Discussion

Analytical results indicated that IPA concentrations were not detected (ND) in soil samples DF-IPA-01 through DF-IPA-04. VOC concentrations were also not detected (ND) in soil sample DF-IPA-04. Soil sample DF-IPA-01 exhibited concentrations of acetone (7.0 ppm) and carbon disulfide (0.011 ppm). Soil samples DF-IPA-02 and DF-IPA-03 exhibited benzene concentrations of 0.0013 ppm and 0.0014 ppm respectively and toluene concentrations of 0.005 ppm and 0.0031 respectively.

Soil sample DF-IPA-01 exhibited an acetone concentration (7.0 ppm) in excess of its NYSDEC recommended soil cleanup objective of 0.2 ppm as stated in the "NYSDEC Technical And Administrative Guidance Memorandum (TAGM) #4046, Determination of Soil Cleanup Objectives and Cleanup Levels" document (see Appendix 1).

All remaining contaminant concentrations were below their applicable recommended soil cleanup objectives. Analytical results are summarized in Table 1 and Drawing 2. The analytical results (Form I's) and the data package are included in Appendix 2.

## 4.0 UST-2, 4,000 GALLON, DIESEL/NO. 2 FUEL OIL, UST

UST decommissioning activities for UST-2 were performed on April 17, 2003.

### 4.1 The Tank Closure Procedure

The subject UST was closed in accordance with API Bulletin 1604 "Recommended Practice for Abandonment or Removal of Used Underground Storage Tanks". The basic procedures were as follows:

1. The overburden material (48") overlying the subject UST was removed and staged on polyethylene sheeting. The overburden material was field screened with a photoionization detector (PID). All PID measurements were negative (0 ppm).

2. All liquid was pumped from the tank. Approximately 200 gallons of liquid material was containerized in 55-gallon drums. The transportation and off-site disposal of the material will occur at a later date. See the project file for a copy of the disposal documentation.

3. Upon removal of all liquid, the subject UST was excavated, staged on polyethylene sheeting and placed in a secure location with blocking around it to prevent movement.

4. A combustible gas indicator meter was used to measure oxygen concentration and level of flammable vapors as a percent of its lower explosive limit (LEL).

5. The tank interior was made "safe" by inerting its atmosphere with carbon dioxide gas (dry ice) at a rate of 2 pounds per 100 gallons of tank capacity. The concentration of oxygen inside the tank was reduced to a level insufficient to support combustion by replacing the oxygen with the carbon dioxide. Based on the capacity of the subject UST, approximately 80 pounds of dry ice was crushed and distributed inside the tank.

6. Once it was determined the subject tank was safe for entry, it was opened and cleaned following API 2015 "Standards for Cleaning Petroleum Storage Tanks".

7. All sludge/solids were removed from the tank and containerized in 55 gallon drums. The transportation and off-site disposal of the material will occur at a later date. See the project file for a copy of the disposal documentation.

8. UST-2 was rendered useless and labeled to warn against reuse, former contents and vapor state. The tank was cut up, added to, and disposed with the non-RCRA hazardous debris generated during site operations.

9. The subject UST excavation was backfilled with the previously staged overburden material.

### 4.2 Soils Assessment Procedure

Soils assessment procedures were performed on April 17, 2003 in accordance with the New York State Department of Environmental Conservation (NYSDEC), Division of Environmental Remediation, "Draft DER-10, Technical Guidance For Site Investigation And Remediation" document, dated December 2002.

Soil samples were analyzed by GLA Laboratories, 1008 W. Ninth Avenue, King of Prussia, PA 19406, (610) 337-9992, New York State Department of Health (NYSDOH) Certification No. 11593. GLA Laboratories was subcontracted by WRS.

During UST removal activities, visual observations of the subject UST indicated sound structural integrity of the subject UST system. Groundwater was not encountered in the excavation.

In accordance with NYSDEC guidance, five soil samples (DF-FO-01 through DF-FO-05) were collected at the 0-6" interval directly below the centerline of the subject UST (9.33' - 9.83' interval below ground surface). See Drawing 3 for soil sample locations.

There was no pipe run associated with the subject UST. Therefore, the collection and analysis of pipe run samples was not required.

A total of five soil samples were analyzed for VOCs and base neutral organic compounds (BNs).

### 4.3 Analytical Results and Discussion

Analytical results indicated that VOC concentrations were not detected (ND) in soil samples DF-FO-01. Analytical results indicated that soil sample DF-FO-01 exhibited the following individual BN compounds: benzo (a) anthracene (0.21 ppm); benzo (a) pyrene (0.36 ppm); benzo (b) fluoranthene (0.49 ppm); benzo (g,h,i) perylene (0.35 ppm); benzo (k) fluoranthene (0.19 ppm); chrysene (0.27 ppm); fluoranthene (0.25 ppm); indeno (1,2,3-cd) pyrene (0.35 ppm); phenanthrene (0.13 ppm) and pyrene (0.24 ppm).

Analytical results indicated that soil sample DF-FO-02 exhibited respective benzene and o-xylene concentrations of 0.0029 ppm and 0.0022 ppm. Analytical results also indicated that soil sample DF-FO-02 exhibited the following individual BN compounds: benzo (a) anthracene (0.11 ppm); benzo (a) pyrene (0.15 ppm); benzo (b) fluoranthene (0.35 ppm); benzo (g,h,i) perylene (0.14 ppm); benzo (k) fluoranthene (0.11 ppm); chrysene (0.23 ppm); fluoranthene (0.25 ppm); indeno (1,2,3-cd) pyrene (0.14 ppm); phenanthrene (0.29 ppm) and pyrene (0.32 ppm).

Analytical results indicated that soil sample DF-FO-03 exhibited respective benzene, carbon disulfide and tetrachloroethene concentrations of 0.0018 ppm, 0.0024 ppm and 0.0012 ppm. Analytical results also indicated that soil sample DF-FO-03 exhibited the following individual BN compounds: benzo (a) anthracene (0.28 ppm); benzo (a) pyrene (0.38 ppm); benzo (b) fluoranthene (0.53 ppm); benzo (g,h,i) perylene (0.25 ppm); benzo (k) fluoranthene (0.18 ppm); chrysene (0.37 ppm); fluoranthene (0.5 ppm); indeno (1,2,3-cd) pyrene (0.25 ppm); phenanthrene (0.23 ppm) and pyrene (0.45 ppm).

Analytical results indicated that soil sample DF-FO-04 exhibited a benzene concentration of 0.0025 ppm. Analytical results also indicated that soil sample DF-FO-04 exhibited the following individual BN compounds: benzo (b) fluoranthene (0.13 ppm); chrysene (0.1 ppm); fluoranthene (0.15 ppm); phenanthrene (0.12 ppm) and pyrene (0.14 ppm).

Analytical results indicated that soil sample DF-FO-05 exhibited the following individual VOC compounds: acetone (0.15 ppm); benzene (0.0019 ppm); ethylbenzene (0.0033 ppm); p,m-xylene (0.014 ppm) and o-xylene (0.01 ppm). Analytical results also indicated that soil sample DF-FO-05 exhibited the following individual BN compounds: acenaphthene (1.5 ppm); fluorene (1.5 ppm); 2-methylnaphthalene (10 ppm); naphthalene (1.1 ppm) and phenanthrene (7.6 ppm).

As discussed above, soil samples DF-FO-01, DF-FO-02 and DF-FO-03 exhibited respective benzo (a) pyrene concentrations of 0.36 ppm, 0.15 ppm and 0.38 ppm. These concentrations exceeded the NYSDEC recommended soil cleanup objective for benzo (a) pyrene of 0.061 ppm or its method detection limit (MDL) of 0.1 ppm (in this case). Refer to the "NYSDEC Technical And Administrative Guidance Memorandum (TAGM) #4046, Determination of Soil Cleanup Objectives and Cleanup Levels" document (see Appendix 1).

As discussed above, soil sample DF-FO-03 exhibited a benzo (a) anthracene concentration of 0.28 ppm, which exceeded its NYSDEC recommended soil cleanup objective of 0.224 ppm. Refer to the "NYSDEC Technical And Administrative Guidance Memorandum (TAGM) #4046, Determination of Soil Cleanup Objectives and Cleanup Levels" document (see Appendix 1).

All remaining contaminant concentrations were below their applicable recommended soil cleanup objectives. Analytical results are summarized in Table 1 and Drawing 3. The analytical results (Form I's) and the data package are included in Appendix 2.

## 5.0 UST-3, 1,000 GALLON, DIESEL/NO. 2 FUEL OIL, UST

UST decommissioning activities for UST-3 were performed on April 17, 2003.

## 5.1 The Tank Closure Procedure

The subject UST was closed in accordance with API Bulletin 1604 "Recommended Practice for Abandonment or Removal of Used Underground Storage Tanks". The basic procedures were as follows:

1. The overburden material (48") overlying the subject UST was removed and staged on polyethylene sheeting. The overburden material was field screened with a photoionization detector (PID). All PID measurements were negative (0 ppm).

2. The UST was excavated, staged on polyethylene sheeting and placed in a secure location with blocking around it to prevent movement.

3. A combustible gas indicator meter was used to measure oxygen concentration and level of flammable vapors as a percent of its lower explosive limit (LEL).

4. The tank interior was made "safe" by inerting its atmosphere with carbon dioxide gas (dry ice) at a rate of 2 pounds per 100 gallons of tank capacity. The concentration of oxygen inside the tank was reduced to a level insufficient to support combustion by replacing the oxygen with the carbon dioxide. Based on the capacity of the subject UST, approximately 20 pounds of dry ice was crushed and distributed inside the tank.

5. Once it was determined the subject tank was safe for entry, it was opened and cleaned following API 2015 "Standards for Cleaning Petroleum Storage Tanks".

6. All sludge/solids were removed from the tank and containerized in 55 gallon drums. The transportation and off-site disposal of the material will occur at a later date. See the project file for a copy of the disposal documentation.

7. UST-3 was rendered useless and labeled to warn against reuse, former contents and vapor state. The tank will be scrapped at a later date with other scrap metal generated from building demolition.

8. The subject UST excavation was backfilled with the previously staged overburden material.

## 5.2 Soils Assessment Procedure

Soils assessment procedures were performed on April 17, 2003 in accordance with the New York State Department of Environmental Conservation (NYSDEC), Division of Environmental Remediation, "Draft DER-10, Technical Guidance For Site Investigation And Remediation" document, dated December 2002.

Soil samples were analyzed by GLA Laboratories, 1008 W. Ninth Avenue, King of Prussia, PA 19406, (610) 337-9992, New York State Department of Health (NYSDOH) Certification No. 11593. GLA Laboratories was subcontracted by WRS.

During UST removal activities, visual observations of the subject UST indicated sound structural integrity of the subject UST system. Groundwater was not encountered in the excavation.

In accordance with NYSDEC guidance, three soil samples (DF-FO-06 through DF-FO-08) were collected at the 0-6" interval directly below the centerline of the subject UST (8.0' - 8.5' interval below ground surface). See Drawing 3 for soil sample locations.

There was no pipe run associated with the subject UST. Therefore, the collection and analysis of pipe run samples was not required.

A total of three soil samples were analyzed for VOCs and BNs.

## 5.3 Analytical Results and Discussion

Analytical results indicated that VOC concentrations were not detected (ND) in soil samples DF-FO-08. Analytical results indicated that BN concentrations were not detected (ND) in soil sample DF-FO-06.

Analytical results indicated that soil sample DF-FO-06 exhibited a benzene concentration of 0.0014 ppm.

Analytical results indicated that soil sample DF-FO-07 exhibited respective benzene and toluene concentrations of 0.0028 ppm and 0.0024 ppm. Analytical results also indicated that soil sample DF-FO-07 exhibited the following individual BN compounds: benzo (a) anthracene (0.3 ppm); benzo (a) pyrene (0.49 ppm); benzo (b) fluoranthene (0.95 ppm); benzo (g,h,i) perylene (0.41 ppm); benzo (k) fluoranthene (0.34 ppm); chrysene (0.46 ppm); dibenz (a,h) anthracene (0.12 ppm); fluoranthene (0.25 ppm); indeno (1,2,3-cd) pyrene (0.42 ppm); phenanthrene (0.13 ppm) and pyrene (0.26 ppm).

Analytical results also indicated that soil sample DF-FO-08 exhibited the following individual BN compounds: acenaphthene (0.23 ppm); benzo (a) anthracene (0.35 ppm); benzo (a) pyrene (0.71 ppm); benzo (b) fluoranthene (0.91 ppm); benzo (g,h,i) perylene (0.57 ppm); benzo (k) fluoranthene (0.3 ppm); chrysene (0.42 ppm); dibenz (a,h) anthracene (0.15 ppm); fluoranthene (0.4 ppm); indeno (1,2,3-cd) pyrene (0.58 ppm); phenanthrene (0.22 ppm) and pyrene (0.43 ppm).

As discussed above, soil samples DF-FO-07 and DF-FO-08 exhibited respective benzo (a) anthracene concentrations of 0.3 ppm and 0.35 ppm, which exceeded its NYSDEC recommended soil cleanup objective of 0.224 ppm. Refer to the "NYSDEC Technical And Administrative Guidance Memorandum (TAGM) #4046, Determination of Soil Cleanup Objectives and Cleanup Levels" document (see Appendix 1).

As discussed above, soil samples DF-FO-07 and DF-FO-08 exhibited respective chrysene concentrations of 0.46 ppm and 0.42 ppm, which exceeded its NYSDEC recommended soil cleanup objective of 0.4 ppm. Refer to the "NYSDEC Technical And Administrative Guidance Memorandum (TAGM) #4046, Determination of Soil Cleanup Objectives and Cleanup Levels" document (see Appendix 1).

As discussed above, soil samples DF-FO-07 and DF-FO-08 exhibited respective dibenz (a,h) anthracene concentrations of 0.12 ppm and 0.15 ppm. These concentrations exceeded the NYSDEC recommended soil cleanup objective for dibenz (a,h) anthracene of 0.014 ppm or its method detection limit (MDL) of 0.1 ppm (in this case).

Refer to the "NYSDEC Technical And Administrative Guidance Memorandum (TAGM) #4046, Determination of Soil Cleanup Objectives and Cleanup Levels" document (see Appendix 1).

Analytical results are summarized in Table 1 and Drawing 3. The analytical results (Form I's) and the data package are included in Appendix 2.

## 6.0 SITE SPECIFIC QUALITY ASSURANCE/QUALITY CONTROL PLAN

The objective of this QA/QC plan is to provide analytical results which are legally defensible in a court of law. The QA/QC plan incorporated procedures for field sampling, chain of custody, laboratory analyses, and reporting to assure generation of sound analytical results. Sampling procedures were conducted in accordance with USEPA protocols.

### 6.1 Sampling Equipment and Methods

Samples were collected at the locations and depths as described in this report. Procedural changes dictated by field conditions were fully documented in the field notes.

Equipment utilized for this project were dedicated plastic scoops and spatulas.

All samples were transferred immediately after collection into sample bottles selected by parameter as listed below.

The type of sample container required for the Dussault Foundry UST soils assessment were as follows:

a. Volatile Organic Compounds - 3 X 5g En Core Samplers;

b. Isopropanol - 3 X 5g En Core Samplers;

c. Base Neutral Organic Compounds - 8 oz glass bottle;

All soil samples were packed on ice immediately following collection.

All samples were labeled with the following information:

a. sample number;
b. date and time of collection;
c. site name;
d. sample collector's initials;
e. analyses required.

Accurate field notes were maintained which included the information listed above. Additional information included, but was not limited to:

a. sample location sketch;
b. sample method;
c. general comments, including any modification from the sample plan.

## 6.2 Chain of Custody

Chain of custody was maintained for all samples. Chain of custody originated with the collection of the samples and was maintained until the samples were relinquished to the laboratory.
The chain of custody form detailed the following information:

a. sample identification number;
b. sample collection date and time;
c. sample matrix;
d. expected contaminant concentration (low, medium, high);
e. sample type (grab or composite);
f. sample preservation;
g. analytical parameters;
h. name(s) and signatures(s) of sampler(s);
i. signatures(s) of individual(s) with control over samples.

### 6.3 Quality Assurance/Quality Control Samples

Because a Level 1 QA objective was specified for this project, the collection of QA/QC samples (duplicates, matrix spikes/matrix spike duplicates) was not required.

### 6.4 Sample QA/QC Data

A Reduced Deliverable Format QA/QC package was provided for all samples submitted for analysis.

### 6.5 Sample Shipment/Documentation

On 04/17/03, four soil samples (DF-IPA-01 through DF-IPA-04) were shipped to GLA Laboratories via Federal Express Airbill No. 837726191267. On 04/18/03, eight soil samples (DF-FO-01 through DF-FO-08) were shipped to GLA Laboratories via Federal Express Airbill No. 837726191245. Copies of the airbills are included in Appendix 2.

# TABLE 1

## DUSSAULT FOUNDRY, LOCKPORT, NEW YORK
## POST EXCAVATION SOIL SAMPLE RESULTS



| Sample ID | Date | Depth (below grade) | Analytical Parameters and Results (ppm) | Location |
|---|---|---|---|---|
| DF-IPA-01 | 04/17/03 | 5.83' - 6.33' | Acetone = 7.0<br>Carbon disulfide = 0.011<br>Isopropanol = None detected | 2,000 Gallon, IPA UST |
| DF-IPA-02 | 04/17/03 | 5.83' - 6.33' | Benzene = 0.0013<br>Toluene = 0.005<br>Isopropanol = None detected | 2,000 Gallon, IPA UST |
| DF-IPA-03 | 04/17/03 | 5.83' - 6.33' | Benzene = 0.0014<br>Toluene = 0.0031<br>Isopropanol = None detected | 2,000 Gallon, IPA UST |
| DF-IPA-04 | 04/17/03 | 5.83' - 6.33' | VOCs = None detected<br>Isopropanol = None detected | 2,000 Gallon, IPA UST |
| DF-FO-01 | 04/17/03 | 9.33' - 9.83' | VOCs = None detected<br>Benzo (a) anthracene = 0.21<br>Benzo (a) pyrene = 0.36<br>Benzo (b) fluoranthene = 0.49<br>Benzo (g,h,i) perylene = 0.35<br>Benzo (k) fluoranthene = 0.19<br>Chrysene = 0.27<br>Fluoranthene = 0.25<br>Indeno (1,2,3-cd) pyrene = 0.35<br>Phenanthrene = 0.13<br>Pyrene = 0.24 | 4,000 Gallon, Diesel/No. 2 Fuel Oil UST |
| DF-FO-02 | 04/17/03 | 9.33' - 9.83' | Benzene = 0.0029<br>o-xylene = 0.0022<br>Benzo (a) anthracene = 0.11<br>Benzo (a) pyrene = 0.15<br>Benzo (b) fluoranthene = 0.35<br>Benzo (g,h,i) perylene = 0.14<br>Benzo (k) fluoranthene = 0.11<br>Chrysene = 0.23<br>Fluoranthene = 0.25<br>Indeno (1,2,3-cd) pyrene = 0.14<br>Phenanthrene = 0.29<br>Pyrene = 0.32 | 4,000 Gallon, Diesel/No. 2 Fuel Oil UST |

# TABLE 1

## DUSSAULT FOUNDRY, LOCKPORT, NEW YORK
## POST EXCAVATION SOIL SAMPLE RESULTS



| Sample ID | Date | Depth (below grade) | Analytical Parameters and Results (ppm) | Location |
|---|---|---|---|---|
| DF-FO-03 | 04/17/03 | 9.33' - 9.83' | Benzene = 0.0018<br>Carbon disulfide = 0.0024<br>Tetrachloroethene = 0.0012<br>Benzo (a) anthracene = 0.28<br>Benzo (a) pyrene = 0.38<br>Benzo (b) fluoranthene = 0.53<br>Benzo (g,h,i) perylene = 0.25<br>Benzo (k) fluoranthene = 0.18<br>Chrysene = 0.37<br>Fluoranthene = 0.5<br>Indeno (1,2,3-cd) pyrene = 0.25<br>Phenanthrene = 0.23<br>Pyrene = 0.45 | 4,000 Gallon, Diesel/No. 2 Fuel Oil UST |
| DF-FO-04 | 04/17/03 | 9.33' - 9.83' | Benzene = 0.0025<br>Benzo (b) fluoranthene = 0.13<br>Chrysene = 0.1<br>Fluoranthene = 0.15<br>Phenanthrene = 0.12<br>Pyrene = 0.14 | 4,000 Gallon, Diesel/No. 2 Fuel Oil UST |
| DF-FO-05 | 04/17/03 | 9.33' - 9.83' | Acetone = 0.15<br>Benzene = 0.0019<br>Ethylbenzene = 0.0033<br>p,m-xylene = 0.014<br>o-xylene = 0.01<br>Acenaphthene = 1.5<br>Fluorene = 1.5<br>2-Methylnaphthalene = 10<br>Naphthalene = I.1<br>Phenanthrene = 7.6 | 4,000 Gallon, DieseI/No. 2 Fuel Oil UST |
| DF-FO-06 | 04/17/03 | 8.0' - 8.5' | Benzene = 0.0014<br>BNs = None Detected | I,000 Gallon, Diesel/No. 2 Fuel Oil UST |

# TABLE 1

## DUSSAULT FOUNDRY, LOCKPORT, NEW YORK
## POST EXCAVATION SOIL SAMPLE RESULTS



| Sample ID | Date | Depth (below grade) | Analytical Parameters and Results (ppm) | Location |
|---|---|---|---|---|
| DF-FO-07 | 04/17/03 | 8.0' - 8.5' | Benzene = 0.0028<br>Toluene = 0.0024<br>Benzo (a) anthracene = 0.3<br>Benzo (a) pyrene = 0.49<br>Benzo (b) fluoranthene = 0.95<br>Benzo (g,h,i) perylene = 0.41<br>Benzo (k) fluoranthene = 0.34<br>Chrysene = 0.46<br>Dibenz (a,h) anthracene = 0.12<br>Fluoranthene = 0.25<br>Indeno (1,2,3-cd) pyrene = 0.42<br>Phenanthrene = 0.13<br>Pyrene = 0.26 | 1,000 Gallon, Diesel/No. 2 Fuel Oil UST |
| DF-FO-08 | 04/17/03 | 8.0' - 8.5' | VOCs = None detected<br>Acenaphthene = 0.23<br>Benzo (a) anthracene = 0.35<br>Benzo (a) pyrene = 0.71<br>Benzo (b) fluoranthene = 0.91<br>Benzo (g,h,i) perylene = 0.57<br>Benzo (k) fluoranthene = 0.3<br>Chrysene = 0.42<br>Dibenz (a,h) anthracene = 0.15<br>Fluoranthene = 0.4<br>Indeno (1,2,3-cd) pyrene = 0.58<br>Phenanthrene = 0.22<br>Pyrene = 0.43 | 1,000 Gallon, Diesel/No. 2 Fuel Oil UST |

# APPENDIX 1

# NYSDEC, TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM (TAGM) #4046, DETERMINATION OF SOIL CLEANUP OBJECTIVES AND CLEANUP LEVELS

# TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM #4046

DETERMINATION OF SOIL CLEANUP OBJECTIVES AND CLEANUP LEVELS

**TO:** Regional Haz. Waste Remediation Engineers, Bureau Directors, and Section Chiefs

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

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

**DATE:** JAN 24, 1994

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



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

1. INTRODUCTION:

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

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

It should be noted that even after soil cleanup levels are established in the ROD, these levels may prove to be unattainable when remedial construction begins. In that event, alternative remedial actions or institutional controls may be necessary to protect the environment.

2. BASIS FOR SOIL CLEANUP OBJECTIVES:

The following alternative bases are used to determine soil cleanup objectives:

1. Human health based levels that correspond to excess lifetime cancer risks of one in a million for Class A[1] and B[2] carcinogens, or one in 100,000 for Class C[3] carcinogens. These levels are contained in USEPA's Health Effects Assessment Summary Tables (HEASTs) which are compiled and updated quarterly by the NYSDEC's Division of Hazardous Substances Regulation;
2. Human health based levels for systemic toxicants, calculated from Reference Doses (RfDs). RfDs are an estimate of the daily exposure an individual (including sensitive individuals) can experience without appreciable risk of health effects during a lifetime. An average scenario of exposure in which children ages one to six (who exhibit the greatest tendency to ingest soil) is assumed. An intake rate of 0.2 gram/day for a five-year exposure period for a 16-kg child is assumed. These levels are contained in USEPA's Health Effects Assessment Summary Tables (HEASTs) which are compiled and updated quarterly by the NYSDEC's Division of Hazardous Substances Regulation;
3. Environmental concentrations which are protective of groundwater/drinking water quality; based on promulgated or proposed New York State Standards;
4. Background values for contaminants; and
5. Detection limits.

A recommendation on the appropriate cleanup objective is based on the criterion that produces the most stringent cleanup level using criteria a, b, and c for organic chemicals, and criteria a, b, and d for heavy metals. If criteria a and/or b are below criterion d for a contaminant, its background value should be used as the cleanup objective. However, cleanup objectives developed using this approach must be, at a minimum, above the method detection limit (MDL) and it is preferable to have the soil cleanup objectives above the Contract Required Quantitation Limit (CRQL) as defined by NYSDEC. If the cleanup objective of a compound is "non-detectable", it should mean that it is not detected at the MDL. Efforts should be made to obtain the best MDL detection possible when selecting a laboratory and analytical protocol.

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

The water/soil partitioning theory is used to determine soil cleanup objectives which would be protective of groundwater/drinking water quality for its best use. This theory is conservative in nature and assumes that contaminated soil and groundwater are in direct contact. This theory is based upon the ability of organic matter in soil to adsorb organic chemicals. The approach predicts the maximum amount of contamination that may remain in soil so that leachate from the contaminated soil will not violate groundwater and/or drinking water standards.

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

Protection of water quality from contaminated soil is a two-part problem. The first is predicting the amount of contamination that will leave the contaminated media as leachate. The second part of the problem is to determine how much of that contamination will actually contribute to a violation of groundwater standards upon reaching and dispersing into groundwater. Some of the

contamination which initially leaches out of soil will be absorbed by other soil before it reaches groundwater. Some portion will be reduced through natural attenuation or other mechanism.

PART A: PARTITION THEORY MODEL

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

Allowable Soil Concentration Cs = f x Koc x Cw . . . . (1)

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

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

log Koc = 3.64 - 0.55 log S

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

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

PART B: PROCEDURE FOR DETERMINATION OF SOIL CLEANUP OBJECTIVES

When the contaminated soil is in the unsaturated zone above the water table, many mechanisms are at work that prevent all of the contamination that would leave the contaminated soil from impacting groundwater. These mechanisms occur during transport and may work simultaneously. They include the following: (1) volatility, (2) sorption and desorption, (3) leaching and diffusion, (4) transformation and degradation, and (5) change in concentration of contaminants after reaching and/or mixing with the groundwater surface. To account for these mechanisms, a

correction factor of 100 is used to establish soil cleanup objectives. This value of 100 for the correction is consistent with the logic used by EPA in its Dilution Attenuation Factor (DAF) approach for EP Toxicity and TCLP. (Federal Register/Vol. 55, No. 61, March 29, 1990/Pages 11826-27). Soil cleanup objectives are calculated by multiplying the allowable soil concentration by the correction factor. If the contaminated soil is very close (<3' - 5') to the groundwater table or in the groundwater, extreme caution should be exercised when using the correction factor of 100 (one hundred) as this may not give conservative cleanup objectives. For such situations the Technology Section should be consulted for site-specific cleanup objectives.

Soil cleanup objectives are limited to the following maximum values. These values are consistent with the approach promulgated by the States of Washington and Michigan.

1. Total VOCs < 10 ppm.
2. Total Semi VOCs < 500 ppm.
3. Individual Semi VOCs < 50 ppm.
4. Total Pesticides < 10 ppm.

One concern regarding the semi-volatile compounds is that some of these compounds are so insoluble that their Cs values are fairly large. Experience (Draft TOGS on Petroleum Contaminated Soil Guidance) has shown that soil containing some of these insoluble substances at high concentrations can exhibit a distinct odor even though the substance will not leach from the soil. Hence any time a soil exhibits a discernible odor nuisance, it shall not be considered clean even if it has met the numerical criteria.

4. DETERMINATION OF FINAL CLEANUP LEVELS:

Recommended soil cleanup objectives should be utilized in the development of final cleanup levels through the Feasibility Study (FS) process. During the FS, various alternative remedial actions developed during the Remedial Investigation (RI) are initially screened and narrowed down to the list of potential alternative remedial actions that will be evaluated in detail. These alternative remedial actions are evaluated using the criteria discussed in TAGM 4030, Selection of Remedial Actions at Inactive Hazardous Waste Sites, revised May 15, 1990, and the preferred remedial action will be selected. After the detailed evaluation of the preferred remedial action, the final cleanup levels which can be actually achieved using the preferred remedial action must be established. Remedy selection, which will include final cleanup levels, is the subject of TAGM 4030.

Recommended soil cleanup objectives that have been calculated by the Technology Section are presented in Appendix A. These

objectives are based on a soil organic carbon content of 1% (0.01) and should be adjusted for the actual organic carbon content if it is known. For determining soil organic carbon content, use attached USEPA method (Appendix B). Please contact the Technology Section, Bureau of Program Management for soil cleanup objectives not included in Appendix A.

**TAGM 4046 Footnotes:**

1. Class A are proved human carcinogens
2. Class B are probable human carcinogens
3. Class C are possible human carcinogens

**Appendix A - Recommended Soil Cleanup Objectives:**



**Appendix B - Total Organic Carbon (TOC)**

**APPENDIX B TO TAGM 4046**

Conventional Sediment Variables
Total Organic Carbon (TOC)
March 1986

TOTAL ORGANIC CARBON (TOC)

USE AND LIMITATIONS

Total organic carbon is a measure of the total amount of nonvolatile, volatile, partially volatile, and particulate organic compounds in a sample. Total organic carbon is independent of the oxidation state of the organic compounds and is not a measure of the organically bound and inorganic elements that can contribute to the biochemical and chemical oxygen demand tests.

Because inorganic carbon (e.g., carbonates, bicarbonates, free $CO_2$) will interfere with total organic carbon determinations, samples should be treated to remove inorganic carbon before being analyzed.

FIELD PROCEDURES

Collection

Samples can be collected in glass or plastic containers. A minimum

sample size of 25 g is recommended. If unrepresentative material is to be removed from the sample, it should be removed in the field under the supervision of the chief scientist and noted on the field log sheet.

Processing

Samples should be stored frozen and can be held for up to 6 months under that condition. Excessive temperatures should not be used to thaw samples.

LABORATORY PROCEDURES

Analytical Procedures

- Equipment
  - Induction furnace

    e.g., Leco WR-12, Dohrmann DC-50, Coleman CH analyzer, Perkin Elmer 240 elemental analyzer, Carlo-Erba 1106

  - Analytical balance

    0.1 mg accuracy

  - Desiccator
  - Combustion boats
  - 10 percent hydrochloric acid (HCL)
  - Cupric oxide fines (or equivalent material)
  - Benzoic acid or other carbon source as a standard.
- Equipment preparation
  - Clean combustion boats by placing them in the induction furnace at 950° C. After being cleaned, combustion boats should not be touched with bare hands.
  - Cool boats to room temperature in a desiccator.
  - Weigh each boat to the nearest 0.1 mg.
- Sample preparation
  - Allow frozen samples to warm to room temperature.
  - Homogenize each sample mechanically, incorporating any overlying water.
  - Transfer a representative aliquot (5-10 g) to a clean container.
- Analytical procedures
  - Dry samples to constant weight at 70 + 2°C. The drying temperature is relatively low to minimize loss of volatile organic compounds.
  - Cool dried samples to room temperature in a desiccator.
  - Grind sample using a mortar and pestle to break up aggregates.
  - Transfer a representative aliquot (0.2-0.5 g) to a clean,

preweighed combustion boat.
- Determine sample weight to the nearest 0.1 mg.
- Add several drops of HCL to the dried sample to remove carbonates. Wait until the effervescing is completed and add more acid. Continue this process until the incremental addition of acid causes no further effervescence. Do not add too much acid at one time as this may cause loss of sample due to frothing. Exposure of small samples (i.e., 1-10 mg) having less than 50 percent carbonate to an HCL atmosphere for 24-48 h has been shown to be an effective means of removing carbonates (Hedges and Stern 1984). If this method is used for sample sizes greater than 10 mg, its effectiveness should be demonstrated by the user.
- Dry the HCL-treated sample to constant weight at 70 + 2° C.
- Cool to room temperature in a desiccator.
- Add previously ashed cupric oxide fines or equivalent material (e.g., alumina oxide) to the sample in the combustion boat.
- Combust the sample in an induction furnace at a minimum temperature of 950 + 10° C.

- Calculations
  - If an ascarite-filled tube is used to capture $CO_2$, the carbon content of the sample can be calculated as follows:

$$\text{Percent carbon} = \frac{A\ (0.2729)\ (100)}{B}$$

Where:

A = the weight (g) of $CO_2$ determined by weighing the ascarite tube before and after combustion

B = dry weight (g) of the unacidified sample in the combustion boat

0.2729 = the ratio of the molecular weight of carbon to the molecular weight of carbon dioxide

A silica gel trap should be placed before the ascarite tube to catch any moisture driven off during sample combustion. Additional silica gel should be placed at the exit end of the ascarite tube to trap any water that might be formed by reaction of the trapped $CO_2$ with the NaOH in the ascarite.

- If an elemental analyzer is used, the amount of $CO_2$ will be measured by a thermal conductivity detector. The instrument should be calibrated daily using an empty boat blank as the zero point and at least two standards. Standards should bracket the expected range of carbon concentrations in the samples.

QA/QC Procedures

It is critical that each sample be thoroughly homogenized in the laboratory before a subsample is taken for analysis. Laboratory homogenization should be conducted even if samples were homogenized in the field.

Dried samples should be cooled in a desiccator and held there until they are weighed. If a desiccator is not used, the sediment will accumulate ambient moisture and the sample weight will be overestimated. A color-indicating desiccant is recommended so that spent desiccant can be detected easily. Also, the seal on the desiccator should be checked periodically and, if necessary, the ground glass rims should be greased or the "O" rings should be replaced.

It is recommended that triplicate analyses be conducted on one of every 20 samples, or on one sample per batch if less than 20 samples are analyzed. A method blank should be analyzed at the same frequency as the triplicate analyses. The analytical balance should be inspected daily and calibrated at least once per week. The carbon analyzer should be calibrated daily with freshly prepared standards. A standard reference material should be analyzed at least once for each major survey.

DATA REPORTING REQUIREMENTS

Total organic carbon should be reported as a percentage of the dry weight of the unacidified sample to the nearest 0.1 unit. The laboratory should report the results of all samples (including QA replicates, method blanks, and standard reference measurements) and should note any problems that may have influenced sample quality. The laboratory should also provide a summary of the calibration procedure and results (e.g., range covered, regression equation, coefficient of determination).

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New York State Department of
Environmental Conservation



**More information from this division:**

***APPENDIX A of TAGM #4046***

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

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

| Contaminant | Partition Coefficient, Koc | Groundwater Standards/ Criteria, Cw (ug/l or ppb) | a Allowable soil conc., Cs (ppm) | b ** Soil cleanup objectives to protect GW quality (ppm) | USEPA Health Based (ppm) Carcin-ogens | Systemic Toxicants | CRQL (ppb) | *** Rec. Soil Cleanup Objective (ppm) |
|---|---|---|---|---|---|---|---|---|
| Acetone | 2.2 | 50 | 0.0011 | 0.11 | N/A | 8,000 | 10 | 0.2 |
| Benzene | 83 | 0.7 | 0.0006 | 0.06 | 24 | N/A | 5 | 0.06 |
| Benzoic Acid | 54 * | 50 | 0.027 | 2.7 | N/A | 300,000 | 5 | 2.7 |
| 2-Butanone | 4.5 * | 50 | 0.003 | 0.3 | N/A | 4,000 | 10 | 0.3 |
| Carbon Disulfide | 54 * | 50 | 0.027 | 2.7 | N/A | 8,000 | 5 | 2.7 |
| Carbon Tetrachloride | 110 * | 5 | 0.006 | 0.6 | 5.4 | 60 | 5 | 0.6 |
| Chlorobenzene | 330 | 5 | 0.017 | 1.7 | N/A | 2,000 | 5 | 1.7 |
| Chloroethane | 37 * | 50 | 0.019 | 1.9 | N/A | N/A | 10 | 1.9 |
| Chloroform | 31 | 7 | 0.003 | 0.30 | 114 | 800 | 5 | 0.3 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | N/A | 50 | N/A | N/A | N/A | N/A | 5 | N/A |
| 1,2-Dichlorobenzene | 1,700 | 4.7 | 0.079 | 7.9 | N/A | N/A | 330 | 7.9 |
| 1,3-Dichlorobenzene | 310 * | 5 | 0.0155 | 1.55 | N/A | N/A | 330 | 1.6 |
| 1,4-Dichlorobenzene | 1,700 | 5 | 0.085 | 8.5 | N/A | N/A | 330 | 8.5 |
| 1,1-Dichloroethane | 30 | 5 | 0.002 | 0.2 | N/A | N/A | 5 | 0.2 |
| 1,2-Dichloroethane | 14 | 5 | 0.001 | 0.1 | 7.7 | N/A | 5 | 0.1 |
| 1,1-Dichloroethene | 65 | 5 | 0.004 | 0.4 | 12 | 700 | 5 | 0.4 |
| 1,2-Dichloroethene (trans) | 59 | 5 | 0.003 | 0.3 | N/A | 2,000 | 5 | 0.3 |
| 1-3 dichloropropane | 51 | 5 | 0.003 | 0.3 | N/A | N/A | 5 | 0.3 |
| Ethylbenzene | 1,100 | 5 | 0.055 | 5.5 | N/A | 8,000 | 5 | 5.5 |
| 113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane) | 1,230 * | 5 | 0.060 | 6.0 | N/A | 200,000 | 5 | 6.0 |
| Methylene chloride | 21 | 5 | 0.001 | 0.1 | 93 | 5,000 | 5 | 0.1 |
| 4-Methyl-2-Pentanone | 19 * | 50 | 0.01 | 1.0 | N/A | N/A | 10 | 1.0 |
| Tetrachloroethene | 277 | 5 | 0.014 | 1.4 | 14 | 800 | 5 | 1.4 |
| 1,1,1-Trichloroethane | 152 | 5 | 0.0076 | 0.76 | N/A | 7,000 | 5 | 0.8 |
| 1,1,2,2-Tetrachloroethane | 118 | 5 | 0.006 | 0.6 | 35 | N/A | 5 | 0.6 |
| 1,2,3-trichloropropane | 68 | 5 | 0.0034 | 0.34 | N/A | 80 | 5 | 0.4 |
| 1,2,4-trichlorobenzene | 670 * | 5 | 0.034 | 3.4 | N/A | N/A | 330 | 3.4 |
| Toluene | 300 | 5 | 0.015 | 1.5 | N/A | 20,000 | 5 | 1.5 |
| Trichloroethene | 126 | 5 | 0.007 | 0.70 | 64 | N/A | 5 | 0.7 |
| Vinyl chloride | 57 | 2 | 0.0012 | 0.12 | N/A | N/A | 10 | 0.2 |
| Xylenes | 240 | 5 | 0.012 | 1.2 | N/A | 200,000 | -- | 1.2 |

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

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

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

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

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

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**More information from this division:**

***APPENDIX A of TAGM #4046***

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

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

| Contaminant | Partition Coefficient, Koc | Groundwater Standards/ Criteria, Cw (ug/l or ppb) | a Allowable soil conc., Cs (ppm) | b ** Soil cleanup objectives to protect GW quality (ppm) | USEPA Health Based (ppm) Carcin-ogens | Systemic Toxicants | CRQL (ppb) | *** Rec. Soil Cleanup Objective (ppm) |
|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 4,600 | 20 | 0.9 | 90.0 | N/A | 5,000 | 330 | 50.0 *** |
| Acenaphthylene | 2,056 * | 20 | 0.41 | 41.0 | N/A | N/A | 330 | 41.0 |
| Aniline | 13.8 | 5 | 0.001 | 0.1 | 123 | N/A | 330 | 0.1 |
| Anthracene | 14,000 | 50 | 7.00 | 700.0 | N/A | 20,000 | 330 | 50.0 *** |
| Benzo(a) anthracene | 1,380,000 | 0.002 | 0.03 | 3.0 | 0.224 | N/A | 330 | 0.224 or MDL |
| Benzo (a) pyrene | 5,500,000 | 0.002 (ND) | 0.110 | 11.0 | 0.0609 | N/A | 330 | 0.061 or MDL |
| Benzo (b) fluoranthene | 550,000 | 0.002 | 0.011 | 1.1 | N/A | N/A | 330 | 1.1 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Benzo (g,h,i) perylene | 1,600,000 | 5 | 8.0 | 800 | N/A | N/A | 330 | 50.0 *** |
| Benzo (k) fluoranthene | 550,000 | 0.002 | 0.011 | 1.1 | N/A | N/A | 330 | 1.1 |
| bis(2-ethylhexyl) phthalate | 8,706 * | 50 | 4.35 | 435.0 | 50 | 2,000 | 330 | 50.0 *** |
| Butylbenzylphthlate | 2,430 | 50 | 1.215 | 122.0 | N/A | 20,000 | 330 | 50.0 *** |
| Chrysene | 200,000 | 0.002 | 0.004 | 0.4 | N/A | N/A | 330 | 0.4 |
| 4- Chloroaniline | 43 **** | 5 | 0.0022 | 0.22 | 200 | 300 | 330 | 0.220 or MDL |
| 4-Chloro-3-methylphenol | 47 | 5 | 0.0024 | 0.24 | N/A | N/A | 330 | 0.240 or MDL |
| 2-Chlorophenol | 15 * | 50 | 0.008 | 0.8 | N/A | 400 | 330 | 0.8 |
| Dibenzofuran | 1,230 * | 5 | 0.062 | 6.2 | N/A | N/A | 330 | 6.2 |
| Dibenzo(a,h) anthracene | 33,000,000 | 50 | 1,650 | 165,000 | 0.0143 | N/A | 330 | 0.014 or MDL |
| 3,3'-Dichlorobenzidine | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 2,4-Dichlorophenol | 380 | 1 | 0.004 | 0.4 | N/A | 200 | 330 | 0.4 |
| 2,4-Dinitrophenol | 38 | 5 | 0.002 | 0.2 | N/A | 200 | 1,600 | 0.200 or MDL |
| 2,6 Dinitrotoluene | 198* | 5 | 0.01 | 1.0 | 1.03 | N/A | 330 | 1.0 |
| Diethylphthlate | 142 | 50 | 0.071 | 7.1 | N/A | 60,000 | 330 | 7.1 |
| Dimethylphthlate | 40 | 50 | 0.020 | 2.0 | N/A | 80,000 | 330 | 2.0 |
| Di-n-butyl phthalate | 162* | 50 | 0.081 | 8.1 | N/A | 8,000 | 330 | 8.1 |
| Di-n-octyl phthlate | 2,346 * | 50 | 1.2 | 120.0 | N/A | 2,000 | 330 | 50.0 *** |
| Fluoranthene | 38,000 | 50 | 19 | 1900.0 | N/A | 3,000 | 330 | 50.0 *** |
| Fluorene | 7,300 | 50 | 3.5 | 350.0 | N/A | 3,000 | 330 | 50.0 *** |
| Hexachlorobenzene | 3,900 | 0.35 | 0.014 | 1.4 | 0.41 | 60 | 330 | 0.41 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Indeno (1,2,3-cd) pyrene | 1,600,000 | 0.002 | 0.032 | 3.2 | N/A | N/A | 330 | 3.2 |
| Isophorone | 88.31 * | 50 | 0.044 | 4.40 | 1,707 | 20,000 | 330 | 4.40 |
| 2-methylnaphthalene | 727 * | 50 | 0.364 | 36.4 | N/A | N/A | 330 | 36.4 |
| 2-Methylphenol | 15 | 5 | 0.001 | 0.1 | N/A | N/A | 330 | 0.100 or MDL |
| 4-Methylphenol | 17 | 50 | 0.009 | 0.9 | N/A | 4,000 | 330 | 0.9 |
| Naphthalene | 1,300 | 10 | 0.130 | 13.0 | N/A | 300 | 330 | 13.0 |
| Nitrobenzene | 36 | 5 | 0.002 | 0.2 | N/A | 40 | 330 | 0.200 or MDL |
| 2-Nitroaniline | 86 | 5 | 0.0043 | 0.43 | N/A | N/A | 1,600 | 0.430 or MDL |
| 2-Nitrophenol | 65 | 5 | 0.0033 | 0.33 | N/A | N/A | 330 | 0.330 or MDL |
| 4-Nitrophenol | 21 | 5 | 0.001 | 0.1 | N/A | N/A | 1,600 | 0.100 or MDL |
| 3-Nitroaniline | 93 | 5 | 0.005 | 0.5 | N/A | N/A | 1,600 | 0.500 or MDL |
| Pentachlorophenol | 1,022 | 1 | 0.01 | 1.0 | N/A | 2,000 | 1,600 | 1.0 or MDL |
| Phenanthrene | 4,365 * | 50 | 2.20 | 220.0 | N/A | N/A | 330 | 50.0 *** |
| Phenol | 27 | 1 | 0.0003 | 0.03 | N/A | 50,000 | 330 | 0.03 or MDL |
| Pyrene | 13,295 * | 50 | 6.65 | 665.0 | N/A | 2,000 | 330 | 50.0 *** |
| 2,4,5-Trichlorophenol | 89 * | 1 | 0.001 | 0.1 | N/A | 8,000 | 330 | 0.1 |

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

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

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

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

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

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

Back to top of page

# APPENDIX 2

# ANALYTICAL RESULTS (FORM I'S) & DATA PACKAGES

GLA LABORATORIES
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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/29/03 09:13 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| DF-IPA-01 | K304462-01 | Soil | 04/17/03 14:30 | 04/18/03 12:00 |
| DF-IPA-02 | K304462-02 | Soil | 04/17/03 14:40 | 04/18/03 12:00 |
| DF-IPA-03 | K304462-03 | Soil | 04/17/03 14:50 | 04/18/03 12:00 |
| DF-IPA-04 | K304462-04 | Soil | 04/17/03 15:00 | 04/18/03 12:00 |

GLA Laboratories

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Tom Lyon

Tom Lyon, Project Manager

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|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/29/03 09:13 |

# Volatile Organic Compounds by EPA Method 8260B

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-IPA-01 (K304462-01) Soil** | **Sampled: 04/17/03 14:30** | **Received: 04/18/03 12:00** | | | | | | | |
| **Acetone** | **7000** | 6300 | ug/kg dry | 50 | 3042313 | 04/23/03 | 04/25/03 | EPA 8260B | DILN |
| Benzene | ND | 1.3 | " | 1 | " | " | " | " | |
| Bromodichloromethane | ND | 1.3 | " | " | " | " | " | " | |
| Bromoform | ND | 2.5 | " | " | " | " | " | " | |
| Bromomethane | ND | 2.5 | " | " | " | " | " | " | |
| 2-Butanone | ND | 150 | " | " | " | " | " | " | O8 |
| **Carbon disulfide** | **11** | 2.5 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 2.5 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 2.5 | " | " | " | " | " | " | |
| Chlorodibromomethane | ND | 2.5 | " | " | " | " | " | " | |
| Chloroethane | ND | 5.0 | " | " | " | " | " | " | |
| Chloroform | ND | 2.5 | " | " | " | " | " | " | 11 |
| Chloromethane | ND | 2.5 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 2.5 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 2.5 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 2.5 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 2.5 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 2.5 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 2.5 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 2.5 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 2.5 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 2.5 | " | " | " | " | " | " | 11 |
| 2-Hexanone | ND | 13 | " | " | " | " | " | " | |
| Methylene chloride | ND | 38 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone | ND | 13 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 2.5 | " | " | " | " | " | " | |
| Styrene | ND | 2.5 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 2.5 | " | " | " | " | " | " | |
| Tetrachloroethene | ND | 1.3 | " | " | " | " | " | " | |
| Toluene | ND | 2.5 | " | " | " | " | " | " | 11 |
| 1,1,1-Trichloroethane | ND | 2.5 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 2.5 | " | " | " | " | " | " | |
| Trichloroethene | ND | 1.3 | " | " | " | " | " | " | |
| Trichlorofluoromethane | ND | 2.5 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 2.5 | " | " | " | " | " | " | |
| p,m-Xylene | ND | 5.0 | " | " | " | " | " | " | |
| o-Xylene | ND | 2.5 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 7.6 | " | " | " | " | " | " | |
| *Surrogate: Dibromofluoromethane* | | *103 %* | *60-140* | | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *108 %* | *60-140* | | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *102 %* | *60-140* | | " | " | " | " | |

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Tom Lyon, Project Manager

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| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/29/03 09:13 |

# Volatile Organic Compounds by EPA Method 8260B

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-IPA-02 (K304462-02) Soil Sampled: 04/17/03 14:40 Received: 04/18/03 12:00** | | | | | | | | | |
| Acetone | ND | 5000 | ug/kg dry | 50 | 3042313 | 04/23/03 | 04/25/03 | EPA 8260B | DILN |
| **Benzene** | **1.3** | 1.0 | " | 1 | " | " | " | " | |
| Bromodichloromethane | ND | 1.0 | " | " | " | " | " | " | |
| Bromoform | ND | 2.0 | " | " | " | " | " | " | |
| Bromomethane | ND | 2.0 | " | " | " | " | " | " | |
| 2-Butanone | ND | 120 | " | " | " | " | " | " | O8 |
| Carbon disulfide | ND | 2.0 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 2.0 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 2.0 | " | " | " | " | " | " | |
| Chlorodibromomethane | ND | 2.0 | " | " | " | " | " | " | |
| Chloroethane | ND | 4.0 | " | " | " | " | " | " | |
| Chloroform | ND | 2.0 | " | " | " | " | " | " | 11 |
| Chloromethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 2.0 | " | " | " | " | " | " | 11 |
| 2-Hexanone | ND | 10 | " | " | " | " | " | " | |
| Methylene chloride | ND | 30 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone | ND | 10 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 2.0 | " | " | " | " | " | " | |
| Styrene | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Tetrachloroethene | ND | 1.0 | " | " | " | " | " | " | |
| **Toluene** | **5.0** | 2.0 | " | " | " | " | " | " | 11 |
| 1,1,1-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Trichloroethene | ND | 1.0 | " | " | " | " | " | " | |
| Trichlorofluoromethane | ND | 2.0 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 2.0 | " | " | " | " | " | " | |
| p,m-Xylene | ND | 4.0 | " | " | " | " | " | " | |
| o-Xylene | ND | 2.0 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 6.0 | " | " | " | " | " | " | |
| *Surrogate: Dibromofluoromethane* | | *102 %* | *60-140* | | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *105 %* | *60-140* | | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *101 %* | *60-140* | | " | " | " | " | |

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Tom Lyon

Tom Lyon, Project Manager

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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/29/03 09:13 |

## Volatile Organic Compounds by EPA Method 8260B

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-IPA-03 (K304462-03) Soil Sampled: 04/17/03 14:50 Received: 04/18/03 12:00** | | | | | | | | | |
| Acetone | ND | 510 | ug/kg dry | 1 | 3042313 | 04/23/03 | 04/25/03 | EPA 8260B | O8 |
| **Benzene** | **1.4** | 1.0 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 1.0 | " | " | " | " | " | " | |
| Bromoform | ND | 2.0 | " | " | " | " | " | " | |
| Bromomethane | ND | 2.0 | " | " | " | " | " | " | |
| 2-Butanone | ND | 120 | " | " | " | " | " | " | O8 |
| Carbon disulfide | ND | 2.0 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 2.0 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 2.0 | " | " | " | " | " | " | |
| Chlorodibromomethane | ND | 2.0 | " | " | " | " | " | " | |
| Chloroethane | ND | 4.0 | " | " | " | " | " | " | |
| Chloroform | ND | 2.0 | " | " | " | " | " | " | 11 |
| Chloromethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 2.0 | " | " | " | " | " | " | 11 |
| 2-Hexanone | ND | 10 | " | " | " | " | " | " | |
| Methylene chloride | ND | 30 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone | ND | 10 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 2.0 | " | " | " | " | " | " | |
| Styrene | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Tetrachloroethene | ND | 1.0 | " | " | " | " | " | " | |
| **Toluene** | **3.1** | 2.0 | " | " | " | " | " | " | 11 |
| 1,1,1-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Trichloroethene | ND | 1.0 | " | " | " | " | " | " | |
| Trichlorofluoromethane | ND | 2.0 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 2.0 | " | " | " | " | " | " | |
| p,m-Xylene | ND | 4.0 | " | " | " | " | " | " | |
| o-Xylene | ND | 2.0 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 6.0 | " | " | " | " | " | " | |
| *Surrogate: Dibromofluoromethane* | | *102 %* | *60-140* | | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *107 %* | *60-140* | | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *101 %* | *60-140* | | " | " | " | " | |

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|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/29/03 09:13 |

## Volatile Organic Compounds by EPA Method 8260B

### GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-IPA-04 (K304462-04) Soil** | **Sampled: 04/17/03 15:00** | **Received: 04/18/03 12:00** | | | | | | | |
| Acetone | ND | 510 | ug/kg dry | 1 | 3042313 | 04/23/03 | 04/25/03 | EPA 8260B | O8 |
| Benzene | ND | 1.0 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 1.0 | " | " | " | " | " | " | |
| Bromoform | ND | 2.0 | " | " | " | " | " | " | |
| Bromomethane | ND | 2.0 | " | " | " | " | " | " | |
| 2-Butanone | ND | 120 | " | " | " | " | " | " | O8 |
| Carbon disulfide | ND | 2.0 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 2.0 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 2.0 | " | " | " | " | " | " | |
| Chlorodibromomethane | ND | 2.0 | " | " | " | " | " | " | |
| Chloroethane | ND | 4.0 | " | " | " | " | " | " | |
| Chloroform | ND | 2.0 | " | " | " | " | " | " | 11 |
| Chloromethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 2.0 | " | " | " | " | " | " | 11 |
| 2-Hexanone | ND | 10 | " | " | " | " | " | " | |
| Methylene chloride | ND | 30 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone | ND | 10 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 2.0 | " | " | " | " | " | " | |
| Styrene | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Tetrachloroethene | ND | 1.0 | " | " | " | " | " | " | |
| Toluene | ND | 2.0 | " | " | " | " | " | " | 11 |
| 1,1,1-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Trichloroethene | ND | 1.0 | " | " | " | " | " | " | |
| Trichlorofluoromethane | ND | 2.0 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 2.0 | " | " | " | " | " | " | |
| p,m-Xylene | ND | 4.0 | " | " | " | " | " | " | |
| o-Xylene | ND | 2.0 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 6.0 | " | " | " | " | " | " | |
| *Surrogate: Dibromofluoromethane* | | *100 %* | *60-140* | | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *106 %* | *60-140* | | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *99.3 %* | *60-140* | | " | " | " | " | |

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|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/29/03 09:13 |

## Physical Parameters by APHA/ASTM/EPA Methods

### GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-IPA-01 (K304462-01) Soil** | **Sampled: 04/17/03 14:30** | **Received: 04/18/03 12:00** | | | | | | | |
| **% Solids** | **79.2** | 0.01 | % by Weight | 1 | 3042307 | 04/23/03 | 04/23/03 | EPA 160.3 | |
| **DF-IPA-02 (K304462-02) Soil** | **Sampled: 04/17/03 14:40** | **Received: 04/18/03 12:00** | | | | | | | |
| **% Solids** | **82.4** | 0.01 | % by Weight | 1 | 3042307 | 04/23/03 | 04/23/03 | EPA 160.3 | |
| **DF-IPA-03 (K304462-03) Soil** | **Sampled: 04/17/03 14:50** | **Received: 04/18/03 12:00** | | | | | | | |
| **% Solids** | **80.4** | 0.01 | % by Weight | 1 | 3042307 | 04/23/03 | 04/23/03 | EPA 160.3 | |
| **DF-IPA-04 (K304462-04) Soil** | **Sampled: 04/17/03 15:00** | **Received: 04/18/03 12:00** | | | | | | | |
| **% Solids** | **80.2** | 0.01 | % by Weight | 1 | 3042307 | 04/23/03 | 04/23/03 | EPA 160.3 | |



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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/29/03 09:13 |

## Industrial Solvent Scan by EPA Method 3810/8015 (Modified)

## Great Lakes Analytical--Buffalo Grove

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-IPA-01 (K304462-01) Soil** | **Sampled: 04/17/03 14:30** | **Received: 04/18/03 12:00** | | | | | | | **QC** |
| Isopropanol | ND | 12.6 | mg/kg dry | 1 | 3040665 | 04/25/03 | 04/25/03 | 8015M | |
| **DF-IPA-02 (K304462-02) Soil** | **Sampled: 04/17/03 14:40** | **Received: 04/18/03 12:00** | | | | | | | **QC** |
| Isopropanol | ND | 12.1 | mg/kg dry | 1 | 3040665 | 04/25/03 | 04/25/03 | 8015M | |
| **DF-IPA-03 (K304462-03) Soil** | **Sampled: 04/17/03 14:50** | **Received: 04/18/03 12:00** | | | | | | | **QC** |
| Isopropanol | ND | 12.4 | mg/kg dry | 1 | 3040665 | 04/25/03 | 04/28/03 | 8015M | |
| **DF-IPA-04 (K304462-04) Soil** | **Sampled: 04/17/03 15:00** | **Received: 04/18/03 12:00** | | | | | | | **QC** |
| Isopropanol | ND | 12.5 | mg/kg dry | 1 | 3040665 | 04/25/03 | 04/25/03 | 8015M | |



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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/29/03 09:13 |

## Percent Solids

## Great Lakes Analytical--Buffalo Grove

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-IPA-01 (K304462-01) Soil** | **Sampled: 04/17/03 14:30** | **Received: 04/18/03 12:00** | | | | | | | |
| **% Solids** | **79.2** | 0.200 | % | 1 | 3040451 | 04/17/03 | 04/25/03 | EPA 5035 7.5 | |
| **DF-IPA-02 (K304462-02) Soil** | **Sampled: 04/17/03 14:40** | **Received: 04/18/03 12:00** | | | | | | | |
| **% Solids** | **82.4** | 0.200 | % | 1 | 3040451 | 04/17/03 | 04/25/03 | EPA 5035 7.5 | |
| **DF-IPA-03 (K304462-03) Soil** | **Sampled: 04/17/03 14:50** | **Received: 04/18/03 12:00** | | | | | | | |
| **% Solids** | **80.4** | 0.200 | % | 1 | 3040451 | 04/17/03 | 04/25/03 | EPA 5035 7.5 | |
| **DF-IPA-04 (K304462-04) Soil** | **Sampled: 04/17/03 15:00** | **Received: 04/18/03 12:00** | | | | | | | |
| **% Solids** | **80.2** | 0.200 | % | 1 | 3040451 | 04/17/03 | 04/25/03 | EPA 5035 7.5 | |



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Tom Lyon

Tom Lyon, Project Manager

GLA LABORATORIES
1008 W. Ninth Avenue • King of Prussia, Pennsylvania 19406 (610) 337-9992 FAX (610) 337-9939

| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/29/03 09:13 |

# Volatile Organic Compounds by EPA Method 8260B - Quality Control

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 3042313 - EPA 5030B [P/T]** | | | | | | | | | | |
| **Blank (3042313-BLK1)** | | | | Prepared: 04/23/03 Analyzed: 04/25/03 | | | | | | |
| Acetone | ND | 100 | ug/kg wet | | | | | | | |
| Benzene | ND | 1.0 | " | | | | | | | |
| Bromodichloromethane | ND | 1.0 | " | | | | | | | |
| Bromoform | ND | 2.0 | " | | | | | | | |
| Bromomethane | ND | 2.0 | " | | | | | | | |
| 2-Butanone | ND | 100 | " | | | | | | | |
| Carbon disulfide | ND | 2.0 | " | | | | | | | |
| Carbon tetrachloride | ND | 2.0 | " | | | | | | | |
| Chlorobenzene | ND | 2.0 | " | | | | | | | |
| Chlorodibromomethane | ND | 2.0 | " | | | | | | | |
| Chloroethane | ND | 4.0 | " | | | | | | | |
| Chloroform | ND | 2.0 | " | | | | | | | |
| Chloromethane | ND | 2.0 | " | | | | | | | |
| 1,1-Dichloroethane | ND | 2.0 | " | | | | | | | |
| 1,2-Dichloroethane | ND | 2.0 | " | | | | | | | |
| 1,1-Dichloroethene | ND | 2.0 | " | | | | | | | |
| cis-1,2-Dichloroethene | ND | 2.0 | " | | | | | | | |
| trans-1,2-Dichloroethene | ND | 2.0 | " | | | | | | | |
| 1,2-Dichloropropane | ND | 2.0 | " | | | | | | | |
| cis-1,3-Dichloropropene | ND | 2.0 | " | | | | | | | |
| trans-1,3-Dichloropropene | ND | 2.0 | " | | | | | | | |
| Ethylbenzene | ND | 2.0 | " | | | | | | | |
| 2-Hexanone | ND | 10 | " | | | | | | | |
| Methylene chloride | ND | 30 | " | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | " | | | | | | | |
| Methyl tert-butyl ether | ND | 2.0 | " | | | | | | | |
| Styrene | ND | 2.0 | " | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | " | | | | | | | |
| Tetrachloroethene | ND | 1.0 | " | | | | | | | |
| Toluene | ND | 2.0 | " | | | | | | | |
| 1,1,1-Trichloroethane | ND | 2.0 | " | | | | | | | |
| 1,1,2-Trichloroethane | ND | 2.0 | " | | | | | | | |
| Trichlorocthene | ND | 1.0 | " | | | | | | | |
| Trichlorofluoromethane | ND | 2.0 | " | | | | | | | |
| Vinyl chloride | ND | 2.0 | " | | | | | | | |
| p,m-Xylene | ND | 4.0 | " | | | | | | | |
| o-Xylene | ND | 2.0 | " | | | | | | | |
| Xylenes (total) | ND | 6.0 | " | | | | | | | |



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Tom Lyon, Project Manager

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1008 W. Ninth Avenue • King of Prussia, Pennsylvania 19406 (610) 337-9992 FAX (610) 337-9939

| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/29/03 09:13 |

# Volatile Organic Compounds by EPA Method 8260B - Quality Control

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 3042313 - EPA 5030B [P/T]** | | | | | | | | | | |
| **Blank (3042313-BLK1)** | | | | Prepared: 04/23/03 Analyzed: 04/25/03 | | | | | | |
| *Surrogate: Dibromofluoromethane* | *49.9* | | *ug/kg wet* | *50.0* | | *99.8* | *60-140* | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *48.8* | | " | *50.0* | | *97.6* | *60-140* | | | |
| *Surrogate: Toluene-d8* | *50.1* | | " | *50.0* | | *100* | *60-140* | | | |
| **LCS (3042313-BS1)** | | | | Prepared: 04/23/03 Analyzed: 04/25/03 | | | | | | |
| Chloroform | 62.2 | 2.0 | ug/kg wet | 50.0 | | 124 | 80-120 | | | G3 |
| 1,1-Dichloroethene | 51.3 | 2.0 | " | 50.0 | | 103 | 80-120 | | | |
| 1,2-Dichloropropane | 59.6 | 2.0 | " | 50.0 | | 119 | 80-120 | | | |
| Ethylbenzene | 64.0 | 2.0 | " | 50.0 | | 128 | 80-120 | | | G3 |
| Toluene | 63.4 | 2.0 | " | 50.0 | | 127 | 80-120 | | | G3 |
| Vinyl chloride | 57.2 | 2.0 | " | 50.0 | | 114 | 80-120 | | | |
| *Surrogate: Dibromofluoromethane* | *49.7* | | " | *50.0* | | *99.4* | *60-140* | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *49.9* | | " | *50.0* | | *99.8* | *60-140* | | | |
| *Surrogate: Toluene-d8* | *49.8* | | " | *50.0* | | *99.6* | *60-140* | | | |
| **LCS (3042313-BS2)** | | | | Prepared: 04/23/03 Analyzed: 04/25/03 | | | | | | |
| Chloroform | 63.3 | 2.0 | ug/kg wet | 50.0 | | 127 | 80-120 | | | |
| 1,1-Dichloroethene | 51.9 | 2.0 | " | 50.0 | | 104 | 80-120 | | | |
| 1,2-Dichloropropane | 61.2 | 2.0 | " | 50.0 | | 122 | 80-120 | | | |
| Ethylbenzene | 62.6 | 2.0 | " | 50.0 | | 125 | 80-120 | | | |
| Toluene | 63.2 | 2.0 | " | 50.0 | | 126 | 80-120 | | | |
| Vinyl chloride | 51.5 | 2.0 | " | 50.0 | | 103 | 80-120 | | | |
| *Surrogate: Dibromofluoromethane* | *49.6* | | " | *50.0* | | *99.2* | *60-140* | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *49.8* | | " | *50.0* | | *99.6* | *60-140* | | | |
| *Surrogate: Toluene-d8* | *50.4* | | " | *50.0* | | *101* | *60-140* | | | |
| **LCS Dup (3042313-BSD2)** | | | | Prepared: 04/23/03 Analyzed: 04/25/03 | | | | | | |
| Chloroform | 65.4 | 2.0 | ug/kg wet | 50.0 | | 131 | 80-120 | 3.26 | 20 | |
| 1,1-Dichloroethene | 53.1 | 2.0 | " | 50.0 | | 106 | 80-120 | 2.29 | 20 | |
| 1,2-Dichloropropane | 62.9 | 2.0 | " | 50.0 | | 126 | 80-120 | 2.74 | 20 | |
| Ethylbenzene | 62.8 | 2.0 | " | 50.0 | | 126 | 80-120 | 0.319 | 20 | |
| Toluene | 65.3 | 2.0 | " | 50.0 | | 131 | 80-120 | 3.27 | 20 | |
| Vinyl chloride | 53.4 | 2.0 | " | 50.0 | | 107 | 80-120 | 3.62 | 20 | |
| *Surrogate: Dibromofluoromethane* | *51.0* | | " | *50.0* | | *102* | *60-140* | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *50.0* | | " | *50.0* | | *100* | *60-140* | | | |
| *Surrogate: Toluene-d8* | *50.8* | | " | *50.0* | | *102* | *60-140* | | | |





Tom Lyon, Project Manager

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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/29/03 09:13 |

## Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 3042307 - General Prep WC** | | | | | | | | | | |
| **Duplicate (3042307-DUP1)** | | **Source: K304421-01** | | Prepared & Analyzed: 04/23/03 | | | | | | |
| % Solids | 80.9 | 0.01 | % by Weight | | 80.4 | | | 0.620 | 5 | |
| **Duplicate (3042307-DUP2)** | | **Source: K304457-01** | | Prepared & Analyzed: 04/23/03 | | | | | | |
| % Solids | 76.2 | 0.01 | % by Weight | | 76.8 | | | 0.784 | 5 | |



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Tom Lyon, Project Manager

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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/29/03 09:13 |

## Industrial Solvent Scan by EPA Method 3810/8015 (Modified) - Quality Control
## Great Lakes Analytical--Buffalo Grove

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 3040665 - EPA 5021** | | | | | | | | | | |
| **Blank (3040665-BLK1)** | | | | Prepared & Analyzed: 04/25/03 | | | | | | |
| Isopropanol | ND | 10.0 | mg/kg wet | | | | | | | |
| **LCS (3040665-BS1)** | | | | Prepared & Analyzed: 04/25/03 | | | | | | |
| Isopropanol | 11.8 | 10.0 | mg/kg wet | 12.5 | | 94.4 | 70-130 | | | |
| **Matrix Spike (3040665-MS1)** | | **Source: K304462-04** | | Prepared: 04/25/03 Analyzed: 04/28/03 | | | | | | |
| Isopropanol | 4.05 | 1.25 | mg/kg dry | 15.6 | ND | 26.0 | 70-130 | | | |
| **Matrix Spike Dup (3040665-MSD1)** | | **Source: K304462-04** | | Prepared & Analyzed: 04/25/03 | | | | | | |
| Isopropanol | 2.30 | 1.25 | mg/kg dry | 15.5 | ND | 14.8 | 70-130 | 55.1 | 20 | |



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Tom Lyon

Tom Lyon, Project Manager

GLA LABORATORIES
1008 W. Ninth Avenue • King of Prussia, Pennsylvania 19406 (610) 337-9992 FAX (610) 337-9939

| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/29/03 09:13 |

## Notes and Definitions

| | |
|---|---|
| 11 | This compound was above the method control limits in the Check Standard associated with this sample. |
| DILN | Due to matrix interference and or sample dilution the detection limits for this sample have been elevated. |
| G3 | The laboratory control spike recoveries associated with this sample were above the laboratory's established acceptance criteria. |
| O8 | The preservative in this sample produced ketones, the detection limits have been elevated for those compounds. |
| QC | The result for one or more quality control measurements associated with this sample did not meet the laboratory and/or source method acceptance criteria. |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |





Tom Lyon

Tom Lyon, Project Manager

WORK ORDER

Printed: 4/21/2003 11:52:06AM

**K304462**

# GLA Laboratories

**Client:** WRS
**Project:** Dussault Foundry/Lockport, NY

**Project Manager:** Tom Lyon
**Project Number:** 501075

**Report To:**
WRS
M. Mahnkopf
925 Canal Street Suite 3701
Bristol, PA 19007
Phone: (609) 499-6540
Fax: (609) 499-6545

**Invoice To:**
WRS
Accounts Payable
925 Canal Street Suite 3701
Bristol, PA 19007
Phone :267-540-0048
Fax: 267-540-0049

Date Due: 04/25/03 16:00 (5 day TAT)
Received By: Jake Zanck
Logged In By: Oswaldo Burgos
Date Received: 04/18/03 12:00
Date Logged In: 04/21/03 10:15

Samples Received at: 0°C
Custody Seals No Received On Ice Yes
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confir Yes

| Analysis | Due | TAT | Expires | Comments |
|---|---|---|---|---|
| **K304462-01 DF-IPA-01 [Soil] Sampled 04/17/03 14:30 Eastern** | | | | |
| 8260 | 04/25/03 12:00 | 5 | 05/01/03 14:30 | |
| Solids, Dry Weight | 04/25/03 12:00 | 5 | 05/17/03 14:30 | |
| **K304462-02 DF-IPA-02 [Soil] Sampled 04/17/03 14:40 Eastern** | | | | |
| 8260 | 04/25/03 12:00 | 5 | 05/01/03 14:40 | |
| Solids, Dry Weight | 04/25/03 12:00 | 5 | 05/17/03 14:40 | |
| **K304462-03 DF-IPA-03 [Soil] Sampled 04/17/03 14:50 Eastern** | | | | |
| 8260 | 04/25/03 12:00 | 5 | 05/01/03 14:50 | |
| Solids, Dry Weight | 04/25/03 12:00 | 5 | 05/17/03 14:50 | |
| **K304462-04 DF-IPA-04 [Soil] Sampled 04/17/03 15:00 Eastern** | | | | |
| 8260 | 04/25/03 12:00 | 5 | 05/01/03 15:00 | |
| Solids, Dry Weight | 04/25/03 12:00 | 5 | 05/17/03 15:00 | |
| **GLA - Buffalo Grove** | | | | |
| **K304462-01 DF-IPA-01 [Soil] Sampled 04/17/03 14:30 Eastern** | | | | |
| Misc. Subcontract | 04/25/03 12:00 | 5 | 10/14/03 14:30 | Industrial Alcohols (Isopropanol only) |
| **K304462-02 DF-IPA-02 [Soil] Sampled 04/17/03 14:40 Eastern** | | | | |
| Misc. Subcontract | 04/25/03 12:00 | 5 | 10/14/03 14:40 | Industrial Alcohols (Isopropanol only) |
| **K304462-03 DF-IPA-03 [Soil] Sampled 04/17/03 14:50 Eastern** | | | | |
| Misc. Subcontract | 04/25/03 12:00 | 5 | 10/14/03 14:50 | Industrial Alcohols (Isopropanol only) |

WORK ORDER

Printed: 4/21/2003 11:52:06AM

**K304462**

## GLA Laboratories

**Client:** WRS
**Project:** Dussault Foundry/Lockport, NY

**Project Manager:** Tom Lyon
**Project Number:** 501075

| Analysis | Due | TAT | Expires | Comments |
|---|---|---|---|---|
| **GLA - Buffalo Grove** | | | | |
| **K304462-04 DF-IPA-04 [Soil] Sampled 04/17/03 15:00 Eastern** | | | | |
| Misc. Subcontract | 04/25/03 12:00 | 5 | 10/14/03 15:00 | Industrial Alcohols (Isopropanol only) |

TL

Reviewed By

4/22/03

Date

# CHAIN OF CUSTODY REPORT

GLA LABORATORIES
100 ... Nint...
King of Prussia, PA 19406
(610) 337-9992
FAX (610) 337-9939

1 week TAT

Client: WRS c/o Dussault Foundry
Address: 2 WASHBURN ST.
Lockport NY 14094
Report to: M. Mahkopf Phone #: 716) 438-1203 Fax #: 716) 438-1205

Bill To: WRS
Address:
State & Program:
Phone #: ( ) Fax #: ( )

TAT: Standard 5 DAY 3 DAY 1 DAY 4 DAY 2 DAY < 24 HRS.
DATE RESULTS NEEDED: 4/24/03
TEMPERATURE UPON RECEIPT: 0°C
SHIPPING #:

Project: Dussault Foundry
Sampler: MM
PO/Quote #: 501075

| | FIELD ID, LOCATION | DATE COLLECTED | TIME COLLECTED | SAMPLE MATRIX | # of Bottles Preservative Used: MeOH | NaHSO4 | HCl | HNO3 | H2SO4 | NaOH | NONE | TOTAL # OF BOTTLES | TCL VOAs | IPA | o/o moisture | ANALYSIS TYPE | SAMPLE CONTROL: CRACKED/BROKEN | IMPROPERLY SEALED | GOOD CONDITION | LABORATORY ID NUMBER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | DF-IPA-01 PID: | 4/17/03 | 1430 | Soil | | | | | | | | 4 | X | X | X | | | | | K304462-01 |
| 2 | DF-IPA-02 PID: | | 1440 | | | | | | | | | 4 | X | X | X | | | | | -02 |
| 3 | DF-IPA-03 PID: | | 1450 | | | | | | | | | 4 | X | X | X | | | | | -03 |
| 4 | DF-IPA-04 PID: | | 1500 | | | | | | | | | 4 | X | X | X | | | | | -04 |
| 5 | PID: | | | | | | | | | | | | | | | | | | | |
| 6 | PID: | | | | | | | | | | | | | | | | | | | |
| 7 | PID: | | | | | | | | | | | | | | | | | | | |
| 8 | PID: | | | | | | | | | | | | | | | | | | | |
| 9 | PID: | | | | Cheques were Pres @ Lab - LM 4/18/03 | | | | | | | | | | | | | | | |
| 10 | PID: | | | | | | | | | | | | | | | | | | | |

| RELINQUISHED | DATE / TIME | RECEIVED | DATE / TIME | RELINQUISHED | DATE / TIME | RECEIVED | DATE / TIME |
|---|---|---|---|---|---|---|---|
| M. Mahkopf | 4/17/03 1610 | Jack Jak | 4/18/03 1210 | | | | |
| RELINQUISHED | DATE / TIME | RECEIVED | DATE / TIME | RELINQUISHED | DATE / TIME | RECEIVED | DATE / TIME |

COMMENTS: (1) TCL VOCs VIA EPA METHOD 8260B (2) IPA - Isopropanol VIA EPA METHOD 8015 & Alcohols Scan, Per Tom Lyon

PAGE 1 OF 1

FedEx Express **USA Airbill** FedEx Tracking Number 837726191267

**1 From** *Please print and press hard.*

Date 4/17/03 Sender's FedEx Account Number 1189-0302-1

Sender's Name M. Mahkopf Phone (716) 438-1203

Company WRS

Address 2 WASHBURN ST. Dept/Floor/Suite/Room

City Lockport State NY ZIP 14094

**2 Your Internal Billing Reference** First 24 characters will appear on invoice. 501075

**3 To**

Recipient's Name TOM LYON / SAMPLE MGMT Phone (610) 337-9992

Company GLA LABORATORIES

Address 1008 W. NINTH AVE.

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address Dept/Floor/Suite/Room

City King of Prussia State PA ZIP 19406

Ship online faster at fedex.com

By using this Airbill you agree to the service conditions on the back of this Airbill and in our current Service Guide, including terms that limit our liability.

**Questions? Visit our Web site at fedex.com**
or call 1.800.Go.FedEx® 800.463.3339.

**Sender's Copy**

**4a Express Package Service** *Packages up to 150 lbs.* Delivery commitment may be later in some areas.

- [X] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day

FedEx Envelope rate not available. Minimum charge: One-pound rate

**4b Express Freight Service** *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation:

**5 Packaging** * Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [X] Other

**6 Special Handling**

- [ ] **SATURDAY Delivery** — Available for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] **HOLD Weekday** at FedEx Location — Available for FedEx First Overnight
- [ ] **HOLD Saturday** at FedEx Location — Available for FedEx Priority Overnight and FedEx 2Day to select locations

**Does this shipment contain dangerous goods?**

- [X] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous Goods (including Dry Ice) cannot be shipped in FedEx packaging. [ ] Cargo Aircraft Only

**7 Payment** *Bill to:*

- [X] Sender — Acct. No. in Section 7 will be billed
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. Exp. Date

| Total Packages | Total Weight | Total Declared Value† | |
|---|---|---|---|
| | | $ .00 | FedEx Use Only |

†Our liability is limited to $100 unless you declare a higher value. See back for details.

**8 Release Signature** *Sign to authorize delivery without obtaining signature.*

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

446

Rev. Date 10/01 • Part #157612 • ©1994-2001 FedEx • PRINTED IN U.S.A. WCSL 02

RETAIN THIS COPY FOR YOUR RECORDS.

GLA LABORATORIES
1008 W. Ninth Avenue • King of Prussia, Pennsylvania 19406 (610) 337-9992 FAX (610) 337-9939

| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| DF-FO-01 | K304466-01 | Soil | 04/17/03 18:15 | 04/19/03 11:45 |
| DF-FO-02 | K304466-02 | Soil | 04/17/03 18:20 | 04/19/03 11:45 |
| DF-FO-03 | K304466-03 | Soil | 04/17/03 18:25 | 04/19/03 11:45 |
| DF-FO-04 | K304466-04 | Soil | 04/17/03 18:30 | 04/19/03 11:45 |
| DF-FO-05 | K304466-05 | Soil | 04/17/03 18:35 | 04/19/03 11:45 |
| DF-FO-06 | K304466-06 | Soil | 04/17/03 18:40 | 04/19/03 11:45 |
| DF-FO-07 | K304466-07 | Soil | 04/17/03 18:45 | 04/19/03 11:45 |
| DF-FO-08 | K304466-08 | Soil | 04/17/03 18:50 | 04/19/03 11:45 |





Tom Lyon, Project Manager

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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Volatile Organic Compounds by EPA Method 8260B

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-01 (K304466-01) Soil** | **Sampled: 04/17/03 18:15** | **Received: 04/19/03 11:45** | | | | | | | **A-01a, O7** |
| Acetone | ND | 270 | ug/kg dry | 1 | 3042409 | 04/24/03 | 04/26/03 | EPA 8260B | |
| Benzene | ND | 2.7 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 2.7 | " | " | " | " | " | " | |
| Bromoform | ND | 5.3 | " | " | " | " | " | " | |
| Bromomethane | ND | 5.3 | " | " | " | " | " | " | |
| 2-Butanone | ND | 270 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 5.3 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 5.3 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 5.3 | " | " | " | " | " | " | |
| Chlorodibromomethane | ND | 5.3 | " | " | " | " | " | " | |
| Chloroethane | ND | 11 | " | " | " | " | " | " | |
| Chloroform | ND | 5.3 | " | " | " | " | " | " | |
| Chloromethane | ND | 5.3 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 5.3 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 5.3 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 5.3 | " | " | " | " | " | " | 10 |
| cis-1,2-Dichloroethene | ND | 5.3 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 5.3 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 5.3 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 5.3 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 5.3 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 5.3 | " | " | " | " | " | " | |
| 2-Hexanone | ND | 27 | " | " | " | " | " | " | |
| Methylene chloride | ND | 80 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone | ND | 27 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 5.3 | " | " | " | " | " | " | |
| Styrene | ND | 5.3 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 5.3 | " | " | " | " | " | " | |
| Tetrachloroethene | ND | 2.7 | " | " | " | " | " | " | |
| Toluene | ND | 5.3 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 5.3 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 5.3 | " | " | " | " | " | " | |
| Trichloroethene | ND | 2.7 | " | " | " | " | " | " | |
| Trichlorofluoromethane | ND | 5.3 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 5.3 | " | " | " | " | " | " | |
| p,m-Xylene | ND | 11 | " | " | " | " | " | " | |
| o-Xylene | ND | 5.3 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 16 | " | " | " | " | " | " | |
| *Surrogate: Dibromofluoromethane* | | *97.9 %* | *60-140* | | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *101 %* | *60-140* | | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *96.6 %* | *60-140* | | " | " | " | " | |

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Tom Lyon, Project Manager

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|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Volatile Organic Compounds by EPA Method 8260B

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-02 (K304466-02) Soil Sampled: 04/17/03 18:20 Received: 04/19/03 11:45** | | | | | | | | | |
| Acetone | ND | 100 | ug/kg dry | 1 | 3042409 | 04/24/03 | 04/24/03 | EPA 8260B | |
| **Benzene** | **2.9** | 1.0 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 1.0 | " | " | " | " | " | " | |
| Bromoform | ND | 2.0 | " | " | " | " | " | " | |
| Bromomethane | ND | 2.0 | " | " | " | " | " | " | |
| 2-Butanone | ND | 100 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 2.0 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 2.0 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 2.0 | " | " | " | " | " | " | |
| Chlorodibromomethane | ND | 2.0 | " | " | " | " | " | " | |
| Chloroethane | ND | 4.0 | " | " | " | " | " | " | |
| Chloroform | ND | 2.0 | " | " | " | " | " | " | |
| Chloromethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 2.0 | " | " | " | " | " | " | |
| 2-Hexanone | ND | 10 | " | " | " | " | " | " | |
| Methylene chloride | ND | 30 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone | ND | 10 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 2.0 | " | " | " | " | " | " | |
| Styrene | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Tetrachloroethene | ND | 1.0 | " | " | " | " | " | " | |
| Toluene | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Trichloroethene | ND | 1.0 | " | " | " | " | " | " | |
| Trichlorofluoromethane | ND | 2.0 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 2.0 | " | " | " | " | " | " | |
| p,m-Xylene | ND | 4.0 | " | " | " | " | " | " | |
| **o-Xylene** | **2.2** | 2.0 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 6.0 | " | " | " | " | " | " | |
| *Surrogate: Dibromofluoromethane* | | *109 %* | *60-140* | | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *122 %* | *60-140* | | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *109 %* | *60-140* | | " | " | " | " | |

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Tom Lyon

Tom Lyon, Project Manager

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| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Volatile Organic Compounds by EPA Method 8260B

### GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-03 (K304466-03) Soil Sampled: 04/17/03 18:25 Received: 04/19/03 11:45** | | | | | | | | | |
| Acetone | ND | 100 | ug/kg dry | 1 | 3042409 | 04/24/03 | 04/24/03 | EPA 8260B | |
| **Benzene** | **1.8** | 1.0 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 1.0 | " | " | " | " | " | " | |
| Bromoform | ND | 2.0 | " | " | " | " | " | " | |
| Bromomethane | ND | 2.0 | " | " | " | " | " | " | |
| 2-Butanone | ND | 100 | " | " | " | " | " | " | |
| **Carbon disulfide** | **2.4** | 2.0 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 2.0 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 2.0 | " | " | " | " | " | " | |
| Chlorodibromomethane | ND | 2.0 | " | " | " | " | " | " | |
| Chloroethane | ND | 4.0 | " | " | " | " | " | " | |
| Chloroform | ND | 2.0 | " | " | " | " | " | " | |
| Chloromethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 2.0 | " | " | " | " | " | " | |
| 2-Hexanone | ND | 10 | " | " | " | " | " | " | |
| Methylene chloride | ND | 30 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone | ND | 10 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 2.0 | " | " | " | " | " | " | |
| Styrene | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **1.2** | 1.0 | " | " | " | " | " | " | |
| Toluene | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Trichloroethene | ND | 1.0 | " | " | " | " | " | " | |
| Trichlorofluoromethane | ND | 2.0 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 2.0 | " | " | " | " | " | " | |
| p,m-Xylene | ND | 4.0 | " | " | " | " | " | " | |
| o-Xylene | ND | 2.0 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 6.0 | " | " | " | " | " | " | |
| *Surrogate: Dibromofluoromethane* | | *113 %* | *60-140* | | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *126 %* | *60-140* | | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *119 %* | *60-140* | | " | " | " | " | |

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Tom Lyon, Project Manager

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|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Volatile Organic Compounds by EPA Method 8260B

### GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-04 (K304466-04) Soil Sampled: 04/17/03 18:30 Received: 04/19/03 11:45** | | | | | | | | | |
| Acetone | ND | 100 | ug/kg dry | 1 | 3042409 | 04/24/03 | 04/26/03 | EPA 8260B | |
| **Benzene** | **2.5** | 1.0 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 1.0 | " | " | " | " | " | " | |
| Bromoform | ND | 2.0 | " | " | " | " | " | " | |
| Bromomethane | ND | 2.0 | " | " | " | " | " | " | |
| 2-Butanone | ND | 100 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 2.0 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 2.0 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 2.0 | " | " | " | " | " | " | |
| Chlorodibromomethane | ND | 2.0 | " | " | " | " | " | " | |
| Chloroethane | ND | 4.0 | " | " | " | " | " | " | |
| Chloroform | ND | 2.0 | " | " | " | " | " | " | |
| Chloromethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | 10 |
| cis-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 2.0 | " | " | " | " | " | " | |
| 2-Hexanone | ND | 10 | " | " | " | " | " | " | |
| Methylene chloride | ND | 30 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone | ND | 10 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 2.0 | " | " | " | " | " | " | |
| Styrene | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Tetrachloroethene | ND | 1.0 | " | " | " | " | " | " | |
| Toluene | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Trichloroethene | ND | 1.0 | " | " | " | " | " | " | |
| Trichlorofluoromethane | ND | 2.0 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 2.0 | " | " | " | " | " | " | |
| p,m-Xylene | ND | 4.0 | " | " | " | " | " | " | |
| o-Xylene | ND | 2.0 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 6.0 | " | " | " | " | " | " | |
| *Surrogate: Dibromofluoromethane* | | *107 %* | *60-140* | | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *120 %* | *60-140* | | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *119 %* | *60-140* | | " | " | " | " | |

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|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Volatile Organic Compounds by EPA Method 8260B

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-05 (K304466-05) Soil** | **Sampled: 04/17/03 18:35** | **Received: 04/19/03 11:45** | | | | | | | |
| **Acetone** | **150** | 100 | ug/kg dry | 1 | 3042409 | 04/24/03 | 04/24/03 | EPA 8260B | |
| **Benzene** | **1.9** | 1.0 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 1.0 | " | " | " | " | " | " | |
| Bromoform | ND | 2.0 | " | " | " | " | " | " | |
| Bromomethane | ND | 2.0 | " | " | " | " | " | " | |
| 2-Butanone | ND | 100 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 2.0 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 2.0 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 2.0 | " | " | " | " | " | " | |
| Chlorodibromomethane | ND | 2.0 | " | " | " | " | " | " | |
| Chloroethane | ND | 4.0 | " | " | " | " | " | " | |
| Chloroform | ND | 2.0 | " | " | " | " | " | " | |
| Chloromethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| **Ethylbenzene** | **3.3** | 2.0 | " | " | " | " | " | " | |
| 2-Hexanone | ND | 10 | " | " | " | " | " | " | |
| Methylene chloride | ND | 30 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone | ND | 10 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 2.0 | " | " | " | " | " | " | |
| Styrene | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Tetrachloroethene | ND | 1.0 | " | " | " | " | " | " | |
| **Toluene** | **3.3** | 2.0 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Trichloroethene | ND | 1.0 | " | " | " | " | " | " | |
| Trichlorofluoromethane | ND | 2.0 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 2.0 | " | " | " | " | " | " | |
| **p,m-Xylene** | **14** | 4.0 | " | " | " | " | " | " | |
| **o-Xylene** | **10** | 2.0 | " | " | " | " | " | " | |
| **Xylenes (total)** | **24** | 6.0 | " | " | " | " | " | " | |
| *Surrogate: Dibromofluoromethane* | | *107 %* | *60-140* | | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *120 %* | *60-140* | | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *107 %* | *60-140* | | " | " | " | " | |

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Tom Lyon

Tom Lyon, Project Manager

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| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Volatile Organic Compounds by EPA Method 8260B

### GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-06 (K304466-06) Soil** | **Sampled: 04/17/03 18:40** | **Received: 04/19/03 11:45** | | | | | | | |
| Acetone | ND | 100 | ug/kg dry | 1 | 3042409 | 04/24/03 | 04/24/03 | EPA 8260B | |
| **Benzene** | **1.4** | 1.0 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 1.0 | " | " | " | " | " | " | |
| Bromoform | ND | 2.0 | " | " | " | " | " | " | |
| Bromomethane | ND | 2.0 | " | " | " | " | " | " | |
| 2-Butanone | ND | 100 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 2.0 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 2.0 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 2.0 | " | " | " | " | " | " | |
| Chlorodibromomethane | ND | 2.0 | " | " | " | " | " | " | |
| Chloroethane | ND | 4.0 | " | " | " | " | " | " | |
| Chloroform | ND | 2.0 | " | " | " | " | " | " | |
| Chloromethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 2.0 | " | " | " | " | " | " | |
| 2-Hexanone | ND | 10 | " | " | " | " | " | " | |
| Methylene chloride | ND | 30 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone | ND | 10 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 2.0 | " | " | " | " | " | " | |
| Styrene | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Tetrachloroethene | ND | 1.0 | " | " | " | " | " | " | |
| Toluene | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Trichloroethene | ND | 1.0 | " | " | " | " | " | " | |
| Trichlorofluoromethane | ND | 2.0 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 2.0 | " | " | " | " | " | " | |
| p,m-Xylene | ND | 4.0 | " | " | " | " | " | " | |
| o-Xylene | ND | 2.0 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 6.0 | " | " | " | " | " | " | |
| *Surrogate: Dibromofluoromethane* | | *113 %* | *60-140* | | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *127 %* | *60-140* | | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *120 %* | *60-140* | | " | " | " | " | |

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Tom Lyon

Tom Lyon, Project Manager

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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Volatile Organic Compounds by EPA Method 8260B

### GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-07 (K304466-07) Soil** | **Sampled: 04/17/03 18:45** | **Received: 04/19/03 11:45** | | | | | | | |
| Acetone | ND | 100 | ug/kg dry | 1 | 3042409 | 04/24/03 | 04/26/03 | EPA 8260B | |
| **Benzene** | **2.8** | 1.0 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 1.0 | " | " | " | " | " | " | |
| Bromoform | ND | 2.0 | " | " | " | " | " | " | |
| Bromomethane | ND | 2.0 | " | " | " | " | " | " | |
| 2-Butanone | ND | 100 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 2.0 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 2.0 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 2.0 | " | " | " | " | " | " | |
| Chlorodibromomethane | ND | 2.0 | " | " | " | " | " | " | |
| Chloroethane | ND | 4.0 | " | " | " | " | " | " | |
| Chloroform | ND | 2.0 | " | " | " | " | " | " | |
| Chloromethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | 10 |
| cis-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 2.0 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 2.0 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 2.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 2.0 | " | " | " | " | " | " | |
| 2-Hexanone | ND | 10 | " | " | " | " | " | " | |
| Methylene chloride | ND | 30 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone | ND | 10 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 2.0 | " | " | " | " | " | " | |
| Styrene | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Tetrachloroethene | ND | 1.0 | " | " | " | " | " | " | |
| **Toluene** | **2.4** | 2.0 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 2.0 | " | " | " | " | " | " | |
| Trichloroethene | ND | 1.0 | " | " | " | " | " | " | |
| Trichlorofluoromethane | ND | 2.0 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 2.0 | " | " | " | " | " | " | |
| p,m-Xylene | ND | 4.0 | " | " | " | " | " | " | |
| o-Xylene | ND | 2.0 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 6.0 | " | " | " | " | " | " | |
| *Surrogate: Dibromofluoromethane* | | *108 %* | *60-140* | | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *121 %* | *60-140* | | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *118 %* | *60-140* | | " | " | " | " | |

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|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Volatile Organic Compounds by EPA Method 8260B

### GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-08 (K304466-08) Soil** | **Sampled: 04/17/03 18:50** | **Received: 04/19/03 11:45** | | | | | | | **A-01, O7** |
| Acetone | ND | 230 | ug/kg dry | 1 | 3042409 | 04/24/03 | 04/26/03 | EPA 8260B | |
| Benzene | ND | 2.3 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 2.3 | " | " | " | " | " | " | |
| Bromoform | ND | 4.7 | " | " | " | " | " | " | |
| Bromomethane | ND | 4.7 | " | " | " | " | " | " | |
| 2-Butanone | ND | 230 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 4.7 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 4.7 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 4.7 | " | " | " | " | " | " | |
| Chlorodibromomethane | ND | 4.7 | " | " | " | " | " | " | |
| Chloroethane | ND | 9.3 | " | " | " | " | " | " | |
| Chloroform | ND | 4.7 | " | " | " | " | " | " | |
| Chloromethane | ND | 4.7 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 4.7 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 4.7 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 4.7 | " | " | " | " | " | " | 10 |
| cis-1,2-Dichloroethene | ND | 4.7 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 4.7 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 4.7 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 4.7 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 4.7 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 4.7 | " | " | " | " | " | " | |
| 2-Hexanone | ND | 23 | " | " | " | " | " | " | |
| Methylene chloride | ND | 70 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone | ND | 23 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 4.7 | " | " | " | " | " | " | |
| Styrene | ND | 4.7 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 4.7 | " | " | " | " | " | " | |
| Tetrachloroethene | ND | 2.3 | " | " | " | " | " | " | |
| Toluene | ND | 4.7 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 4.7 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 4.7 | " | " | " | " | " | " | |
| Trichloroethene | ND | 2.3 | " | " | " | " | " | " | |
| Trichlorofluoromethane | ND | 4.7 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 4.7 | " | " | " | " | " | " | |
| p,m-Xylene | ND | 9.3 | " | " | " | " | " | " | |
| o-Xylene | ND | 4.7 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 14 | " | " | " | " | " | " | |
| *Surrogate: Dibromofluoromethane* | | *99.2 %* | *60-140* | | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *104 %* | *60-140* | | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *97.7 %* | *60-140* | | " | " | " | " | |

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|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C

### GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-01 (K304466-01) Soil Sampled: 04/17/03 18:15 Received: 04/19/03 11:45** | | | | | | | | | |
| Acenaphthene | ND | 100 | ug/kg dry | 1 | 3042427 | 04/25/03 | 04/26/03 | EPA 8270C | |
| Acenaphthylene | ND | 100 | " | " | " | " | " | " | |
| Aniline | ND | 100 | " | " | " | " | " | " | |
| Anthracene | ND | 100 | " | " | " | " | " | " | |
| **Benz (a) anthracene** | **210** | 100 | " | " | " | " | " | " | |
| **Benzo (a) pyrene** | **360** | 100 | " | " | " | " | " | " | |
| **Benzo (b) fluoranthene** | **490** | 100 | " | " | " | " | " | " | |
| **Benzo (g,h,i) perylene** | **350** | 100 | " | " | " | " | " | " | |
| **Benzo (k) fluoranthene** | **190** | 100 | " | " | " | " | " | " | |
| Benzyl alcohol | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroethoxy)methane | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroethyl)ether | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroisopropyl)ether | ND | 100 | " | " | " | " | " | " | |
| Bis(2-ethylhexyl)phthalate | ND | 330 | " | " | " | " | " | " | |
| 4-Bromophenyl phenyl ether | ND | 100 | " | " | " | " | " | " | |
| Butyl benzyl phthalate | ND | 100 | " | " | " | " | " | " | |
| 4-Chloroaniline | ND | 100 | " | " | " | " | " | " | |
| 2-Chloronaphthalene | ND | 100 | " | " | " | " | " | " | |
| 4-Chlorophenyl phenyl ether | ND | 100 | " | " | " | " | " | " | |
| **Chrysene** | **270** | 100 | " | " | " | " | " | " | |
| Dibenz (a,h) anthracene | ND | 100 | " | " | " | " | " | " | |
| Dibenzofuran | ND | 100 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 3,3´-Dichlorobenzidine | ND | 500 | " | " | " | " | " | " | |
| Diethyl phthalate | ND | 100 | " | " | " | " | " | " | |
| Dimethyl phthalate | ND | 100 | " | " | " | " | " | " | |
| Di-n-butyl phthalate | ND | 330 | " | " | " | " | " | " | |
| 2,4-Dinitrotoluene | ND | 100 | " | " | " | " | " | " | |
| 2,6-Dinitrotoluene | ND | 100 | " | " | " | " | " | " | |
| Di-n-octyl phthalate | ND | 100 | " | " | " | " | " | " | |
| **Fluoranthene** | **250** | 100 | " | " | " | " | " | " | |
| Fluorene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorobenzene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorocyclopentadiene | ND | 100 | " | " | " | " | " | " | |
| Hexachloroethane | ND | 100 | " | " | " | " | " | " | |
| **Indeno (1,2,3-cd) pyrene** | **350** | 100 | " | " | " | " | " | " | |
| Isophorone | ND | 100 | " | " | " | " | " | " | |
| 2-Methylnaphthalene | ND | 100 | " | " | " | " | " | " | |
| Naphthalene | ND | 100 | " | " | " | " | " | " | |

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|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-01 (K304466-01) Soil** | **Sampled: 04/17/03 18:15** | **Received: 04/19/03 11:45** | | | | | | | |
| 2-Nitroaniline | ND | 500 | ug/kg dry | 1 | 3042427 | 04/25/03 | 04/26/03 | EPA 8270C | |
| 3-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| 4-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| Nitrobenzene | ND | 100 | " | " | " | " | " | " | |
| N-Nitrosodi-n-propylamine | ND | 100 | " | " | " | " | " | " | |
| N-Nitrosodiphenylamine | ND | 100 | " | " | " | " | " | " | |
| **Phenanthrene** | **130** | 100 | " | " | " | " | " | " | |
| **Pyrene** | **240** | 100 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| *Surrogate: Nitrobenzene-d5* | | *59.7 %* | *23-120* | | " | " | " | " | |
| *Surrogate: 2-Fluorobiphenyl* | | *68.5 %* | *30-115* | | " | " | " | " | |
| *Surrogate: Terphenyl-d14* | | *80.1 %* | *18-137* | | " | " | " | " | |
| **DF-FO-02 (K304466-02) Soil** | **Sampled: 04/17/03 18:20** | **Received: 04/19/03 11:45** | | | | | | | |
| Acenaphthene | ND | 100 | ug/kg dry | 1 | 3042427 | 04/25/03 | 04/26/03 | EPA 8270C | |
| Acenaphthylene | ND | 100 | " | " | " | " | " | " | |
| Aniline | ND | 100 | " | " | " | " | " | " | |
| Anthracene | ND | 100 | " | " | " | " | " | " | |
| **Benz (a) anthracene** | **110** | 100 | " | " | " | " | " | " | |
| **Benzo (a) pyrene** | **150** | 100 | " | " | " | " | " | " | |
| **Benzo (b) fluoranthene** | **350** | 100 | " | " | " | " | " | " | |
| **Benzo (g,h,i) perylene** | **140** | 100 | " | " | " | " | " | " | |
| **Benzo (k) fluoranthene** | **110** | 100 | " | " | " | " | " | " | |
| Benzyl alcohol | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroethoxy)methane | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroethyl)ether | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroisopropyl)ether | ND | 100 | " | " | " | " | " | " | |
| Bis(2-ethylhexyl)phthalate | ND | 330 | " | " | " | " | " | " | |
| 4-Bromophenyl phenyl ether | ND | 100 | " | " | " | " | " | " | |
| Butyl benzyl phthalate | ND | 100 | " | " | " | " | " | " | |
| 4-Chloroaniline | ND | 100 | " | " | " | " | " | " | |
| 2-Chloronaphthalene | ND | 100 | " | " | " | " | " | " | |
| 4-Chlorophenyl phenyl ether | ND | 100 | " | " | " | " | " | " | |
| **Chrysene** | **230** | 100 | " | " | " | " | " | " | |
| Dibenz (a,h) anthracene | ND | 100 | " | " | " | " | " | " | |
| Dibenzofuran | ND | 100 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 3,3'-Dichlorobenzidine | ND | 500 | " | " | " | " | " | " | |
| Diethyl phthalate | ND | 100 | " | " | " | " | " | " | |
| Dimethyl phthalate | ND | 100 | " | " | " | " | " | " | |

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|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-02 (K304466-02) Soil** | **Sampled: 04/17/03 18:20** | **Received: 04/19/03 11:45** | | | | | | | |
| Di-n-butyl phthalate | ND | 330 | ug/kg dry | 1 | 3042427 | 04/25/03 | 04/26/03 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 100 | " | " | " | " | " | " | |
| 2,6-Dinitrotoluene | ND | 100 | " | " | " | " | " | " | |
| Di-n-octyl phthalate | ND | 100 | " | " | " | " | " | " | |
| **Fluoranthene** | **250** | 100 | " | " | " | " | " | " | |
| Fluorene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorobenzene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorocyclopentadiene | ND | 100 | " | " | " | " | " | " | |
| Hexachloroethane | ND | 100 | " | " | " | " | " | " | |
| **Indeno (1,2,3-cd) pyrene** | **140** | 100 | " | " | " | " | " | " | |
| Isophorone | ND | 100 | " | " | " | " | " | " | |
| 2-Methylnaphthalene | ND | 100 | " | " | " | " | " | " | |
| Naphthalene | ND | 100 | " | " | " | " | " | " | |
| 2-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| 3-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| 4-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| Nitrobenzene | ND | 100 | " | " | " | " | " | " | |
| N-Nitrosodi-n-propylamine | ND | 100 | " | " | " | " | " | " | |
| N-Nitrosodiphenylamine | ND | 100 | " | " | " | " | " | " | |
| **Phenanthrene** | **290** | 100 | " | " | " | " | " | " | |
| **Pyrene** | **320** | 100 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| *Surrogate: Nitrobenzene-d5* | | *62.7 %* | *23-120* | | " | " | " | " | |
| *Surrogate: 2-Fluorobiphenyl* | | *64.3 %* | *30-115* | | " | " | " | " | |
| *Surrogate: Terphenyl-d14* | | *67.0 %* | *18-137* | | " | " | " | " | |

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Tom Lyon, Project Manager

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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-03 (K304466-03) Soil Sampled: 04/17/03 18:25 Received: 04/19/03 11:45** | | | | | | | | | |
| Acenaphthene | ND | 100 | ug/kg dry | 1 | 3042427 | 04/25/03 | 04/27/03 | EPA 8270C | |
| Acenaphthylene | ND | 100 | " | " | " | " | " | " | |
| Aniline | ND | 100 | " | " | " | " | " | " | |
| Anthracene | ND | 100 | " | " | " | " | " | " | |
| **Benz (a) anthracene** | **280** | 100 | " | " | " | " | " | " | |
| **Benzo (a) pyrene** | **380** | 100 | " | " | " | " | " | " | |
| **Benzo (b) fluoranthene** | **530** | 100 | " | " | " | " | " | " | |
| **Benzo (g,h,i) perylene** | **250** | 100 | " | " | " | " | " | " | |
| **Benzo (k) fluoranthene** | **180** | 100 | " | " | " | " | " | " | |
| Benzyl alcohol | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroethoxy)methane | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroethyl)ether | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroisopropyl)ether | ND | 100 | " | " | " | " | " | " | |
| Bis(2-ethylhexyl)phthalate | ND | 330 | " | " | " | " | " | " | |
| 4-Bromophenyl phenyl ether | ND | 100 | " | " | " | " | " | " | |
| Butyl benzyl phthalate | ND | 100 | " | " | " | " | " | " | |
| 4-Chloroaniline | ND | 100 | " | " | " | " | " | " | |
| 2-Chloronaphthalene | ND | 100 | " | " | " | " | " | " | |
| 4-Chlorophenyl phenyl ether | ND | 100 | " | " | " | " | " | " | |
| **Chrysene** | **370** | 100 | " | " | " | " | " | " | |
| Dibenz (a,h) anthracene | ND | 100 | " | " | " | " | " | " | |
| Dibenzofuran | ND | 100 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 3,3'-Dichlorobenzidine | ND | 500 | " | " | " | " | " | " | |
| Diethyl phthalate | ND | 100 | " | " | " | " | " | " | |
| Dimethyl phthalate | ND | 100 | " | " | " | " | " | " | |
| Di-n-butyl phthalate | ND | 330 | " | " | " | " | " | " | |
| 2,4-Dinitrotoluene | ND | 100 | " | " | " | " | " | " | |
| 2,6-Dinitrotoluene | ND | 100 | " | " | " | " | " | " | |
| Di-n-octyl phthalate | ND | 100 | " | " | " | " | " | " | |
| **Fluoranthene** | **500** | 100 | " | " | " | " | " | " | |
| Fluorene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorobenzene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorocyclopentadiene | ND | 100 | " | " | " | " | " | " | |
| Hexachloroethane | ND | 100 | " | " | " | " | " | " | |
| **Indeno (1,2,3-cd) pyrene** | **250** | 100 | " | " | " | " | " | " | |
| Isophorone | ND | 100 | " | " | " | " | " | " | |
| 2-Methylnaphthalene | ND | 100 | " | " | " | " | " | " | |
| Naphthalene | ND | 100 | " | " | " | " | " | " | |

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|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-03 (K304466-03) Soil** | **Sampled: 04/17/03 18:25** | **Received: 04/19/03 11:45** | | | | | | | |
| 2-Nitroaniline | ND | 500 | ug/kg dry | 1 | 3042427 | 04/25/03 | 04/27/03 | EPA 8270C | |
| 3-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| 4-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| Nitrobenzene | ND | 100 | " | " | " | " | " | " | |
| N-Nitrosodi-n-propylamine | ND | 100 | " | " | " | " | " | " | |
| N-Nitrosodiphenylamine | ND | 100 | " | " | " | " | " | " | |
| **Phenanthrene** | **230** | 100 | " | " | " | " | " | " | |
| **Pyrene** | **450** | 100 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| *Surrogate: Nitrobenzene-d5* | | *56.8 %* | *23-120* | | " | " | " | " | |
| *Surrogate: 2-Fluorobiphenyl* | | *63.7 %* | *30-115* | | " | " | " | " | |
| *Surrogate: Terphenyl-d14* | | *67.4 %* | *18-137* | | " | " | " | " | |
| **DF-FO-04 (K304466-04) Soil** | **Sampled: 04/17/03 18:30** | **Received: 04/19/03 11:45** | | | | | | | |
| Acenaphthene | ND | 100 | ug/kg dry | 1 | 3042427 | 04/25/03 | 04/27/03 | EPA 8270C | |
| Acenaphthylene | ND | 100 | " | " | " | " | " | " | |
| Aniline | ND | 100 | " | " | " | " | " | " | |
| Anthracene | ND | 100 | " | " | " | " | " | " | |
| Benz (a) anthracene | ND | 100 | " | " | " | " | " | " | |
| Benzo (a) pyrene | ND | 100 | " | " | " | " | " | " | |
| **Benzo (b) fluoranthene** | **130** | 100 | " | " | " | " | " | " | |
| Benzo (g,h,i) perylene | ND | 100 | " | " | " | " | " | " | |
| Benzo (k) fluoranthene | ND | 100 | " | " | " | " | " | " | |
| Benzyl alcohol | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroethoxy)methane | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroethyl)ether | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroisopropyl)ether | ND | 100 | " | " | " | " | " | " | |
| Bis(2-ethylhexyl)phthalate | ND | 330 | " | " | " | " | " | " | |
| 4-Bromophenyl phenyl ether | ND | 100 | " | " | " | " | " | " | |
| Butyl benzyl phthalate | ND | 100 | " | " | " | " | " | " | |
| 4-Chloroaniline | ND | 100 | " | " | " | " | " | " | |
| 2-Chloronaphthalene | ND | 100 | " | " | " | " | " | " | |
| 4-Chlorophenyl phenyl ether | ND | 100 | " | " | " | " | " | " | |
| **Chrysene** | **100** | 100 | " | " | " | " | " | " | |
| Dibenz (a,h) anthracene | ND | 100 | " | " | " | " | " | " | |
| Dibenzofuran | ND | 100 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 3,3'-Dichlorobenzidine | ND | 500 | " | " | " | " | " | " | |
| Diethyl phthalate | ND | 100 | " | " | " | " | " | " | |
| Dimethyl phthalate | ND | 100 | " | " | " | " | " | " | |

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| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C

### GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-04 (K304466-04) Soil** | **Sampled: 04/17/03 18:30** | **Received: 04/19/03 11:45** | | | | | | | |
| Di-n-butyl phthalate | ND | 330 | ug/kg dry | 1 | 3042427 | 04/25/03 | 04/27/03 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 100 | " | " | " | " | " | " | |
| 2,6-Dinitrotoluene | ND | 100 | " | " | " | " | " | " | |
| Di-n-octyl phthalate | ND | 100 | " | " | " | " | " | " | |
| **Fluoranthene** | **150** | 100 | " | " | " | " | " | " | |
| Fluorene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorobenzene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorocyclopentadiene | ND | 100 | " | " | " | " | " | " | |
| Hexachloroethane | ND | 100 | " | " | " | " | " | " | |
| Indeno (1,2,3-cd) pyrene | ND | 100 | " | " | " | " | " | " | |
| Isophorone | ND | 100 | " | " | " | " | " | " | |
| 2-Methylnaphthalene | ND | 100 | " | " | " | " | " | " | |
| Naphthalene | ND | 100 | " | " | " | " | " | " | |
| 2-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| 3-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| 4-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| Nitrobenzene | ND | 100 | " | " | " | " | " | " | |
| N-Nitrosodi-n-propylamine | ND | 100 | " | " | " | " | " | " | |
| N-Nitrosodiphenylamine | ND | 100 | " | " | " | " | " | " | |
| **Phenanthrene** | **120** | 100 | " | " | " | " | " | " | |
| **Pyrene** | **140** | 100 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| *Surrogate: Nitrobenzene-d5* | | *60.9 %* | *23-120* | | " | " | " | " | |
| *Surrogate: 2-Fluorobiphenyl* | | *68.2 %* | *30-115* | | " | " | " | " | |
| *Surrogate: Terphenyl-d14* | | *73.4 %* | *18-137* | | " | " | " | " | |

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| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C

### GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-05 (K304466-05) Soil** | **Sampled: 04/17/03 18:35** | **Received: 04/19/03 11:45** | | | | | | | **DILN** |
| **Acenaphthene** | **1500** | 920 | ug/kg dry | 5 | 3042427 | 04/25/03 | 04/27/03 | EPA 8270C | |
| Acenaphthylene | ND | 920 | " | " | " | " | " | " | |
| Aniline | ND | 920 | " | " | " | " | " | " | |
| Anthracene | ND | 920 | " | " | " | " | " | " | |
| Benz (a) anthracene | ND | 920 | " | " | " | " | " | " | |
| Benzo (a) pyrene | ND | 920 | " | " | " | " | " | " | |
| Benzo (b) fluoranthene | ND | 920 | " | " | " | " | " | " | |
| Benzo (g,h,i) perylene | ND | 920 | " | " | " | " | " | " | |
| Benzo (k) fluoranthene | ND | 920 | " | " | " | " | " | " | |
| Benzyl alcohol | ND | 920 | " | " | " | " | " | " | |
| Bis(2-chloroethoxy)methane | ND | 920 | " | " | " | " | " | " | |
| Bis(2-chloroethyl)ether | ND | 920 | " | " | " | " | " | " | |
| Bis(2-chloroisopropyl)ether | ND | 920 | " | " | " | " | " | " | |
| Bis(2-ethylhexyl)phthalate | ND | 3000 | " | " | " | " | " | " | |
| 4-Bromophenyl phenyl ether | ND | 920 | " | " | " | " | " | " | |
| Butyl benzyl phthalate | ND | 920 | " | " | " | " | " | " | |
| 4-Chloroaniline | ND | 920 | " | " | " | " | " | " | |
| 2-Chloronaphthalene | ND | 920 | " | " | " | " | " | " | |
| 4-Chlorophenyl phenyl ether | ND | 920 | " | " | " | " | " | " | |
| Chrysene | ND | 920 | " | " | " | " | " | " | |
| Dibenz (a,h) anthracene | ND | 920 | " | " | " | " | " | " | |
| Dibenzofuran | ND | 920 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 920 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 920 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 920 | " | " | " | " | " | " | |
| 3,3'-Dichlorobenzidine | ND | 4600 | " | " | " | " | " | " | |
| Diethyl phthalate | ND | 920 | " | " | " | " | " | " | |
| Dimethyl phthalate | ND | 920 | " | " | " | " | " | " | |
| Di-n-butyl phthalate | ND | 3000 | " | " | " | " | " | " | |
| 2,4-Dinitrotoluene | ND | 920 | " | " | " | " | " | " | |
| 2,6-Dinitrotoluene | ND | 920 | " | " | " | " | " | " | |
| Di-n-octyl phthalate | ND | 920 | " | " | " | " | " | " | |
| Fluoranthene | ND | 920 | " | " | " | " | " | " | |
| **Fluorene** | **1500** | 920 | " | " | " | " | " | " | |
| Hexachlorobenzene | ND | 920 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 920 | " | " | " | " | " | " | |
| Hexachlorocyclopentadiene | ND | 920 | " | " | " | " | " | " | |
| Hexachloroethane | ND | 920 | " | " | " | " | " | " | |
| Indeno (1,2,3-cd) pyrene | ND | 920 | " | " | " | " | " | " | |
| Isophorone | ND | 920 | " | " | " | " | " | " | |
| **2-Methylnaphthalene** | **10000** | 920 | " | " | " | " | " | " | |
| **Naphthalene** | **1100** | 920 | " | " | " | " | " | " | |

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| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-05 (K304466-05) Soil** | **Sampled: 04/17/03 18:35** | **Received: 04/19/03 11:45** | | | | | | | **DILN** |
| 2-Nitroaniline | ND | 4600 | ug/kg dry | 5 | 3042427 | 04/25/03 | 04/27/03 | EPA 8270C | |
| 3-Nitroaniline | ND | 4600 | " | " | " | " | " | " | |
| 4-Nitroaniline | ND | 4600 | " | " | " | " | " | " | |
| Nitrobenzene | ND | 920 | " | " | " | " | " | " | |
| N-Nitrosodi-n-propylamine | ND | 920 | " | " | " | " | " | " | |
| N-Nitrosodiphenylamine | ND | 920 | " | " | " | " | " | " | |
| **Phenanthrene** | **7600** | 920 | " | " | " | " | " | " | |
| Pyrene | ND | 920 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 920 | " | " | " | " | " | " | |
| *Surrogate: Nitrobenzene-d5* | | *97.8 %* | *23-120* | | " | " | " | " | |
| *Surrogate: 2-Fluorobiphenyl* | | *100 %* | *30-115* | | " | " | " | " | |
| *Surrogate: Terphenyl-d14* | | *105 %* | *18-137* | | " | " | " | " | |
| **DF-FO-06 (K304466-06) Soil** | **Sampled: 04/17/03 18:40** | **Received: 04/19/03 11:45** | | | | | | | |
| Acenaphthene | ND | 100 | ug/kg dry | 1 | 3042427 | 04/25/03 | 04/27/03 | EPA 8270C | |
| Acenaphthylene | ND | 100 | " | " | " | " | " | " | |
| Aniline | ND | 100 | " | " | " | " | " | " | |
| Anthracene | ND | 100 | " | " | " | " | " | " | |
| Benz (a) anthracene | ND | 100 | " | " | " | " | " | " | |
| Benzo (a) pyrene | ND | 100 | " | " | " | " | " | " | |
| Benzo (b) fluoranthene | ND | 100 | " | " | " | " | " | " | |
| Benzo (g,h,i) perylene | ND | 100 | " | " | " | " | " | " | |
| Benzo (k) fluoranthene | ND | 100 | " | " | " | " | " | " | |
| Benzyl alcohol | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroethoxy)methane | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroethyl)ether | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroisopropyl)ether | ND | 100 | " | " | " | " | " | " | |
| Bis(2-ethylhexyl)phthalate | ND | 330 | " | " | " | " | " | " | |
| 4-Bromophenyl phenyl ether | ND | 100 | " | " | " | " | " | " | |
| Butyl benzyl phthalate | ND | 100 | " | " | " | " | " | " | |
| 4-Chloroaniline | ND | 100 | " | " | " | " | " | " | |
| 2-Chloronaphthalene | ND | 100 | " | " | " | " | " | " | |
| 4-Chlorophenyl phenyl ether | ND | 100 | " | " | " | " | " | " | |
| Chrysene | ND | 100 | " | " | " | " | " | " | |
| Dibenz (a,h) anthracene | ND | 100 | " | " | " | " | " | " | |
| Dibenzofuran | ND | 100 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 3,3'-Dichlorobenzidine | ND | 500 | " | " | " | " | " | " | |
| Diethyl phthalate | ND | 100 | " | " | " | " | " | " | |
| Dimethyl phthalate | ND | 100 | " | " | " | " | " | " | |

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| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C

### GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-06 (K304466-06) Soil Sampled: 04/17/03 18:40 Received: 04/19/03 11:45** | | | | | | | | | |
| Di-n-butyl phthalate | ND | 330 | ug/kg dry | 1 | 3042427 | 04/25/03 | 04/27/03 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 100 | " | " | " | " | " | " | |
| 2,6-Dinitrotoluene | ND | 100 | " | " | " | " | " | " | |
| Di-n-octyl phthalate | ND | 100 | " | " | " | " | " | " | |
| Fluoranthene | ND | 100 | " | " | " | " | " | " | |
| Fluorene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorobenzene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorocyclopentadiene | ND | 100 | " | " | " | " | " | " | |
| Hexachloroethane | ND | 100 | " | " | " | " | " | " | |
| Indeno (1,2,3-cd) pyrene | ND | 100 | " | " | " | " | " | " | |
| Isophorone | ND | 100 | " | " | " | " | " | " | |
| 2-Methylnaphthalene | ND | 100 | " | " | " | " | " | " | |
| Naphthalene | ND | 100 | " | " | " | " | " | " | |
| 2-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| 3-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| 4-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| Nitrobenzene | ND | 100 | " | " | " | " | " | " | |
| N-Nitrosodi-n-propylamine | ND | 100 | " | " | " | " | " | " | |
| N-Nitrosodiphenylamine | ND | 100 | " | " | " | " | " | " | |
| Phenanthrene | ND | 100 | " | " | " | " | " | " | |
| Pyrene | ND | 100 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| *Surrogate: Nitrobenzene-d5* | | *67.7 %* | | *23-120* | " | " | " | " | |
| *Surrogate: 2-Fluorobiphenyl* | | *73.1 %* | | *30-115* | " | " | " | " | |
| *Surrogate: Terphenyl-d14* | | *78.0 %* | | *18-137* | " | " | " | " | |





Tom Lyon, Project Manager

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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-07 (K304466-07) Soil** | **Sampled: 04/17/03 18:45** | **Received: 04/19/03 11:45** | | | | | | | |
| Acenaphthene | ND | 100 | ug/kg dry | 1 | 3042427 | 04/25/03 | 04/27/03 | EPA 8270C | |
| Acenaphthylene | ND | 100 | " | " | " | " | " | " | |
| Aniline | ND | 100 | " | " | " | " | " | " | |
| Anthracene | ND | 100 | " | " | " | " | " | " | |
| **Benz (a) anthracene** | **300** | 100 | " | " | " | " | " | " | |
| **Benzo (a) pyrene** | **490** | 100 | " | " | " | " | " | " | |
| **Benzo (b) fluoranthene** | **950** | 100 | " | " | " | " | " | " | |
| **Benzo (g,h,i) perylene** | **410** | 100 | " | " | " | " | " | " | |
| **Benzo (k) fluoranthene** | **340** | 100 | " | " | " | " | " | " | |
| Benzyl alcohol | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroethoxy)methane | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroethyl)ether | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroisopropyl)ether | ND | 100 | " | " | " | " | " | " | |
| Bis(2-ethylhexyl)phthalate | ND | 330 | " | " | " | " | " | " | |
| 4-Bromophenyl phenyl ether | ND | 100 | " | " | " | " | " | " | |
| Butyl benzyl phthalate | ND | 100 | " | " | " | " | " | " | |
| 4-Chloroaniline | ND | 100 | " | " | " | " | " | " | |
| 2-Chloronaphthalene | ND | 100 | " | " | " | " | " | " | |
| 4-Chlorophenyl phenyl ether | ND | 100 | " | " | " | " | " | " | |
| **Chrysene** | **460** | 100 | " | " | " | " | " | " | |
| **Dibenz (a,h) anthracene** | **120** | 100 | " | " | " | " | " | " | |
| Dibenzofuran | ND | 100 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 3,3'-Dichlorobenzidine | ND | 500 | " | " | " | " | " | " | |
| Diethyl phthalate | ND | 100 | " | " | " | " | " | " | |
| Dimethyl phthalate | ND | 100 | " | " | " | " | " | " | |
| Di-n-butyl phthalate | ND | 330 | " | " | " | " | " | " | |
| 2,4-Dinitrotoluene | ND | 100 | " | " | " | " | " | " | |
| 2,6-Dinitrotoluene | ND | 100 | " | " | " | " | " | " | |
| Di-n-octyl phthalate | ND | 100 | " | " | " | " | " | " | |
| **Fluoranthene** | **250** | 100 | " | " | " | " | " | " | |
| Fluorene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorobenzene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorocyclopentadiene | ND | 100 | " | " | " | " | " | " | |
| Hexachloroethane | ND | 100 | " | " | " | " | " | " | |
| **Indeno (1,2,3-cd) pyrene** | **420** | 100 | " | " | " | " | " | " | |
| Isophorone | ND | 100 | " | " | " | " | " | " | |
| 2-Methylnaphthalene | ND | 100 | " | " | " | " | " | " | |
| Naphthalene | ND | 100 | " | " | " | " | " | " | |

GLA Laboratories

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Tom Lyon

Tom Lyon, Project Manager

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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-07 (K304466-07) Soil** | **Sampled: 04/17/03 18:45** | **Received: 04/19/03 11:45** | | | | | | | |
| 2-Nitroaniline | ND | 500 | ug/kg dry | 1 | 3042427 | 04/25/03 | 04/27/03 | EPA 8270C | |
| 3-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| 4-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| Nitrobenzene | ND | 100 | " | " | " | " | " | " | |
| N-Nitrosodi-n-propylamine | ND | 100 | " | " | " | " | " | " | |
| N-Nitrosodiphenylamine | ND | 100 | " | " | " | " | " | " | |
| **Phenanthrene** | **130** | 100 | " | " | " | " | " | " | |
| **Pyrene** | **260** | 100 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| *Surrogate: Nitrobenzene-d5* | | *58.6 %* | *23-120* | | " | " | " | " | |
| *Surrogate: 2-Fluorobiphenyl* | | *69.1 %* | *30-115* | | " | " | " | " | |
| *Surrogate: Terphenyl-d14* | | *74.9 %* | *18-137* | | " | " | " | " | |
| **DF-FO-08 (K304466-08) Soil** | **Sampled: 04/17/03 18:50** | **Received: 04/19/03 11:45** | | | | | | | |
| **Acenaphthene** | **230** | 100 | ug/kg dry | 1 | 3042427 | 04/25/03 | 04/27/03 | EPA 8270C | |
| Acenaphthylene | ND | 100 | " | " | " | " | " | " | |
| Aniline | ND | 100 | " | " | " | " | " | " | |
| Anthracene | ND | 100 | " | " | " | " | " | " | |
| **Benz (a) anthracene** | **350** | 100 | " | " | " | " | " | " | |
| **Benzo (a) pyrene** | **710** | 100 | " | " | " | " | " | " | |
| **Benzo (b) fluoranthene** | **910** | 100 | " | " | " | " | " | " | |
| **Benzo (g,h,i) perylene** | **570** | 100 | " | " | " | " | " | " | |
| **Benzo (k) fluoranthene** | **300** | 100 | " | " | " | " | " | " | |
| Benzyl alcohol | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroethoxy)methane | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroethyl)ether | ND | 100 | " | " | " | " | " | " | |
| Bis(2-chloroisopropyl)ether | ND | 100 | " | " | " | " | " | " | |
| Bis(2-ethylhexyl)phthalate | ND | 330 | " | " | " | " | " | " | |
| 4-Bromophenyl phenyl ether | ND | 100 | " | " | " | " | " | " | |
| Butyl benzyl phthalate | ND | 100 | " | " | " | " | " | " | |
| 4-Chloroaniline | ND | 100 | " | " | " | " | " | " | |
| 2-Chloronaphthalene | ND | 100 | " | " | " | " | " | " | |
| 4-Chlorophenyl phenyl ether | ND | 100 | " | " | " | " | " | " | |
| **Chrysene** | **420** | 100 | " | " | " | " | " | " | |
| **Dibenz (a,h) anthracene** | **150** | 100 | " | " | " | " | " | " | |
| Dibenzofuran | ND | 100 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| 3,3'-Dichlorobenzidine | ND | 500 | " | " | " | " | " | " | |
| Diethyl phthalate | ND | 100 | " | " | " | " | " | " | |
| Dimethyl phthalate | ND | 100 | " | " | " | " | " | " | |

GLA Laboratories

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Tom Lyon

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|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C

### GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-08 (K304466-08) Soil** | **Sampled: 04/17/03 18:50** | **Received: 04/19/03 11:45** | | | | | | | |
| Di-n-butyl phthalate | ND | 330 | ug/kg dry | 1 | 3042427 | 04/25/03 | 04/27/03 | EPA 8270C | |
| 2,4-Dinitrotoluene | ND | 100 | " | " | " | " | " | " | |
| 2,6-Dinitrotoluene | ND | 100 | " | " | " | " | " | " | |
| Di-n-octyl phthalate | ND | 100 | " | " | " | " | " | " | |
| **Fluoranthene** | **400** | 100 | " | " | " | " | " | " | |
| Fluorene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorobenzene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 100 | " | " | " | " | " | " | |
| Hexachlorocyclopentadiene | ND | 100 | " | " | " | " | " | " | |
| Hexachloroethane | ND | 100 | " | " | " | " | " | " | |
| **Indeno (1,2,3-cd) pyrene** | **580** | 100 | " | " | " | " | " | " | |
| Isophorone | ND | 100 | " | " | " | " | " | " | |
| 2-Methylnaphthalene | ND | 100 | " | " | " | " | " | " | |
| Naphthalene | ND | 100 | " | " | " | " | " | " | |
| 2-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| 3-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| 4-Nitroaniline | ND | 500 | " | " | " | " | " | " | |
| Nitrobenzene | ND | 100 | " | " | " | " | " | " | |
| N-Nitrosodi-n-propylamine | ND | 100 | " | " | " | " | " | " | |
| N-Nitrosodiphenylamine | ND | 100 | " | " | " | " | " | " | |
| **Phenanthrene** | **220** | 100 | " | " | " | " | " | " | |
| **Pyrene** | **430** | 100 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 100 | " | " | " | " | " | " | |
| *Surrogate: Nitrobenzene-d5* | | *73.4 %* | *23-120* | | " | " | " | " | |
| *Surrogate: 2-Fluorobiphenyl* | | *75.5 %* | *30-115* | | " | " | " | " | |
| *Surrogate: Terphenyl-d14* | | *78.2 %* | *18-137* | | " | " | " | " | |





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|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Physical Parameters by APHA/ASTM/EPA Methods

### GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **DF-FO-01 (K304466-01) Soil** | **Sampled: 04/17/03 18:15** | **Received: 04/19/03 11:45** | | | | | | | |
| **% Solids** | **91.9** | 0.01 | % by Weight | 1 | 3042415 | 04/24/03 | 04/24/03 | EPA 160.3 | |
| **DF-FO-02 (K304466-02) Soil** | **Sampled: 04/17/03 18:20** | **Received: 04/19/03 11:45** | | | | | | | |
| **% Solids** | **89.6** | 0.01 | % by Weight | 1 | 3042415 | 04/24/03 | 04/24/03 | EPA 160.3 | |
| **DF-FO-03 (K304466-03) Soil** | **Sampled: 04/17/03 18:25** | **Received: 04/19/03 11:45** | | | | | | | |
| **% Solids** | **86.8** | 0.01 | % by Weight | 1 | 3042415 | 04/24/03 | 04/24/03 | EPA 160.3 | |
| **DF-FO-04 (K304466-04) Soil** | **Sampled: 04/17/03 18:30** | **Received: 04/19/03 11:45** | | | | | | | |
| **% Solids** | **87.0** | 0.01 | % by Weight | 1 | 3042415 | 04/24/03 | 04/24/03 | EPA 160.3 | |
| **DF-FO-05 (K304466-05) Soil** | **Sampled: 04/17/03 18:35** | **Received: 04/19/03 11:45** | | | | | | | |
| **% Solids** | **91.4** | 0.01 | % by Weight | 1 | 3042415 | 04/24/03 | 04/24/03 | EPA 160.3 | |
| **DF-FO-06 (K304466-06) Soil** | **Sampled: 04/17/03 18:40** | **Received: 04/19/03 11:45** | | | | | | | |
| **% Solids** | **89.1** | 0.01 | % by Weight | 1 | 3042415 | 04/24/03 | 04/24/03 | EPA 160.3 | |
| **DF-FO-07 (K304466-07) Soil** | **Sampled: 04/17/03 18:45** | **Received: 04/19/03 11:45** | | | | | | | |
| **% Solids** | **86.8** | 0.01 | % by Weight | 1 | 3042415 | 04/24/03 | 04/24/03 | EPA 160.3 | |
| **DF-FO-08 (K304466-08) Soil** | **Sampled: 04/17/03 18:50** | **Received: 04/19/03 11:45** | | | | | | | |
| **% Solids** | **88.0** | 0.01 | % by Weight | 1 | 3042415 | 04/24/03 | 04/24/03 | EPA 160.3 | |





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| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control
## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 3042409 - EPA 5030B [P/T]** | | | | | | | | | | |
| **Blank (3042409-BLK1)** | | | Prepared & Analyzed: 04/24/03 | | | | | | | |
| Acetone | ND | 100 | ug/kg wet | | | | | | | |
| Benzene | ND | 1.0 | " | | | | | | | |
| Bromodichloromethane | ND | 1.0 | " | | | | | | | |
| Bromoform | ND | 2.0 | " | | | | | | | |
| Bromomethane | ND | 2.0 | " | | | | | | | |
| 2-Butanone | ND | 100 | " | | | | | | | |
| Carbon disulfide | ND | 2.0 | " | | | | | | | |
| Carbon tetrachloride | ND | 2.0 | " | | | | | | | |
| Chlorobenzene | ND | 2.0 | " | | | | | | | |
| Chlorodibromomethane | ND | 2.0 | " | | | | | | | |
| Chloroethane | ND | 4.0 | " | | | | | | | |
| Chloroform | ND | 2.0 | " | | | | | | | |
| Chloromethane | ND | 2.0 | " | | | | | | | |
| 1,1-Dichloroethane | ND | 2.0 | " | | | | | | | |
| 1,2-Dichloroethane | ND | 2.0 | " | | | | | | | |
| 1,1-Dichloroethene | ND | 2.0 | " | | | | | | | |
| cis-1,2-Dichloroethene | ND | 2.0 | " | | | | | | | |
| trans-1,2-Dichloroethene | ND | 2.0 | " | | | | | | | |
| 1,2-Dichloropropane | ND | 2.0 | " | | | | | | | |
| cis-1,3-Dichloropropene | ND | 2.0 | " | | | | | | | |
| trans-1,3-Dichloropropene | ND | 2.0 | " | | | | | | | |
| Ethylbenzene | ND | 2.0 | " | | | | | | | |
| 2-Hexanone | ND | 10 | " | | | | | | | |
| Methylene chloride | ND | 30 | " | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | " | | | | | | | |
| Methyl tert-butyl ether | ND | 2.0 | " | | | | | | | |
| Styrene | ND | 2.0 | " | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | " | | | | | | | |
| Tetrachloroethene | ND | 1.0 | " | | | | | | | |
| Toluene | ND | 2.0 | " | | | | | | | |
| 1,1,1-Trichloroethane | ND | 2.0 | " | | | | | | | |
| 1,1,2-Trichloroethane | ND | 2.0 | " | | | | | | | |
| Trichloroethene | ND | 1.0 | " | | | | | | | |
| Trichlorofluoromethane | ND | 2.0 | " | | | | | | | |
| Vinyl chloride | ND | 2.0 | " | | | | | | | |
| p,m-Xylene | ND | 4.0 | " | | | | | | | |
| o-Xylene | ND | 2.0 | " | | | | | | | |
| Xylenes (total) | ND | 6.0 | " | | | | | | | |

GLA Laboratories

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|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

# Volatile Organic Compounds by EPA Method 8260B - Quality Control

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 3042409 - EPA 5030B [P/T]** | | | | | | | | | | |
| **Blank (3042409-BLK1)** | | | | Prepared & Analyzed: 04/24/03 | | | | | | |
| *Surrogate: Dibromofluoromethane* | *49.4* | | *ug/kg wet* | *50.0* | | *98.8* | *60-140* | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *52.0* | | " | *50.0* | | *104* | *60-140* | | | |
| *Surrogate: Toluene-d8* | *47.0* | | " | *50.0* | | *94.0* | *60-140* | | | |
| **LCS (3042409-BS1)** | | | | Prepared & Analyzed: 04/24/03 | | | | | | |
| Chloroform | 47.4 | 2.0 | ug/kg wet | 50.0 | | 94.8 | 80-120 | | | |
| 1,1-Dichloroethene | 40.9 | 2.0 | " | 50.0 | | 81.8 | 80-120 | | | |
| 1,2-Dichloropropane | 44.7 | 2.0 | " | 50.0 | | 89.4 | 80-120 | | | |
| Ethylbenzene | 47.4 | 2.0 | " | 50.0 | | 94.8 | 80-120 | | | |
| Toluene | 47.7 | 2.0 | " | 50.0 | | 95.4 | 80-120 | | | |
| Vinyl chloride | 50.7 | 2.0 | " | 50.0 | | 101 | 80-120 | | | |
| *Surrogate: Dibromofluoromethane* | *49.8* | | " | *50.0* | | *99.6* | *60-140* | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *51.0* | | " | *50.0* | | *102* | *60-140* | | | |
| *Surrogate: Toluene-d8* | *47.8* | | " | *50.0* | | *95.6* | *60-140* | | | |
| **LCS (3042409-BS2)** | | | | Prepared & Analyzed: 04/24/03 | | | | | | |
| Chloroform | 46.4 | 2.0 | ug/kg wet | 50.0 | | 92.8 | 80-120 | | | |
| 1,1-Dichloroethene | 39.9 | 2.0 | " | 50.0 | | 79.8 | 80-120 | | | |
| 1,2-Dichloropropane | 44.4 | 2.0 | " | 50.0 | | 88.8 | 80-120 | | | |
| Ethylbenzene | 46.9 | 2.0 | " | 50.0 | | 93.8 | 80-120 | | | |
| Toluene | 47.2 | 2.0 | " | 50.0 | | 94.4 | 80-120 | | | |
| Vinyl chloride | 52.0 | 2.0 | " | 50.0 | | 104 | 80-120 | | | |
| *Surrogate: Dibromofluoromethane* | *50.1* | | " | *50.0* | | *100* | *60-140* | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *51.2* | | " | *50.0* | | *102* | *60-140* | | | |
| *Surrogate: Toluene-d8* | *47.5* | | " | *50.0* | | *95.0* | *60-140* | | | |
| **LCS Dup (3042409-BSD2)** | | | | Prepared & Analyzed: 04/24/03 | | | | | | |
| Chloroform | 44.2 | 2.0 | ug/kg wet | 50.0 | | 88.4 | 80-120 | 4.86 | 20 | |
| 1,1-Dichloroethene | 38.6 | 2.0 | " | 50.0 | | 77.2 | 80-120 | 3.31 | 20 | |
| 1,2-Dichloropropane | 41.9 | 2.0 | " | 50.0 | | 83.8 | 80-120 | 5.79 | 20 | |
| Ethylbenzene | 45.1 | 2.0 | " | 50.0 | | 90.2 | 80-120 | 3.91 | 20 | |
| Toluene | 45.1 | 2.0 | " | 50.0 | | 90.2 | 80-120 | 4.55 | 20 | |
| Vinyl chloride | 48.4 | 2.0 | " | 50.0 | | 96.8 | 80-120 | 7.17 | 20 | |
| *Surrogate: Dibromofluoromethane* | *49.7* | | " | *50.0* | | *99.4* | *60-140* | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *50.7* | | " | *50.0* | | *101* | *60-140* | | | |
| *Surrogate: Toluene-d8* | *47.7* | | " | *50.0* | | *95.4* | *60-140* | | | |



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Tom Lyon, Project Manager

GLA LABORATORIES
1008 W. Ninth Avenue • King of Prussia, Pennsylvania 19406 (610) 337-9992 FAX (610) 337-9939

| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 3042427 - EPA 3550B** | | | | | | | | | | |
| **Blank (3042427-BLK1)** | | | | Prepared: 04/25/03 Analyzed: 04/26/03 | | | | | | |
| Acenaphthene | ND | 100 | ug/kg wet | | | | | | | |
| Acenaphthylene | ND | 100 | " | | | | | | | |
| Aniline | ND | 100 | " | | | | | | | |
| Anthracene | ND | 100 | " | | | | | | | |
| Benz (a) anthracene | ND | 100 | " | | | | | | | |
| Benzo (a) pyrene | ND | 100 | " | | | | | | | |
| Benzo (b) fluoranthene | ND | 100 | " | | | | | | | |
| Benzo (g,h,i) perylene | ND | 100 | " | | | | | | | |
| Benzo (k) fluoranthene | ND | 100 | " | | | | | | | |
| Benzyl alcohol | ND | 100 | " | | | | | | | |
| Bis(2-chloroethoxy)methane | ND | 100 | " | | | | | | | |
| Bis(2-chloroethyl)ether | ND | 100 | " | | | | | | | |
| Bis(2-chloroisopropyl)ether | ND | 100 | " | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 330 | " | | | | | | | |
| 4-Bromophenyl phenyl ether | ND | 100 | " | | | | | | | |
| Butyl benzyl phthalate | ND | 100 | " | | | | | | | |
| 4-Chloroaniline | ND | 100 | " | | | | | | | |
| 2-Chloronaphthalene | ND | 100 | " | | | | | | | |
| 4-Chlorophenyl phenyl ether | ND | 100 | " | | | | | | | |
| Chrysene | ND | 100 | " | | | | | | | |
| Dibenz (a,h) anthracene | ND | 100 | " | | | | | | | |
| Dibenzofuran | ND | 100 | " | | | | | | | |
| 1,2-Dichlorobenzene | ND | 100 | " | | | | | | | |
| 1,3-Dichlorobenzene | ND | 100 | " | | | | | | | |
| 1,4-Dichlorobenzene | ND | 100 | " | | | | | | | |
| 3,3'-Dichlorobenzidine | ND | 500 | " | | | | | | | |
| Diethyl phthalate | ND | 100 | " | | | | | | | |
| Dimethyl phthalate | ND | 100 | " | | | | | | | |
| Di-n-butyl phthalate | ND | 330 | " | | | | | | | |
| 2,4-Dinitrotoluene | ND | 100 | " | | | | | | | |
| 2,6-Dinitrotolucne | ND | 100 | " | | | | | | | |
| Di-n-octyl phthalate | ND | 100 | " | | | | | | | |
| Fluoranthene | ND | 100 | " | | | | | | | |
| Fluorene | ND | 100 | " | | | | | | | |
| Hexaehlorobenzene | ND | 100 | " | | | | | | | |
| Hexachlorobutadiene | ND | 100 | " | | | | | | | |
| Hexachlorocyclopentadiene | ND | 100 | " | | | | | | | |
| Hexachloroethane | ND | 100 | " | | | | | | | |

GLA Laboratories

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Tom Lyon

Tom Lyon, Project Manager

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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 3042427 - EPA 3550B** | | | | | | | | | | |
| **Blank (3042427-BLK1)** | | | | Prepared: 04/25/03 Analyzed: 04/26/03 | | | | | | |
| Indeno (1,2,3-cd) pyrene | ND | 100 | ug/kg wet | | | | | | | |
| Isophorone | ND | 100 | " | | | | | | | |
| 2-Methylnaphthalene | ND | 100 | " | | | | | | | |
| Naphthalene | ND | 100 | " | | | | | | | |
| 2-Nitroaniline | ND | 500 | " | | | | | | | |
| 3-Nitroaniline | ND | 500 | " | | | | | | | |
| 4-Nitroaniline | ND | 500 | " | | | | | | | |
| Nitrobenzene | ND | 100 | " | | | | | | | |
| N-Nitrosodi-n-propylamine | ND | 100 | " | | | | | | | |
| N-Nitrosodiphenylamine | ND | 100 | " | | | | | | | |
| Phenanthrene | ND | 100 | " | | | | | | | |
| Pyrene | ND | 100 | " | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 100 | " | | | | | | | |
| *Surrogate: Nitrobenzene-d5* | *1040* | | " | *1670* | | *62.3* | *23-120* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1080* | | " | *1670* | | *64.7* | *30-115* | | | |
| *Surrogate: Terphenyl-d14* | *1110* | | " | *1670* | | *66.5* | *18-137* | | | |
| **LCS (3042427-BS1)** | | | | Prepared: 04/25/03 Analyzed: 04/26/03 | | | | | | |
| Acenaphthene | 2130 | 100 | ug/kg wet | 3000 | | 71.0 | 64-105 | | | |
| 1,4-Dichlorobenzene | 1080 | 100 | " | 1670 | | 64.7 | 57-105 | | | |
| 2,4-Dinitrotoluene | 1130 | 100 | " | 1670 | | 67.7 | 62-105 | | | |
| N-Nitrosodi-n-propylamine | 1240 | 100 | " | 1670 | | 74.3 | 65-105 | | | |
| Pyrene | 2200 | 100 | " | 3000 | | 73.3 | 64-116 | | | |
| 1,2,4-Trichlorobenzene | 1100 | 100 | " | 1670 | | 65.9 | 61-105 | | | |
| *Surrogate: Nitrobenzene-d5* | *1080* | | " | *1670* | | *64.7* | *23-120* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1150* | | " | *1670* | | *68.9* | *30-115* | | | |
| *Surrogate: Terphenyl-d14* | *1260* | | " | *1670* | | *75.4* | *18-137* | | | |





Tom Lyon, Project Manager

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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 3042427 - EPA 3550B** | | | | | | | | | | |
| **Matrix Spike (3042427-MS1)** | **Source: K304466-02** | | | Prepared: 04/25/03 | | Analyzed: 04/27/03 | | | | |
| Acenaphthene | 2430 | 100 | ug/kg dry | 3330 | ND | 73.0 | 64-105 | | | |
| 1,4-Dichlorobenzene | 1190 | 100 | " | 1850 | ND | 64.3 | 60-105 | | | |
| 2,4-Dinitrotoluene | 1250 | 100 | " | 1850 | ND | 67.6 | 63-105 | | | |
| N-Nitrosodi-n-propylamine | 1370 | 100 | " | 1850 | ND | 74.1 | 63-106 | | | |
| Pyrene | 2640 | 100 | " | 3330 | 320 | 69.7 | 57-107 | | | |
| 1,2,4-Trichlorobenzene | 1250 | 100 | " | 1850 | ND | 67.6 | 61-105 | | | |
| *Surrogate: Nitrobenzene-d5* | *1240* | | " | *1850* | | *67.0* | *23-120* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1310* | | " | *1850* | | *70.8* | *30-115* | | | |
| *Surrogate: Terphenyl-d14* | *1450* | | " | *1850* | | *78.4* | *18-137* | | | |
| **Matrix Spike Dup (3042427-MSD1)** | **Source: K304466-02** | | | Prepared: 04/25/03 | | Analyzed: 04/27/03 | | | | |
| Acenaphthene | 2350 | 100 | ug/kg dry | 3310 | ND | 71.0 | 64-105 | 3.35 | 20 | |
| 1,4-Dichlorobenzene | 1210 | 100 | " | 1840 | ND | 65.8 | 60-105 | 1.67 | 20 | |
| 2,4-Dinitrotoluene | 1240 | 100 | " | 1840 | ND | 67.4 | 63-105 | 0.803 | 20 | |
| N-Nitrosodi-n-propylamine | 1330 | 100 | " | 1840 | ND | 72.3 | 63-106 | 2.96 | 20 | |
| Pyrene | 2700 | 100 | " | 3310 | 320 | 71.9 | 57-107 | 2.25 | 20 | |
| 1,2,4-Trichlorobenzene | 1230 | 100 | " | 1840 | ND | 66.8 | 61-105 | 1.61 | 20 | |
| *Surrogate: Nitrobenzene-d5* | *1210* | | " | *1840* | | *65.8* | *23-120* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1250* | | " | *1840* | | *67.9* | *30-115* | | | |
| *Surrogate: Terphenyl-d14* | *1390* | | " | *1840* | | *75.5* | *18-137* | | | |





Tom Lyon, Project Manager

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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

## GLA Laboratories

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 3042415 - General Prep WC** | | | | | | | | | | |
| **Duplicate (3042415-DUP1)** | | **Source: K304430-01** | | Prepared & Analyzed: 04/24/03 | | | | | | |
| % Solids | 84.4 | 0.01 | % by Weight | | 84.3 | | | 0.119 | 5 | |
| **Duplicate (3042415-DUP2)** | | **Source: K304442-02** | | Prepared & Analyzed: 04/24/03 | | | | | | |
| % Solids | 84.0 | 0.01 | % by Weight | | 83.4 | | | 0.717 | 5 | |
| **Duplicate (3042415-DUP3)** | | **Source: K304446-01** | | Prepared & Analyzed: 04/24/03 | | | | | | |
| % Solids | 79.6 | 0.01 | % by Weight | | 79.4 | | | 0.252 | 5 | |
| **Duplicate (3042415-DUP4)** | | **Source: K304449-01** | | Prepared & Analyzed: 04/24/03 | | | | | | |
| % Solids | 85.7 | 0.01 | % by Weight | | 86.6 | | | 1.04 | 5 | |
| **Duplicate (3042415-DUP5)** | | **Source: K304450-04** | | Prepared & Analyzed: 04/24/03 | | | | | | |
| % Solids | 82.4 | 0.01 | % by Weight | | 81.0 | | | 1.71 | 5 | |



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Tom Lyon, Project Manager

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| | | |
|---|---|---|
| WRS | Project: Dussault Foundry/Lockport, NY | |
| 925 Canal Street Suite 3701 | Project Number: 501075 | **Reported:** |
| Bristol PA, 19007 | Project Manager: David Sembrot | 04/28/03 13:50 |

## Notes and Definitions

| | |
|---|---|
| 10 | This compound was below the method control limits in the Check Standard associated with this sample. |
| A-01 | Could not get good internal responses in the NaH preservative. Had to run at a lower weight in purged DI water. |
| A-01a | Could not get good internal responses in the NaH preservative. Had to use low weight in purged DI water. |
| DILN | Due to matrix interference and or sample dilution the detection limits for this sample have been elevated. |
| O7 | The reporting limits for this sample have been raised due to low sample weight, volume and/or weight to methanol volume ratio. |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |





Tom Lyon, Project Manager

WORK ORDER

Printed: 4/21/2003 11:25:09AM

**K304466**

# GLA Laboratories

**Client:** WRS
**Project:** Dussault Foundry/Lockport, NY

**Project Manager:** Tom Lyon
**Project Number:** 501075

**Report To:**
WRS
M. Mahnkopf
925 Canal Street Suite 3701
Bristol, PA 19007
Phone: (609) 499-6540
Fax: (609) 499-6545

**Invoice To:**
WRS
Accounts Payable
925 Canal Street Suite 3701
Bristol, PA 19007
Phone :267-540-0048
Fax: 267-540-0049

Date Due: 04/28/03 16:00 (5 day TAT)

Received By: Jake Zanck
Logged In By: Oswaldo Burgos

Date Received: 04/19/03 11:45
Date Logged In: 04/21/03 11:16

Samples Received at: 3°C
Custody Seals No Received On Ice Yes
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confir Yes

Encores were preserved @ Login 4/19/03

| Analysis | Due | TAT | Expires | Comments |
|---|---|---|---|---|
| **K304466-01 DF-FO-01 [Soil] Sampled 04/17/03 18:15 Eastern** | | | | |
| 8260 | 04/28/03 12:00 | 5 | 05/01/03 18:15 | |
| 8270 BN | 04/28/03 12:00 | 5 | 05/01/03 18:15 | |
| Solids, Dry Weight | 04/28/03 12:00 | 5 | 05/17/03 18:15 | |
| **K304466-02 DF-FO-02 [Soil] Sampled 04/17/03 18:20 Eastern** | | | | |
| 8260 | 04/28/03 12:00 | 5 | 05/01/03 18:20 | |
| 8270 BN | 04/28/03 12:00 | 5 | 05/01/03 18:20 | |
| Solids, Dry Weight | 04/28/03 12:00 | 5 | 05/17/03 18:20 | |
| **K304466-03 DF-FO-03 [Soil] Sampled 04/17/03 18:25 Eastern** | | | | |
| 8260 | 04/28/03 12:00 | 5 | 05/01/03 18:25 | |
| 8270 BN | 04/28/03 12:00 | 5 | 05/01/03 18:25 | |
| Solids, Dry Weight | 04/28/03 12:00 | 5 | 05/17/03 18:25 | |
| **K304466-04 DF-FO-04 [Soil] Sampled 04/17/03 18:30 Eastern** | | | | |
| 8260 | 04/28/03 12:00 | 5 | 05/01/03 18:30 | |
| 8270 BN | 04/28/03 12:00 | 5 | 05/01/03 18:30 | |
| Solids, Dry Weight | 04/28/03 12:00 | 5 | 05/17/03 18:30 | |
| **K304466-05 DF-FO-05 [Soil] Sampled 04/17/03 18:35 Eastern** | | | | |
| 8260 | 04/28/03 12:00 | 5 | 05/01/03 18:35 | |
| 8270 BN | 04/28/03 12:00 | 5 | 05/01/03 18:35 | |
| Solids, Dry Weight | 04/28/03 12:00 | 5 | 05/17/03 18:35 | |

# K304466

## GLA Laboratories

Client: **WRS**
Project: **Dussault Foundry/Lockport, NY**

Project Manager: **Tom Lyon**
Project Number: **501075**

| Analysis | Due | TAT | Expires | Comments |
|---|---|---|---|---|
| **K304466-06 DF-FO-06 [Soil] Sampled 04/17/03 18:40 Eastern** | | | | |
| 8260 | 04/28/03 12:00 | 5 | 05/01/03 18:40 | |
| 8270 BN | 04/28/03 12:00 | 5 | 05/01/03 18:40 | |
| Solids, Dry Weight | 04/28/03 12:00 | 5 | 05/17/03 18:40 | |
| **K304466-07 DF-FO-07 [Soil] Sampled 04/17/03 18:45 Eastern** | | | | |
| 8260 | 04/28/03 12:00 | 5 | 05/01/03 18:45 | |
| 8270 BN | 04/28/03 12:00 | 5 | 05/01/03 18:45 | |
| Solids, Dry Weight | 04/28/03 12:00 | 5 | 05/17/03 18:45 | |
| **K304466-08 DF-FO-08 [Soil] Sampled 04/17/03 18:50 Eastern** | | | | |
| 8260 | 04/28/03 12:00 | 5 | 05/01/03 18:50 | |
| 8270 BN | 04/28/03 12:00 | 5 | 05/01/03 18:50 | |
| Solids, Dry Weight | 04/28/03 12:00 | 5 | 05/17/03 18:50 | |

TL

Reviewed By

4/22/03

Date

# TULA LABORATORIES

# CHAIN OF CUSTODY REPORT

King of Prussia, PA 19406
(610) 337-9992
FAX (610) 337-9939

1 week TAT

| | | | |
|---|---|---|---|
| Client: WRS c/o Dussault Foundry | Bill To: WRS | TAT: Standard ~~5 DAY~~ 3 DAY 1 DAY 4 DAY 2 DAY < 24 HRS. | |
| Address: 2 Washburn ST | Address: | DATE RESULTS NEEDED: 4/25/03 | |
| Lockport, NY 14094 | | TEMPERATURE UPON RECEIPT: 3°C | |
| Report to: M. Mahkorf Phone #: 716 438-1203 Fax #: 716 438-1205 | State & Program: | Phone #: ( ) Fax #: ( ) | SHIPPING #: |

Project: Dussault Foundry
Sampler: MM
PO/Quote #: 501075

| | FIELD ID / LOCATION | DATE COLLECTED | TIME COLLECTED | SAMPLE MATRIX | # of Bottles Preservative Used: MeOH | NaHSO4 | HCl | HNO3 | H2SO4 | NaOH | NONE | TOTAL # OF BOTTLES | TCL VOA | TCL BNs | ANALYSIS TYPE | SAMPLE CONTROL: CRACKED/BROKEN | IMPROPERLY SEALED | GOOD CONDITION | LABORATORY ID NUMBER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | DF-FO-01 PID: | 4/17/03 | 1815 | Soil | | | | | | | | 4 | X | X | | | | | K304466-01 |
| 2 | DF-FO-02 PID: | | 1820 | | | | | | | | | 4 | X | X | | | | | -02 |
| 3 | DF-FO-03 PID: | | 1825 | | | | | | | | | 4 | X | X | | | | | -03 |
| 4 | DF-FO-04 PID: | | 1830 | | | | | | | | | 4 | X | X | | | | | -04 |
| 5 | DF-FO-05 PID: | | 1835 | | | | | | | | | 4 | X | X | | | | | -05 |
| 6 | DF-FO-06 PID: | | 1840 | | | | | | | | | 4 | X | X | | | | | -06 |
| 7 | DF-FO-07 PID: | | 1845 | | | | | | | | | 4 | X | X | | | | | -07 |
| 8 | DF-FO-08 PID: | | 1850 | | | | | | | | | 4 | X | X | | | | | -08 |
| 9 | PID: | | | | | | | | | | | | | | | | | | |
| 10 | PID: | | | | | | | | | | | | | | | | | | |

Extracts were pres. @ log-in. KB 4/19/03

| RELINQUISHED | DATE / TIME | RECEIVED | DATE / TIME | RELINQUISHED | DATE / TIME | RECEIVED | DATE / TIME |
|---|---|---|---|---|---|---|---|
| M. Mahkorf | 4/18/03 1400 | [illegible] | 4/19/03 1745 | | | | |
| RELINQUISHED | DATE / TIME | RECEIVED | DATE / TIME | RELINQUISHED | DATE / TIME | RECEIVED | DATE / TIME |

COMMENTS: (1) TCL VOAs via Method 8260B (2) TCL Base Neutrals (BNs) via EPA Method 8270

FedEx Express **USA Airbill** FedEx Tracking Number **837726191245**

**Sender's Copy**

**1 From** *Please print and press hard.*

Date 4/18/03 Sender's FedEx Account Number 1189-0302-1

Sender's Name S. Soden Phone (716) 438-1201

Company WRS

Address 2 WASHBURN ST

Dept./Floor/Suite/Room

City Lockport State NY ZIP 14094

**2 Your Internal Billing Reference** First 24 characters will appear on invoice. 501075

**3 To**

Recipient's Name PNE STATION / CUSTOMER SVC. Phone (610) 337-9892

Company GLA LABORATORIES

Address 741 Fifth AVE.

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Dept./Floor/Suite/Room

City King OF PRUSSIA State PA ZIP 19406

Ship online at fedex.com

By using this Airbill you agree to the service conditions on the back of this Airbill and in our current Service Guide, including terms that limit our liability.

**Questions? Visit our Web site at fedex.com**
or call 1.800.Go.FedEx® 800.463.3339.

**4a Express Package Service** *Packages up to 150 lbs.* Delivery commitment may be later in some areas.

- [x] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day

FedEx Envelope rate not available. Minimum charge: One-pound rate

**4b Express Freight Service** *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation:

**5 Packaging** * Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [x] Other

**6 Special Handling**

- [ ] **SATURDAY Delivery** — Available [illegible] FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] **HOLD Weekday at FedEx Location** — NOT Available for FedEx First Overnight
- [x] **HOLD Saturday at FedEx Location** — Available [illegible] FedEx Priority Overnight and FedEx 2Day to select locations

**Does this shipment contain dangerous goods?** Dry ice must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous Goods (including Dry Ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

**7 Payment** *Bill to:*

- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. Exp. Date

| Total Packages | Total Weight | Total Declared Value† | FedEx Use Only |
|---|---|---|---|
| | | $ .00 | |

†Our liability is limited to $100 unless you declare a higher value. See back for details.

**8 Release Signature** *Sign to authorize delivery without obtaining signature.*

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

446

Rev. Date 10/01 • Part #157812 • ©1994–2001 FedEx • PRINTED IN U.S.A. WCSL 02

RETAIN THIS COPY FOR YOUR RECORDS.

# APPENDIX 3

# SITE MAPS/FIGURES

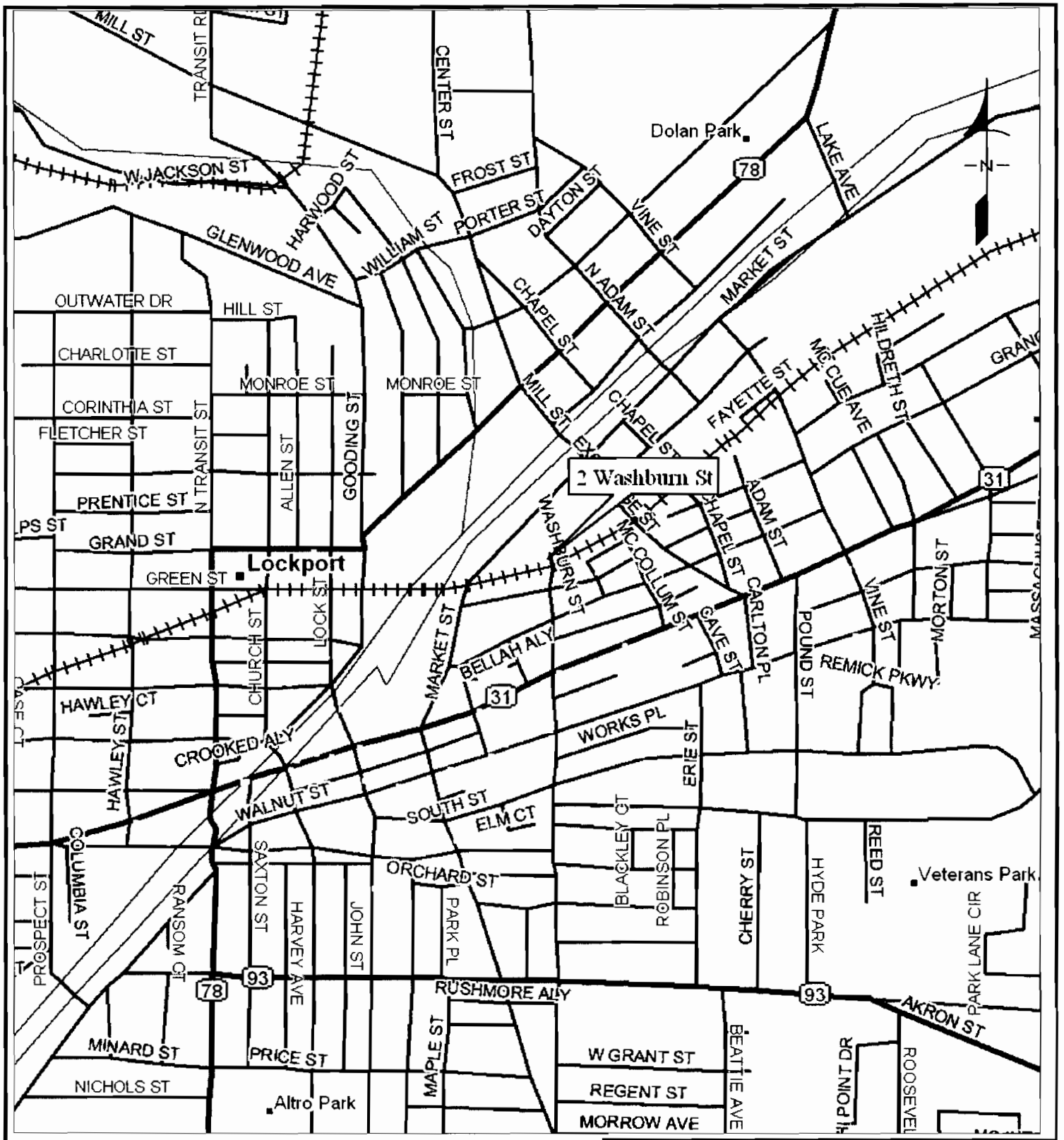


**FIGURE 1**
**SITE LOCATION MAP**
**DUSSAULT FOUNDRY**
**LOCKPORT, NY**

**US ENVIRONMENTAL PROTECTION AGENCY**
REMOVAL SUPPORT TEAM
CONTRACT # 68-W-00-113

EDITED BY: W. HENSPERGER
EPA OSC: K. MATHEIS
SITE PROJECT MANAGER: M. MAHNKOPF
FILE: D:\DWG\DUSSAULT1

WESTON
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FEDERAL PROGRAMS DIVISION

IN ASSOCIATION WITH SCIENTIFIC ENVIRONMENTAL ASSOCIATES, INC.
RESOURCE APPLICATIONS, INC.,
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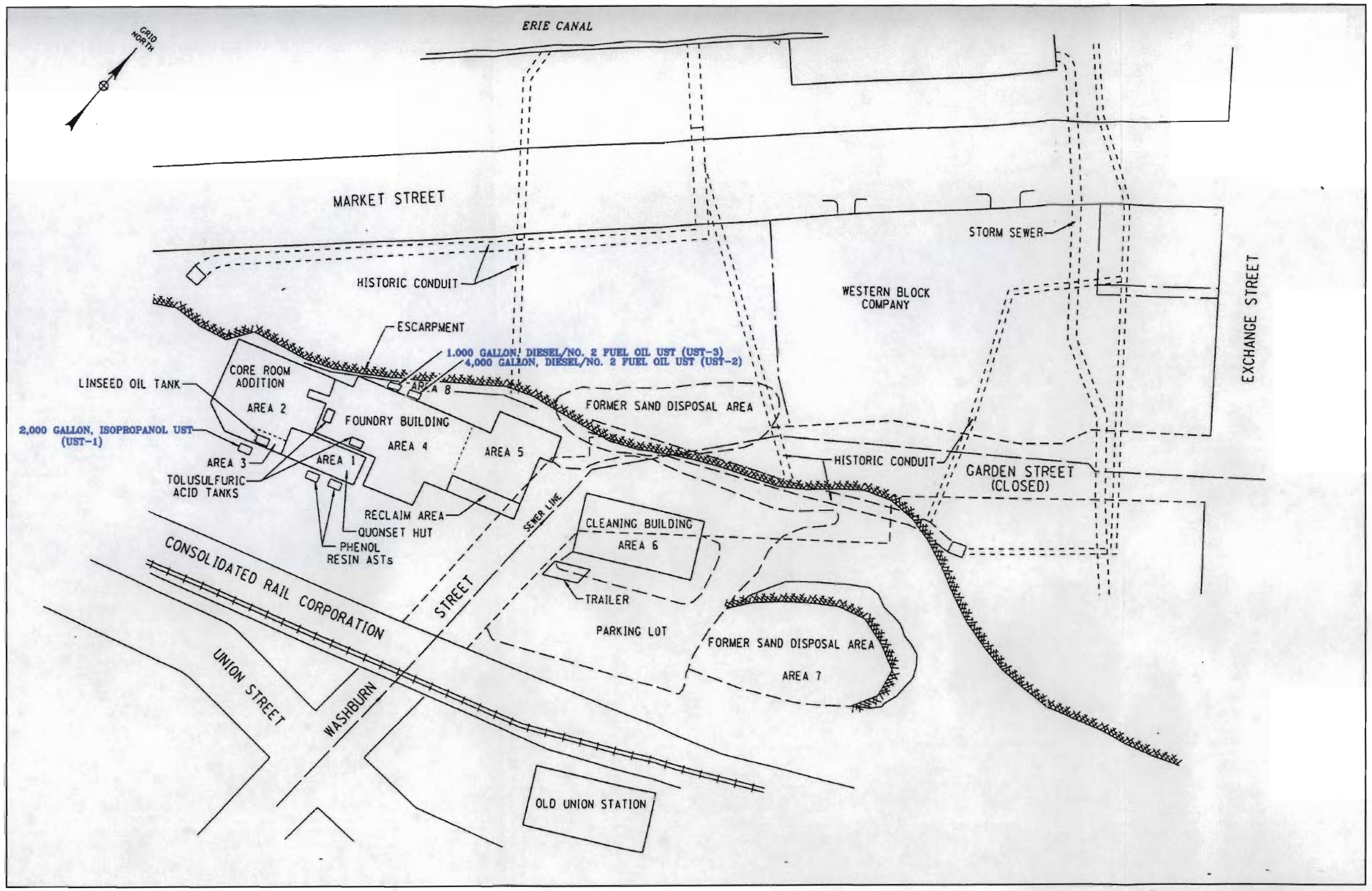


- DRAWING NOT TO SCALE -

**DRAWING 1**
**SITE MAP**
**DUSSAULT FOUNDRY**
**LOCKPORT, NY**

**US ENVIRONMENTAL PROTECTION AGENCY**
REMOVAL SUPPORT TEAM
CONTRACT# 68-W-00-113

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RST PROJECT MANAGER: M. MAHNKOPF
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AND INNOVATIVE TECHNOLOGICAL SOLUTIONS INC.

FOUNDRY BLDG.

N

5'

| DF-IPA-04 | RESULTS (ppm) |
|---|---|
| VOCs = None detected<br>Isopropanol = None detected | |

| DF-IPA-01 | RESULTS (ppm) |
|---|---|
| Acetone = 7.0<br>Carbon disulfide = 0.011<br>Isopropanol = None detected | |

| DF-IPA-03 | RESULTS (ppm) |
|---|---|
| Benzene = 0.0014<br>Toluene = 0.0031<br>Isopropanol = None detected | |

32"

64"

FORMER LOCATION OF
2000 GALLON UST

32"

6'

6'

12'

| DF-IPA-02 | RESULTS (ppm) |
|---|---|
| Benzene = 0.0013<br>Toluene = 0.005<br>Isopropanol = None detected | |

GRAPHIC SCALE

3' 0' 3' 6'

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**FIGURE 2**
**2,000 GALLON ISOPROPANOL UST**
**POST EXCAVATION SOIL SAMPLE LOCATIONS & ANALYTICAL RESULTS**
**DUSSAULT FOUNDRY SITE**
**LOCKPORT, NY**

US EPA REMOVAL ACTION BRANCH
REMOVAL SUPPORT TEAM
CONTRACT#68-W-00-113

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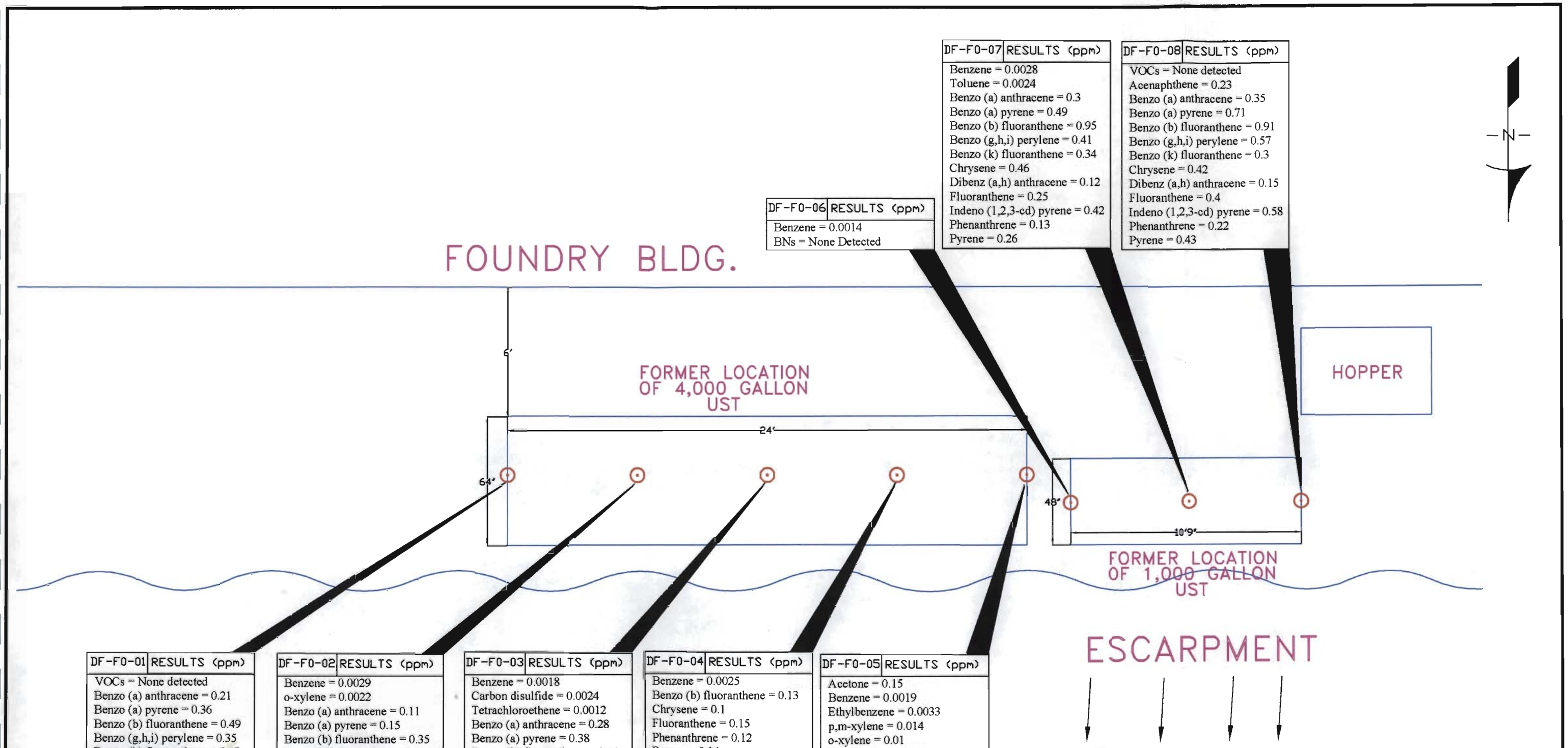


GRAPHIC SCALE

6' 0' 6' 12'

**FIGURE 3**
**1,000 GALLON DIESEL/ NO. 2 FUEL OIL UST**
**4,000 GALLON DIESEL/ NO. 2 FUEL OIL UST**
**POST EXCAVATION SOIL SAMPLE LOCATIONS & ANALYTICAL RESULTS**
**DUSSAULT FOUNDRY SITE**
**LOCKPORT, NY**

**US EPA REMOVAL ACTION BRANCH**

REMOVAL SUPPORT TEAM
CONTRACT#68-W-00-113

WESTON SOLUTIONS Restoring Resource Efficiency

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