

TNT Red Star Express

KIRKWOOD, BROOME COUNTY, NEW YORK

Site Management Plan

NYSDEC Site Number: 704028

**Prepared for:
YRC Freight
10990 Roe Avenue
Overland Park, Kansas**

**Prepared by:
Leader Professional Services, Inc.
271 Marsh Road, Suite 2
Pittsford, New York
585-248-2413**

**March 2015
250.016**



Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date

TABLE OF CONTENTS

TABLE OF CONTENTS	ii
SITE MANAGEMENT PLAN	1
1.0 Introduction and Description of Remedial Program	1
1.1 Introduction.....	1
1.2 Site background.....	3
1.3 Summary of Remedial Investigation Findings.....	4
1.4 Summary of Remedial Actions	6
2.0 Institutional Control Plan	8
2.1 Introduction.....	8
2.2 Institutional Controls.....	9
2.3 Environmental Easement	10
2.4 Excavation Work Plan	11
2.5 Inspections and Notifications.....	13
3.0 Inspections, Reporting and Certifications.....	14
3.1 Site Inspections	14
3.2 Periodic Review Report	15
3.3 Annual Certification Form	16
3.4 Corrective Measures Plan	16

LIST OF FIGURES

Figure 1	Site Location
Figure 2	Site Boundaries
Figure 3	Neighboring Properties
Figure 4	East – West Geologic Cross-Section
Figure 5	Groundwater Flow
Figure 6	Site Utilities and Plume Location
Figure 7	On-Site Area Impacted by Contaminated Soil Vapor

LIST OF TABLES

Table 1	Soil Sample Results for Volatile Organic Compounds
Table 2	Soil Sample Results for Semivolatile Organic Compounds
Table 3	Groundwater Sample Results for Volatile Organic Compounds. May 2014
Table 4	Groundwater Sample Results for Semivolatile Organic Compound, PCBs, and Metals
Table 5	Soil Gas and Sub-Slab Vapor Results
Table 6	Monitoring/Inspection and Reporting Schedule

LIST OF APPENDICES

1. Metes and Bounds
2. Annual Certification Form
3. Excavation Work Plan
4. Monitoring Well Boring and Construction Logs
5. Site-wide Inspection Form
6. Environmental Easement

SITE MANAGEMENT PLAN

1.0 Introduction and Description of Remedial Program

1.1 Introduction

This document is required as an element of the remedial program at TNT Red Star Express Site (hereinafter referred to as the “Site”) under the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program administered by New York State Department of Environmental Conservation (“NYSDEC”). The site was remediated in accordance with Order on Consent Index #B7-0521-97-09, Site # 704028, which was executed on August 10, 2007.

1.1.1 General

USF Red Star, Inc., a former subsidiary of YRCW, Inc. (YRC’s), entered into an Order on Consent (#B7-0521-97-09) on August 20, 1998 with the NYSDEC investigate and remediate the five (approximate) acre Site located in the Town of Kirkwood, Broome County, New York. Following completion of the Remedial Investigation and Feasibility Study, YRCW, Inc. (now known as YRC Freight (“YRC”)) entered into an Order on Consent (#B7-0521-97-09), executed on August 10, 2007 to remediate the Site. Figure 1 shows the Site location and Figure 2 shows the boundaries of this five acre Site. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement (“EE”).

After completion of the remedial work described in the Remedial Action Work Plan, residual amounts of groundwater contamination remained and is hereafter referred to as “remaining contamination.” This Site Management Plan (“SMP”) was prepared to manage the remaining contamination at the Site. All reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by Leader Professional Services, Inc. on behalf of YRC, in accordance with the requirements identified in the project work plans and the guidelines provided by NYSDEC. This SMP addresses the means for implementing the Institutional Controls (“ICs”) that are required by the Environmental Easement for the site.

1.1.2 Purpose

The Site has remaining contamination left in the groundwater when the remedial action was completed. Institutional Controls have been incorporated into the Site remedy to protect the public health and the environment. An EE granted to the NYSDEC by the property owner, and recorded with the Broome County Clerk, will require compliance with this SMP and all ICs placed on the site. The ICs place restrictions on the Site use, and mandate inspection and reporting measures for all ICs. This SMP specifies the methods necessary to ensure compliance with all ICs required by the EE for the remaining contamination. This plan has been approved by the NYSDEC and compliance with this plan is required by the grantor of the EE and the grantor’s successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage the remaining contamination at the Site including: (1) Implementation and management of all IC’s; and (2) Performance of periodic inspections, certification of results, and submittal of Periodic Review Reports.

To address these needs, this SMP includes two plans: (1) an Institutional Control Plan for implementation and management of ICs; and (2) an Excavation Plan in the event excavation work is needed for new buildings, building repair and Site maintenance.

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations, and certifications to NYSDEC. It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the EE. Failure to comply with this SMP is a violation of Environmental Conservation Law, 6 NYCRR Part 375 and thereby subject to applicable penalties.

1.1.3 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. The NYSDEC will provide a notice of any approved changes to the SMP and append these notices to the SMP retained in NYSDEC's files.

1.2 Site background

1.2.1 Site Location and Description

The Site is located in the Town of Kirkwood, County of Broome, New York and is identified as Block 162.02-2 and Lot 1 on the Broome County Tax Map. The Site is an approximately 5-acre area bounded by the following: Industrial Park Drive to the south; lands belonging to Kelbritish Realty L.L.C.; Track Drive L.L.C. to the southwest; and lands belonging to the Broome County Industrial Development Agency to the north, (see Figure 3). The boundaries of the site are more fully described in Appendix 1 – Metes and Bounds.

1.2.2 Site History

The Site was developed in the 1980's and has been used since as a trucking terminal with two buildings; a terminal and maintenance garage. C&D Terminal Leasing developed the property and has owned the property at least since it was developed. Improvements to the Site made by C&D Terminal Leasing include the construction of buildings, the installation of a fuel tank(s), placing pavement over the majority of the property, and connecting the property to the municipal utilities including water, electric and gas. The NYSDEC Petroleum Bulk Storage Database shows a single 10,000-gallon diesel fuel tank as having been removed in 2003. From the 1991 PCE spill through 1995 the former TNT Red Star Express Company removed 120 tons of PCE-contaminated soil, operated a Soil Vapor Extraction system, conducted a soil gas survey and installed and monitored the groundwater (from four monitoring wells) on a quarterly basis.

1.2.3 Geologic Conditions

When the Site was developed the topography was modified primarily by removing overburden to create a flat building surface and roadway. The stratigraphy of the overburden at the Site consists of interlayered silt, silt-sand-gravel mixtures, and clay. The silt and silt-sand-gravel soils are very dense and are common to approximately 16 to 22 feet below the ground surface. Clay soils are found in intermittent layers at depths

from 16 to 50 feet. Bedrock was not encountered during the remedial or subsequent investigations. A geologic section is shown in Figure 4.

Groundwater is encountered first at a depth of six to eight feet below the ground surface and it forms a shallow groundwater zone across the Site. A deeper groundwater zone is found in a sand-silt and silt-gravel layer at a depth of approximately 32 feet. Groundwater elevations from the two layers suggest they are distinct from one another. The hydraulic head of the deep groundwater zone rises to a higher elevation compared to the shallow zone. The distribution of head measurements from the shallow groundwater zone suggest a southeast to south groundwater flow across the site and south to southwest flow component on the adjacent Harris Manufacturing (Kelbritish Realty LLC) property. Figure 5 shows the approximate surface contours of the shallow groundwater.

1.3 Summary of Remedial Investigation Findings

A Remedial Investigation (RI) was performed to characterize the nature and extent of contamination at the Site. The results of the RI are described in detail in the following reports:

1. Remedial Investigation Report, dated August 2000.
2. Vapor Intrusion Study, dated May 2006
3. Results for Additional Sampling, dated August 2010.

Two sources of contamination were found during the RI:

1. A January 7, 1991 spill of Tetrachloroethylene ("PCE") on to the west side of the terminal building, which impacted both the soil and groundwater. The soil contamination was removed shortly after the spill.
2. Impacts from the use of an oil water separator located on the south side of the maintenance garage building. The impacts from the oil water separator included the introduction of 1,1,1-Trichloroethane ("TCA") into the groundwater.

Impacts from the groundwater contamination spread in response to groundwater flow southwards to the adjacent property. Contaminants found at concentrations exceeding NYSDEC groundwater quality standards are outlined by monitoring wells PW-1, PW-4, PW-9, MW-2 and MW-5. The deep groundwater zone has not been impacted.

Prior to the start of the groundwater remedial efforts the groundwater quality did not improve but also did not degrade (increase in concentration) indicating the contaminant sources had either been remediated or were no longer contributing to the groundwater contamination. The Site contaminants do no longer represent a threat to the users of the site, because the Site's groundwater is not used for drinking water purposes or for commercial purposes (direct or indirect cooling, or as a non-portable source of water). Impacts from the contamination are limited to the ambient groundwater quality. Based on ambient indoor air sampling of the terminal and garage buildings, groundwater contaminants have not impacted indoor air quality.

Below is a summary of Site conditions when the RI was performed.

Soil

No soil impacts above NYSDEC soil cleanup levels have been identified. Table 1 and Table 2 provide results of the soil samples at the two source areas (MW-3 and PW-4), Catch Basin 1, the intermittent drainage swale, and several borings.

Site-Related Groundwater

Groundwater impacts from the Site involve only chlorinated volatile organic compounds ("CVOCs"), specifically PCE and TCA, and their breakdown products. Several petroleum related volatile organic compounds were also found, but these tended to be at concentrations below groundwater cleanup standards. The CVOCs ranged in concentration from less than five parts per billion ("ppb") to three parts per million ("ppm"). The larger CVOCs concentrations were found in the vicinity of the source area, but these quickly decrease a short distance away (downgradient) from the source area. The contaminant plume resulting from the PCE concentrations dropped substantially at the property line. Offsite the CVOC concentrations ranged from 1.3 ppb to 14 ppb. Currently, the PCE levels at the property line and offsite are less than 14 ppb.

The plume from the oil water separator behaved similarly, but because of the proximity of the source area to the property line, the decrease in CVOC concentrations was not as dramatic. Part per million concentrations of TCA (monitoring wells PW-4 and GP-2)

were found at the property and offsite concentrations of less than 20 ppb at monitoring well PW-9. Currently, TCA concentrations in the source area are 2.3 ppb, and contaminant levels at the property line and offsite are less than 16 ppb. Table 3 and Table 4 provide groundwater sample results from the RI to May 2014.

Site-Related Soil Vapor Intrusion

Vapor intrusion was first evaluated during the RI in 1999-2000 by installing a one inch diameter monitoring well (PW-8) and by monitoring holes drilled through the concrete floor of the maintenance garage to collect concentration measurements of the organic vapors. Vapor readings were measured using a portable organic vapor meter with photoionization detector ("PID"). No indoor ambient air samples were collected. PID instrument readings from the floor slab were relatively uniform with soil gas concentrations ranging from 1.5 to 19 ppm.

In 2006, vapor intrusion studies were started and these lasted three heating seasons. Soil vapor, sub-slab, and indoor air samples were collected and analyzed on and offsite. The results indicated the presence of PCE, TCA and Trichloroethylene in the subsurface, but none in the indoor ambient air at levels requiring action. Table 5 provides a summary of the on-site results.

1.4 Summary of Remedial Actions

The Site was remediated in accordance with the NYSDEC-approved Remedial Design, Remedial Action Work Plan, dated August 2007. The Remedial Design and Remedial Action Work Plan("RAWP") included tasks for the following:

- Conduct a bench study to determine if indigenous microbes could be used to remediate the groundwater with the addition of proprietary additives and nutrients;
- Conduct a pilot study to prove the concept and determine injection pressures and rates; and
- Implement a full scale project using Regenesys' HRC and 3-D Microemulsion products.

During the pilot study and full scale implementation projects, injections were made and the monitoring wells were sampled monthly and quarterly to follow remedial progress. The pilot studies began in September of 2007 and were followed by full scale injections in March of 2008. A total of 42 injections were made.

During this time, concentrations in the source areas dropped significantly. In the PCE source area, contaminant concentrations dropped to less than one ppb within the pilot program period. In the oil water separator area CVOCs concentrations dropped as well from part per million levels to less than 23 ppb. Along the property line CVOC concentrations dropped from less than 100 ppb to less than 21 ppb. Offsite concentrations have remained static at the low part per billion levels. Table 3 and Table 4 provide the groundwater monitoring data.

1.4.1 Remaining Contamination

The remaining on and offsite contamination will be found in the shallow groundwater zone approximately six feet or more below the ground surface. Figure 6 presents a drawing of the contaminant plumes and the location of underground utilities. In general, contaminated groundwater is found between the terminal building and the maintenance garage and extends to the Harris Manufacturing building to the south. This remaining contamination is composed of CVOCs: the breakdown products of PCE and TCA, which include; 1,1-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethane, Trichloroethylene, and Vinyl Chloride. Based on the last round of groundwater sampling (May 14, 2014), the highest concentrations in the groundwater were located in the vicinity of monitoring wells GP-2, MW-4, MW-5 and PW-4, which have been subsequently decommissioned. Table 3 and Table 4 provide a summary of the contaminant concentrations.

2.0 Institutional Control Plan

2.1 Introduction

2.1.1 General

Since groundwater contamination above the NYSDEC's cleanup standards remains beneath the Site, ICs are required to protect human health and the environment. This Institutional Control Plan describes the procedures for the implementation and management of all ICs at the Site. The IC Plan is one component of the SMP and is subject to revision by NYSDEC.

The Site does not have an engineered remedial system or cap to limit access or to control groundwater flow because the depth to groundwater does not impact building basements nor does it emerge as a spring within the Site area. This Site does not have an active remediation system which is controlling or treating vapors originating in the soil or groundwater. As a result, there is no need for engineering controls for this Site.

It is possible, that deep excavations for building foundations or utility work may be deep enough to encounter groundwater; therefore, the Excavation Work Plan, provided in Appendix 3, outlines the procedures required to be implemented in the event groundwater is encountered.

2.1.2 Purpose

The IC plan provides:

- A description of all ICs on the Site;
- The basic implementation and intended role of each IC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the features to be evaluated during each required inspection and periodic review;

- A description of plans and procedures to be followed for implementation of the ICs; such as, the implementation of the Excavation Work Plan for the proper handling of the remaining contamination that may be disturbed during maintenance or redevelopment work on the Site; and
- Any other provisions necessary to identify or establish methods for implementing the ICs required by the Site remedy, as determined by the NYSDEC.

2.2 Institutional Controls

Institutional Controls required by the Environmental Easement to be implemented on the Site include:

1. To limit the use and development of the Site to the existing zoning uses (commercial/industrial);
2. To not allow the use of groundwater;
3. Implementation and compliance with the SMP by the Grantor and the Grantor's successors and assigns;
4. The potential for vapor intrusion must be evaluated if one of the site buildings will have a change of use (i.e., renovation or change in the type of use) or a new building will be placed on the property. And,
5. The Site owner will submit to NYSDEC a written statement that certifies, under penalty of perjury, that:
 - (a) Controls employed at the Site are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and,
 - (b) Nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure

to comply with the SMP. NYSDEC retains the right to access the Site at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

2.3 Environmental Easement

The Site owner will convey an Environmental Easement (“EE”) acceptable to the NYSDEC to be placed on the property (see EE in Appendix 6).

IC’s to be used in the management of the Site will involve the following:

- Compliance with the Environmental Easement and this SMP by the Grantor and the Grantor’s successors and assigns;
- Institutional Controls identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement.
- The property may only be used for commercial/industrial use provided that the Institutional Controls included in this SMP are employed.
- The property may not be used for a higher level of use, such as unrestricted or restricted residential use without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated groundwater must be conducted in accordance with this SMP;
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- The potential for vapor intrusion must be evaluated for any buildings developed on the site and any potential impacts that are identified must be monitored or mitigated;
- The site owner will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Site are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the

ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP.

- NYSDEC retains the right to access the Site at any time in order to evaluate the continued maintenance of any and all controls.
- This certification shall be submitted with the Periodic Review Report (or an alternate period of time that NYSDEC may allow) and will be made by the owner or individual that the NYSDEC finds acceptable.

Restricting the use of the property will be done primarily through recording these limitations on the property title or deed, and recording these limitations with the County Clerk or Recorder. The Town of Kirkwood's zoning also identifies the property as being zoned for commercial use and has a building code ordinance limiting use of groundwater. Compliance with the SMP will be the responsibility of the Site owner and will be verified by the use of annual inspections and completion of an Annual Certification Form. Appendix 2 provides a copy of the Certification Form.

2.4 Excavation Work Plan

The Site has been remediated and is suitable for continued commercial or industrial use. Any future intrusive work that will encounter or disturb the remaining contaminated groundwater or saturated soil will be performed in compliance with the Excavation Work Plan ("EWP") that is attached as Appendix 3 to this SMP. Any work conducted pursuant to the EWP must also be conducted using a Site and work specific health and safety plan ("HASP") and a Community Air Monitoring Plan (CAMP) must be prepared for the Site. The NYSDOH CAMP is included as Appendix 1A (as Attachment 1) in the EWP and a sample HASP is included in Attachment 2 of the EWP.

Based on future changes to State and Federal health and safety requirements, and specific methods employed by future contractors, a HASP will be prepared and the CAMP will be updated by the contractor or the environmental consultant and resubmitted with the notification described in Section 1 of the EWP. Any intrusive construction work will be

performed in compliance with the EWP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under Section 4 of this SMP.

The Site owner or associated parties are responsible for informing the parties performing intrusive work of the existence of the SMP, EWP and CAMP. The Site owner will ensure that site development activities are done in accordance with the SMP.

2.4.1 Soil Vapor Intrusion Evaluation

Prior to construction of any new enclosed structures or change of use renovations for any existing buildings anywhere on the property, a soil vapor intrusion (“SVI”) evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to vapors in the proposed structure. Alternatively, an SVI mitigation system may be installed as an element of the building foundation without first conducting an investigation. This mitigation system will include a vapor barrier and passive sub-slab depressurization system that is capable of being converted to an active system.

Prior to conducting an SVI investigation or installing a mitigation system for a new structure, a work plan will be developed and submitted to the NYSDEC and NYSDOH for approval. This work plan will be developed in accordance with the most recent NYSDOH “Guidance for Evaluating Vapor Intrusion in the State of New York.” Measures to be employed to mitigate potential vapor intrusion will be evaluated, selected, designed, installed, and maintained based on the SVI evaluation, the NYSDOH guidance, and construction details of the proposed structure.

It will also be necessary to conduct vapor intrusion sampling if the Site’s garage building is redeveloped for a different use. The sampling will be conducted using an approved Work Plan as described in paragraph 2 above. The owner or interested party conducting SVI study will forward the preliminary (unvalidated) sampling data to the NYSDEC and NYSDOH for their initial review and interpretation. Upon validation, the final data will be transmitted to the agencies along with a recommendation for follow-up action, such as

mitigation, within 30-days of data validation. If the validated results indicate exceedances of the NYSDOH's guidelines for vapor intrusion contamination, the owner or a third party, shall provide all tenants and occupants of the impacted building(s) copies of the relevant NYSDOH fact sheets for the vapor intrusion contaminants that are present.

SVI sampling results, evaluations, and follow-up actions will also be summarized in the next Periodic Review Report.

2.5 Inspections and Notifications

2.5.1 Comprehensive Site-Wide Inspection

A comprehensive site-wide inspection will be conducted when there is a visit to the Site in response to excavation activity, building activity, change in use notification, etc. The inspections will determine and document the following:

- Compliance with requirements of this SMP and the Environmental Easement;
- Current use of the buildings and property;
- Condition of the property and the adjacent properties; and
- If Site records are complete and up to date.

Inspections will be conducted in accordance with the procedures set forth in Section 3 of the SMP. The reporting requirements are outlined in the Periodic Review Reporting section of the SMP (Section 3.2).

2.5.2 Notifications

Notifications will be submitted by the property owner to the NYSDEC for the following reasons:

- Sixty day advance notice of any proposed changes in Site use that are required under Environmental Conservation Law, Part 375, and this SMP.

- Fourteen day advance notice of any proposed ground-intrusive activities pursuant to the EWP.
- Within 48 hours, notice will be provided in the event of a fire or an emergency response action which might impact the condition of occupied buildings or groundwater quality.

Any change in the ownership of the Site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of all approved work plans and reports, including this SMP.
- Within 15 days after the transfer of all or part of the Site, the new owner's name, contact representative and contact information will be confirmed in writing.

3.0 Inspections, Reporting and Certifications

3.1 Site Inspections

3.1.1 Inspection Frequency

The owner or his representative can conduct routine Site inspections. These inspections will be conducted for excavation work being conducted near or below the water table, demolition or construction of a building, renovation due to fire or building damage, or to view a change of use on the Site. At a minimum a Site inspection will be conducted once every 12-months.

3.1.2 Inspection Forms

All inspections events will be recorded on the appropriate forms for their respective task which are contained in Appendices. These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, including daily logs, sampling data, disposal records, etc., generated for the Site during the reporting period will be provided in electronic format.

3.2 Periodic Review Report

The Site owner will submit a Periodic Review Report to the NYSDEC, beginning fifteen months after the Final Engineers Report (“FER”) is approved and then at the 5-year anniversary of the FER acceptance. In the event that the Site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared for each subdivided parcel identified within Site described in Appendix 1 (Metes and Bounds). The parcel owners will prepare a report in accordance with NYSDEC DER-10 and submitted within 30 days of the end of each certification period. Media sampling results, if any, will also be incorporated into the Periodic Review Report.

The report will include:

- Identification, assessment and certification of all ICs required by the remedy for the Site;
- Results of the required annual Site inspections;
- All applicable inspection forms and other records generated for the Site during the reporting period in electronic format;
- A summary of any monitoring data and/or information generated during the reporting period with comments and conclusions;
- Data summary tables and graphical representations of contaminants of concern by media (groundwater, air, soil, soil vapor), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;

- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;
- A Site evaluation, which includes the following:
 - The compliance of the remedy with the requirements of the site-specific Decision Document;
 - Any new conclusions or observations regarding site contamination based on inspections or data generated by the EWP or sampling conducted as required for a building/site change of use evaluation;
 - Recommendations regarding any necessary changes to the remedy; and
 - The overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted in an electronic format to the NYSDEC Central Office.

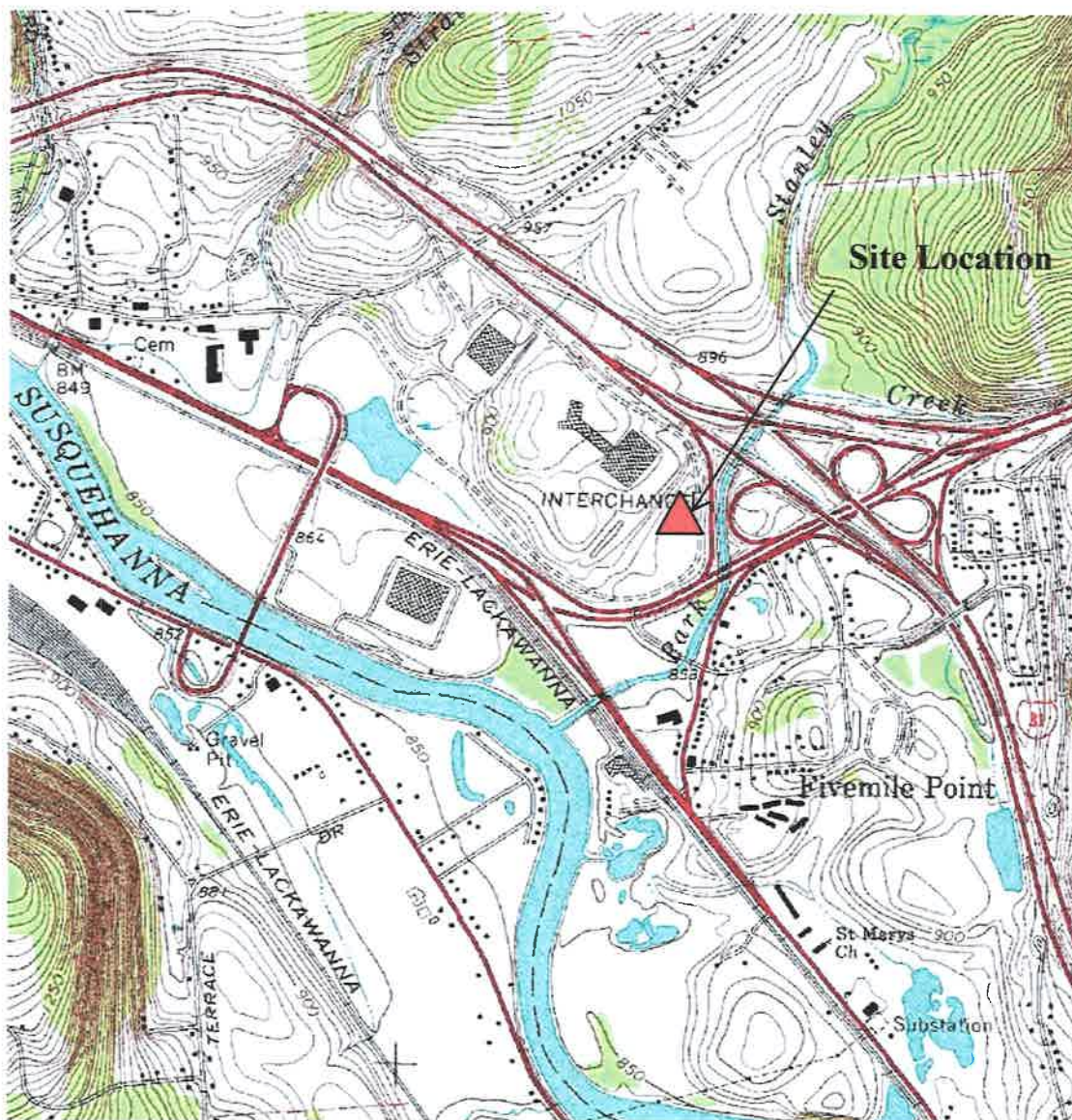
3.3 Annual Certification Form

The Certification Form presented as Appendix 2 will be reviewed and signed by the Site's owner or their representative attesting to the veracity of the results of a Site Inspection, the use of the Site, and the effectiveness of the IC. The form will be completed on an annual basis or in keeping with the proposed schedule presented on Table 6.

3.4 Corrective Measures Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an IC, the owner will submit a corrective measures plan to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure.

Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC.



Title: Site Location
TNT-Red Star Express Site
Kirkwood, NY

Prepared For: YRC Freight
Overland Park, Kansas



Leader Professional Services, Inc.
271 Marsh Road-Suite 2
Pittsford, New York 14534
(585) 248-2413
FAX (585) 248-2834

Project 250.016
Date 3/10/15

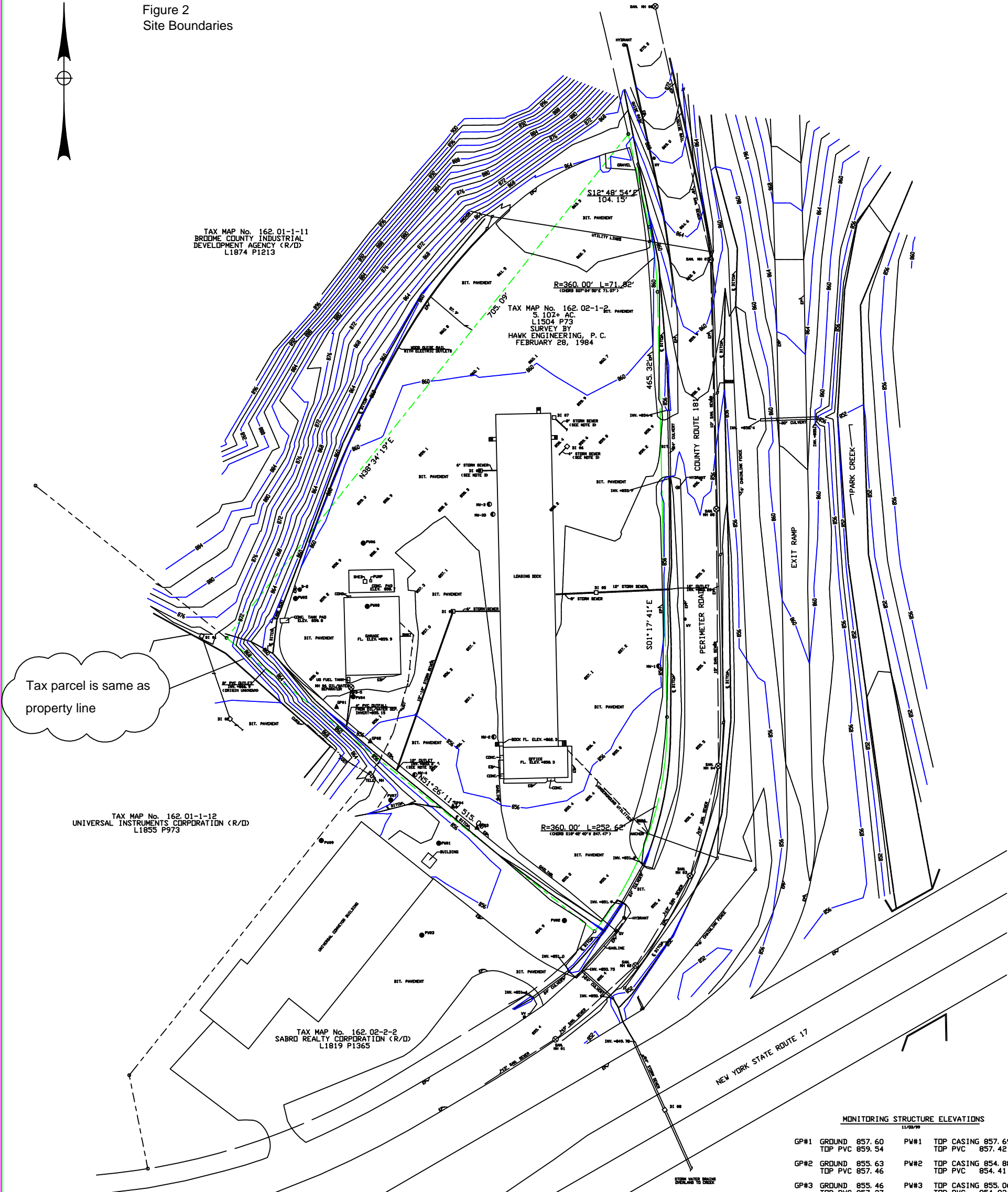
Scale
NTS

Drawn PVS
Checked MPR
File Name
Site Map

Figure

1

Figure 2
Site Boundaries



- DI #1
TG=874.60
- DI #2
TG=871.45
- DI #3
TG=856.37
6' E IN=854.32
10 S OUT=853.82
- DI #4
TG=857.99
6' E OUT=856.84
- DI #5
TG=857.27
8' W IN=853.85
12' E OUT=853.72
- DI #6
TG=858.24
4' S OUT=857.31
- DI #7
TG=858.96
8' S OUT=855.56
- DI #8
TG=852.33
24' W IN=849.31
24' E OUT=849.31
- MH #1
TG=854.64
Q INV.=846.80
- MH #2
TG=854.91
Q INV.=847.31
- MH #3
TG=854.82
8' W IN=847.56
Q INV.=847.56
- MH #4
TG=854.81
Q INV.=847.78
- MH #5
TG=855.24
Q INV.=848.61
- MH #6
TG=858.20
- MH #7
TG=861.76
8' N IN=854.23
Q INV.=854.23
- MH #8
TG=876.71
Q INV.=869.50

- BM #6
ELEV.
R.R. SPIKE POLE# NYSEG 3407/12-1
V. SIDE PERIMETER ROAD N. OF SLY.
ENTRANCE TO RED STAR TERMINAL
- BM #7
ELEV.
PAINTED SQUARE CONC. FLOOR E.
SIDE GARAGE AT N END MIDDLE
OVERHEAD DOOR
- BM #8
ELEV.
R.R. SPIKE POLE# NYSEG 15 E. SIDE
PERIMETER ROAD ABOUT OPPOSITE
N. END RED STAR TERMINAL BUILDING
- MONITORING WELL 1 TOP=856.46
- MONITORING WELL 2 TOP=857.83
- MONITORING WELL 3 TOP=858.40
- MONITORING WELL 4 TOP=855.10

- 854.59
- 859.95
- 858.00
- LEGEND
- PROPERTY IRON FOUND
 - N. Y. S. R. D. W. MONUMENT FOUND
 - REBAR WITH CAP SET
 - UTILITY POLE
 - SPOT ELEVATION
 - (R/D) - REPUTED OWNER(S)

NOTES:

- ELEVATIONS BASED ON BM #2-NYSDDT CONTRACT No. D257816
BRIDGE REPLACEMENT-CR 177 OVER U.S. RT. 11 AND CONRAIL-TOWN
OF KIRKWOOD, BROOME COUNTY, NEW YORK
- UNDERGROUND UTILITIES SHOWN ARE FROM FIELD LOCATIONS AND
MAY NOT BE COMPLETE. NOTIFY UPFD PRIOR TO ANY EXCAVATION.
- DYE POURED INTO DI #4 WAS OBSERVED COMING OUT OF 12" OUTLET
INTO DITCH. SURVEYOR WAS UNABLE TO DETERMINE CONNECTIONS OF
PIPES GOING OUT OF DI #4, #6 AND #7.

REVISION 11/03/99 - MARS, PW#1-9, & GP#1-4 ADDED

SURVEY FOR

USF RED STAR EXPRESS, INC.

COUNTY ROUTE 181

TOWN OF KIRKWOOD

BROOME COUNTY, NEW YORK

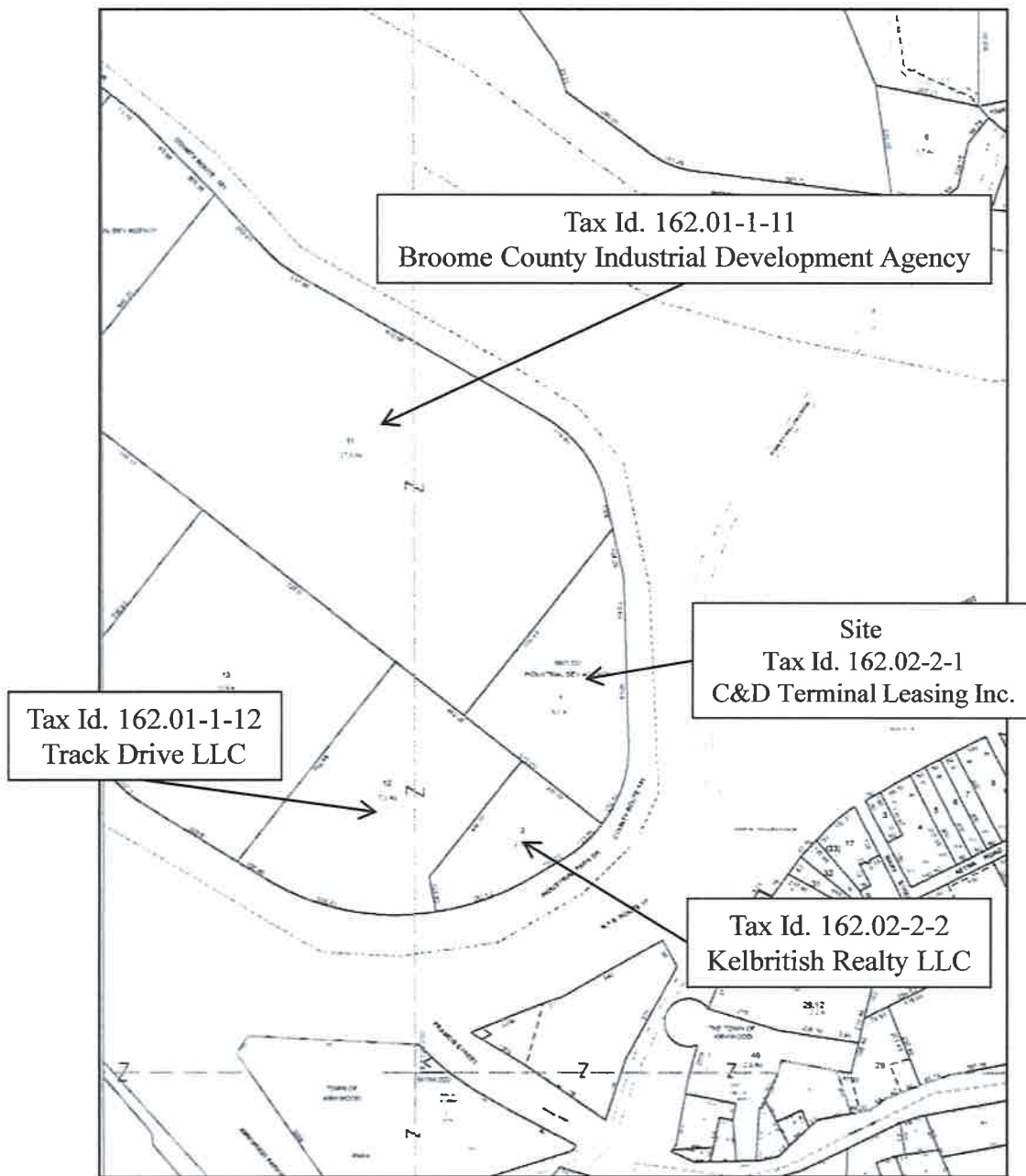
SCALE: 1 INCH = 50 FEET

MARCH 11, 1999

STS SOUTHERN TIER SURVEYING, LLP

RONALD C. SCHIESS, PLS
71 TIRRELL ROAD
HARPURSVILLE, NEW YORK
N.Y. LIC. No. 049554

ROGER H. HOLMES, PLS
1233 TRACY CREEK ROAD
VESTAL, NEW YORK
N.Y. LIC. No. 050206
PA. LIC. No. SU-051533-E



Map, tax identification numbers, and ownership information obtained from the Broome County website.

Title: Neighboring Properties
TNT-Red Star Express Site
Kirkwood, NY

Prepared For: YRC Freight
Overland Park, Kansas



Leader Professional Services, Inc.
271 Marsh Road-Suite 2
Pittsford, New York 14534
(585) 248-2413
FAX (585) 248-2834

Project 250.016

Date 3/10/15

Scale NTS

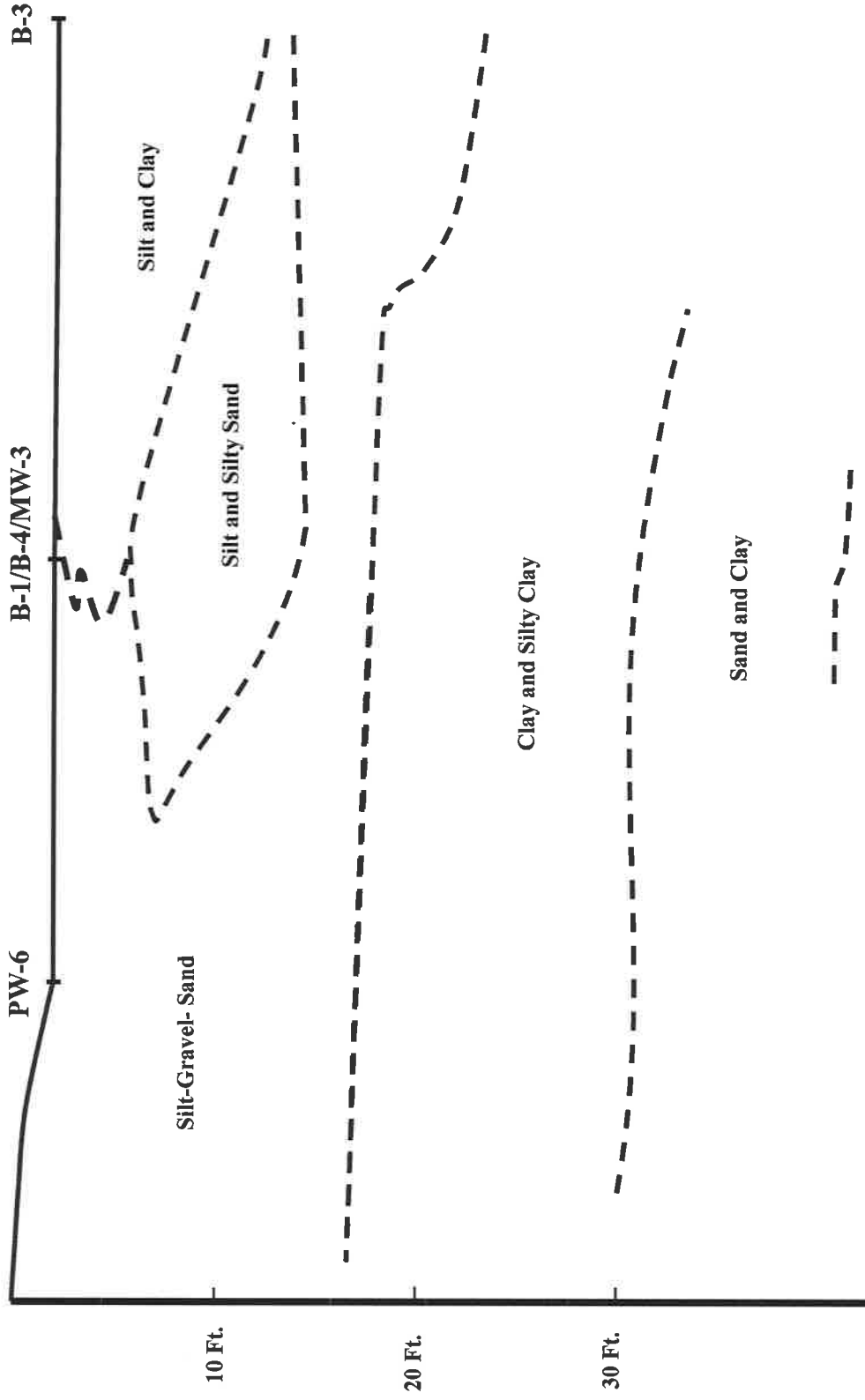
Drawn PVS
Checked MPR

File Name
Site Map

Figure

3

B-2/PW-5



Note subsurface lines are inferred boundaries.

Title

East - West Geologic Cross-Section
TNT Red Star Site #794028
97 Industrial Park Drive
Kirkwood, New York

Prepared For

YRC Freight
Overland Park, Kansas



Project 250.016
Date 3/10/15
Scale H: 1=40.5 ft.

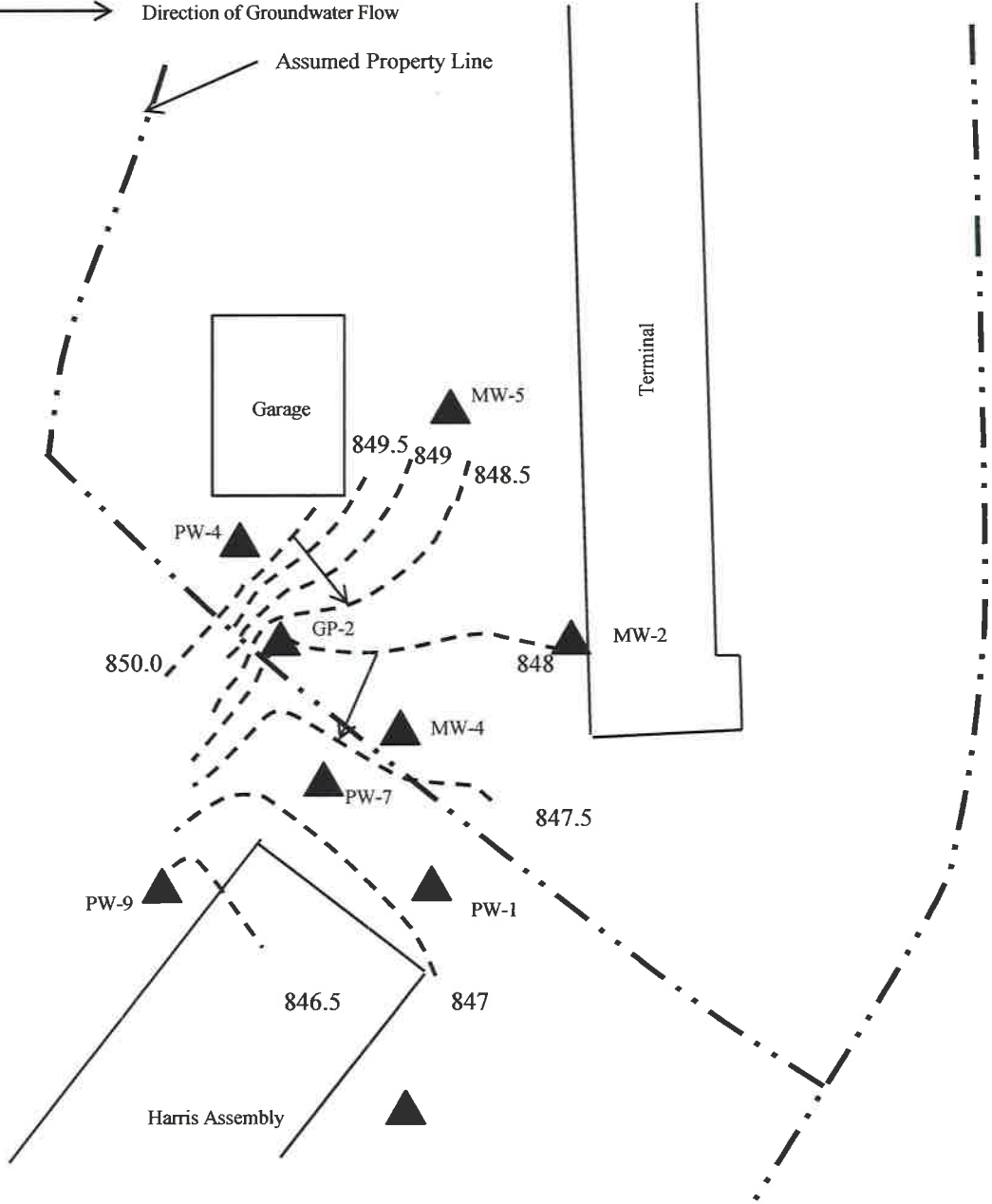
Drawn PVS
Checked MPR
File Name

Figure

4



- ▲ Monitoring Wells
- - - 845.0 Groundwater Surface Contours (in feet) and Elevation Based on NYSDOT Benchmark, Water Levels Measured June 8, 2010.
- Direction of Groundwater Flow



Title: Groundwater Flow
TNT-Red Star Express Site
Kirkwood, NY

Prepared For: YRC Freight
Overland Park, Kansas


Leader Professional Services, Inc.
271 Marsh Road-Suite 2
Pittsford, New York 14534
(585) 248-2413
FAX (585) 248-2834

Project 250.016
Date 3/10/15
Scale NTS

Drawn PVS
Checked MPR
File Name
Site Map

Figure
5

MAP No. 162.01-1-11
 DE COUNTY INDUSTRIAL
 SLOPMENT AGENCY (R/D)
 L1874 P1213

TAX MAP No. 162.02-1-2
 S. 102A AC
 L1504 P73
 SURVEY BY
 HAWK ENGINEERING, P. C.
 FEBRUARY 28, 1984

WOOD QUITE BATH
 WITH ELECTRIC OUTLETS

110V, UNDERGROUND ELECTRICAL CONDUIT

6" STORM SEWER

STORM SEWER
 (SEE NOTE 3)

STORM SEWER
 (SEE NOTE 3)

MV-3
 MV-3D/3-4
 P-1

LOADING DOCK

6" STORM SEWER

UNDERGROUND TELEPHONE CONDUIT
 ELECTRICAL CONDUIT
 4" SANITARY CAST IRON
 3/4" WATERLINE

TERMINAL BUILDING

OFFICE

NYSEG UNDERGROUND ELECTRIC
 1 1/2" WATER (COPPER) SAN
 6" SANITARY CAST IRON

4" PVC OUTFALL
 FROM OIL/WATER SEP.
 INVERT=855.15

12" STORM SEWER

Approx. 5 ppb Limit
 Of 1,1,1-TCA
 Groundwater
 Concentration

UNIVERSAL CONVEYOR BUILDING

TAX MAP No. 162.02-2-2
 SABRO REALTY CORPORATION (R/D)
 L1819 P1365



Leader Professional Services, Inc.
 271 Marsh Road-Suite 2
 Pittsford, New York 14534
 (585) 248-2413
 FAX (585) 248-2834

Project
 250.016
 Date
 3/10/15
 Scale
 NTS

Drawn
 PVS
 Checked
 MPR
 File Name
 Site Map

Figure
 6

Title: Site Utilities and Plume Location
 TNT-Red Star Express Site
 Kirkwood, NY
 Prepared For: YRC Freight
 Overland Park, Kansas

Sample Key

SV-1 Soil Vapor Sample

PCE = Tetrachloroethylene

TCA = 1,1,1-Trichloroethane

TCE = Trichloroethylene

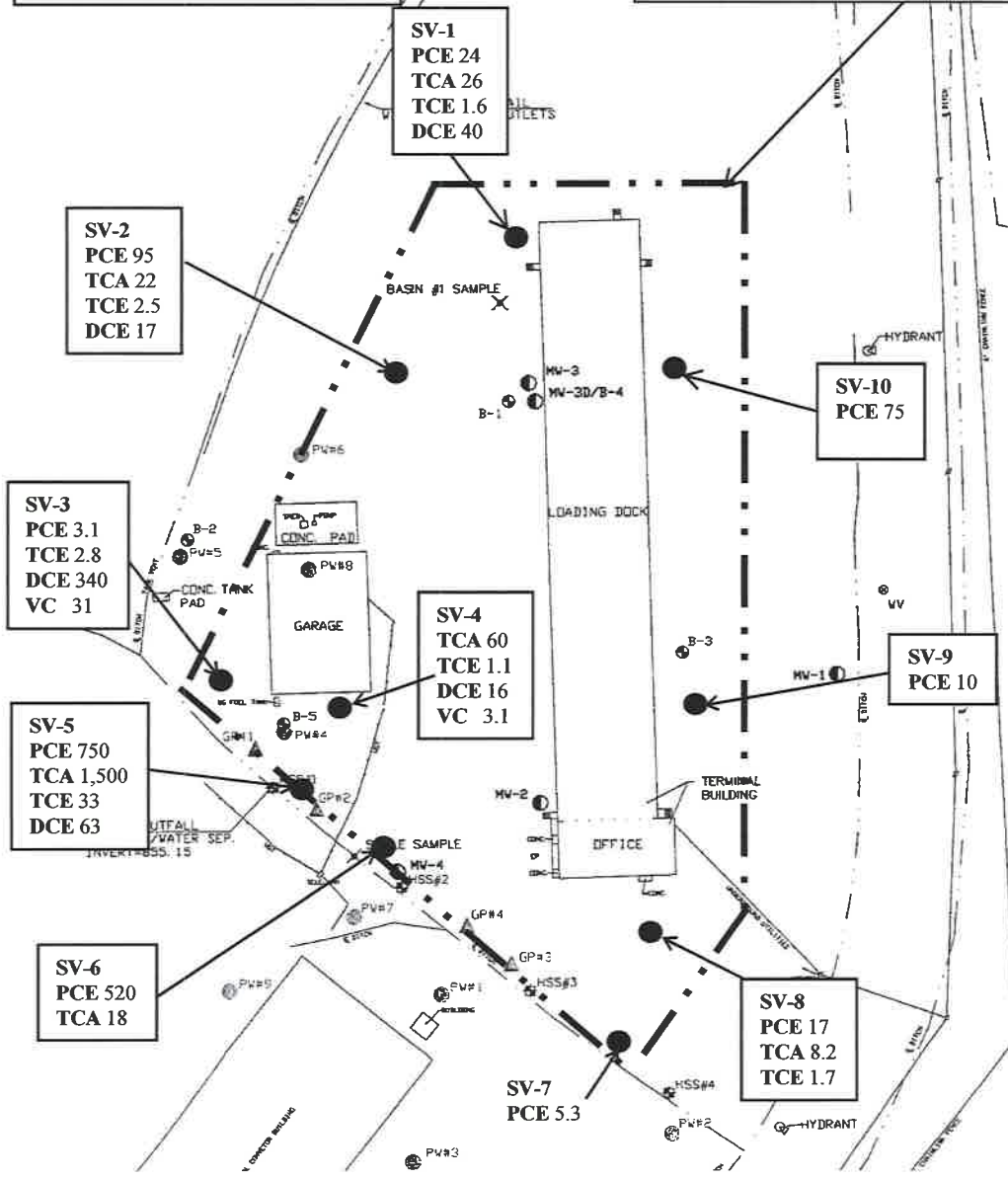
DCE = 1,1-Dichloroethene

VC = Vinyl Chloride

Units = microgram/cubic meter



Potential Limit of Vapor Intrusion Hazard



Title: On-site Areas Impacted by Contaminated Soil Vapor
TNT-Red Star Express Site
Kirkwood, NY

Prepared For:

YRC Freight
Overland Park, Kansas



Leader Professional Services, Inc.
271 Marsh Road-Suite 2
Pittsford, New York 14534
(585) 248-2413
FAX (585) 248-2834

Project

250.016

Date

3/10/15

Scale

NTS

Drawn

PVS

Checked

MPR

File Name

Site Map

Figure

7

TABLE 1
Soil Results of Volatile Organic Compounds ("VOCs")
TNT-Red Star Express Site
NYSDEC Site #704028
Kirkwood, New York

EPA Sample Number	N/A	B4/MW3D	PW-4	PW-5	B-5	TW-9	Basin 1	Swale	#1	Trip Blank
Sampling Date	N/A	2/19/1999	10/25/1999	10/26/1999	10/25/1999	6/30/2010	2/18/1999	2/18/1999	10/29/1999	10/29/1999
Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Water
Field Location	N/A	14 - 16 ft	PW-4	PW-5	B-5	TW-9	1	Swale	Drainage Swale	NA
Sample Depth	N/A	NA	10-11.4 ft.	12-14 ft.	6-8 ft.	7.5 ft.	0-6 in.	0-6 in.	0-6 in.	NA
Concentration	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L
Analyses	NYSDEC TAGM 4046	ASP-95-1	8260	8260	8260	8260	ASP-95-1	ASP-95-1	8260	8260
Acetone	110	3J	5.0U	5.0U	28	290	11U	42	3400U	5.0U
Benzene	60	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5.0U
Bromobenzene	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5.0U
Bromodichloromethane	NL	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5.0U
Bromoform	NL	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5.0U
Bromomethane	NL	10U	5.0U	5.0U	5.0U	5.0U	11U	15U	840U	5.0U
2-Butanone	300	10U	5.0U	5.0U	11U	5.0U	11U	13J	1700U	5.0U
n-Butylbenzene	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5.0U
sec-Butylbenzene	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5.0U
tert-Butylbenzene	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5.0U
Carbon Disulfide	2,700	10U	5.0U	5.0U	2J	5.0U	11U	15U	1700U	5.0U
Carbon Tetrachloride	500	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5.0U
Chlorobenzene	1,700	10U	5.0U	5.0U	5.4U	5.0U	11U	2J	840U	5.0U
Chloroethane	1,900	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5.0U
2-Chloroethyl vinyl ether	NL	NA	5.0U	5.0U	NA	5.0U	NA	NA	NA	5.0U
Chloroform	300	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5.0U
Chloromethane	NL	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5.0U
2-Chlorotoluene	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5.0U
4-Chlorotoluene	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5.0U
1,2-Dibromo-3-chloropropane	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5.0U
Dibromochloromethane	NA	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5.0U
1,2-Dibromoethane	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5.0U
Dibromomethane	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5.0U
1,2-Dichlorobenzene	7,900	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5.0U
1,3-Dichlorobenzene	1,550	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5.0U
1,4-Dichlorobenzene	8,500	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5.0U
Dichlorodifluoromethane	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5.0U
1,1-Dichloroethane	200	10U	5.0U	5.0U	29	5.0U	11U	15U	840U	5.0U
1,2-Dichloroethane	100	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5.0U
1,1-Dichloroethane	400	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5.0U

TABLE 1
Soil Results of Volatile Organic Compounds ("VOCs")
TNT-Red Star Express Site
NYSDEC Site #704028
Kirkwood, New York

EPA Sample Number	N/A	B4/MW3D	PW-4	PW-5	B-5	TW-9	Basin 1	Swale	#1	Trip Blank
Sampling Date	N/A	2/19/1999	10/25/1999	10/26/1999	10/29/1999	6/30/2010	2/18/1999	2/18/1999	10/29/1999	10/29/1999
Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Water
Field Location	N/A	14 - 16 ft.	PW-4	PW-5	B-5	TW-9	1	Swale	Drainage Swale	NA
Sample Depth	N/A	NA	10-11.4 ft.	12-14 ft.	7.5 ft.	7.5 ft.	0-6 in.	0-6 in.	0-6 in.	NA
Concentration	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L
Analyses	NYSDEC TAGM 4046	ASP-95-1	8260	8260	8260	8260	ASP-95-1	ASP-95-1	8260	8260
cis-1,2-Dichloroethene	250	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	840U	5U
1,2-Dichloroethene	NL	10U	NA	NA	NA	5.0U	11U	15U	NA	5U
trans-1,2-Dichloroethene	300	NA	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5U
1,2-Dichloropropane	NL	10U	5.0U	NA	NA	5.0U	NA	NA	840U	5U
1,3-Dichloropropane	300	NA	5.0U	NA	NA	5.0U	NA	NA	840U	5U
2,2-Dichloropropane	NL	NA	NA	NA	5.4U	5.0U	11U	NA	NA	0U
cis-1,3-Dichloropropane	NL	10U	NA	NA	5.4U	5.0U	11U	15U	NA	0U
trans-1,3-Dichloropropane	NL	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	NA	5U
Hexachlorobutadiene	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5U
Ethylbenzene	5,500	10U	5.0U	5.0U	5.4U	5.0U	11U	2J	840U	5U
1,1-Dichloropropane	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5U
2-Hexanone	NL	10U	5.0U	5.0U	11U	5.0U	11U	15U	1700U	5U
Methylene chloride	100	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5U
4-Isopropyltoluene	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5U
Methyl-tert-butyl ether	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5U
4-Methyl-2-pentanone	1,000	10U	5.0U	5.0U	11U	5.0U	11U	15U	1700U	5U
n-Propylbenzene	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5U
Styrene	NL	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5U
Isopropylbenzene	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5U
Naphthalene	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5U
1,1,1,2-Tetrachloroethane	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5U
1,1,2,2-Tetrachloroethane	600	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5U
Tetrachloroethene	1,400	12	5.0U	5.0U	5.4U	5.0U	4J	15U	840U	5U
Toluene	1,500	10U	5.0U	5.0U	1.7J	5.0U	11U	4J	540J	5U
1,2,3-Trichlorobenzene	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	15U	NA	5U
1,2,4-Trichlorobenzene	3,400	NA	5.0U	5.0U	5.4U	5.0U	NA	15U	NA	5U
1,1,1-Trichloroethane	760	10U	5.0U	5.0U	130	5.0U	11U	15U	840U	5U
Trichloroethene	700	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5U
1,1,2-Trichloroethane	NL	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5U
1,2,3-Trichloropropane	340	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5U
Trichlorofluoromethane	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5U
1,2,4-Trimethylbenzene	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5U
1,3,5-Trimethylbenzene	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5U
Vinyl acetate	NL	NA	5.0U	5.0U	5.4U	5.0U	NA	NA	NA	5U
Vinyl chloride	120	10U	5.0U	5.0U	5.4U	5.0U	11U	15U	840U	5U
m,p-Xylene	NL	NA	10U	10U	5.4U	5.0U	11U	4J	490J	5U
o-Xylene	NL	NA	5.0U	5.0U	5.4U	5.0U	11U	4J	360J	5U
Total Xylene	1,200	10U	5.0U	5.0U	NA	5.0U	NA	NA	NA	10U
Tics	N/A	17J	NA	NA	NA	NA	9J	7620	NA	NA

TABLE 1
Soil Results of Volatile Organic Compounds ("VOCs")
TNT-Red Star Express Site
NYSDEC Site #704028
Kirkwood, New York

EPA Sample Number	N/A	99-5-25	1	1 (Dup of 1)	UST (Waste Oil)	Rinse Spoon	Decon	Trip Blank	Cooler Blank	Cooler Blank	Trip Blank
Sampling Date	7/22/1999	10/25/1999	10/25/1999	10/25/1999	6/9/2000	2/18/1999	2/18/1999	2/18/1999	2/18/1999	2/18/1999	10/26/1999
Sample Matrix	Soil	Sediment	Sediment	Sediment	Water	Water	Water	Water	Water	Water	Water
Field Location	N/A	O/W Separator	O/W Separator	O/W Separator	Waste Oil Tank	Field Blank	Decon Water	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Sample Depth	N/A	6ft.	6ft.	6ft.	NA	NA	NA	NA	NA	NA	NA
Concentration	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Analyses	NYSDEC TAGM 4048	8021	ASP-95-1	ASP-95-1	8/280	ASP-95-1	ASP-95-1	ASP-95-1	ASP-95-1	ASP-95-1	ASP-95-1
Acetone	110	250U	1600JB	1900BJ	12,000U	3J	5J	10U	10U	1JB	2JB
Benzene	60	250U	2800U	2800U	2,500U	10U	10U	10U	10U	10U	10U
Bromobenzene	NL	250U	NA	NA	2,500U	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U
Bromoform	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U
Bromomethane	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U
2-Butanone	300	250U	2800U	2500U	12,000U	10U	2J	10U	10U	10U	10U
n-Butylbenzene	NL	7720	NA	NA	22,000	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	NL	845	NA	NA	2,500U	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	NL	5010	NA	NA	2,500U	NA	NA	NA	NA	NA	NA
Carbon Disulfide	2,700	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U
Carbon Tetrachloride	500	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U
Chlorobenzene	1,700	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U
Chloroethane	1,900	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U
2-Chloroethyl vinyl ether	NL	250U	NA	NA	2,500U	NA	NA	NA	NA	NA	NA
Chloroform	300	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U
Chloromethane	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U
2-Chlorotoluene	NL	250U	NA	NA	2,500U	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	NL	250U	NA	NA	2,500U	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NL	250U	NA	NA	2,500U	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U
1,2-Dibromoethane	NL	250U	NA	NA	2,500U	NA	NA	NA	NA	NA	NA
Dibromomethane	NL	250U	NA	NA	2,500U	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	7,900	250U	NA	NA	2,500U	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	1,550	250U	NA	NA	2,500U	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	8,500	250U	NA	NA	2,500U	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NL	250U	NA	NA	2,500U	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	200	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U
1,2-Dichloroethane	100	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U
1,1,1-Dichloroethene	400	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U

TABLE 1
Soil Results of Volatile Organic Compounds ("VOCs")
TNT-Red Star Express Site
NYSDEC Site #704028
Kirkwood, New York

EPA Sample Number	N/A	99-5-25	1	1 (Dup of 1)	UST (Waste Oil)	Rinse Spoon	Decon	Trip Blank	Cooler Blank	Cooler Blank	Trip Blank	Trip Blank
Sampling Date	7/22/1999	Sediment	10/25/1999	10/25/1999	6/9/2000	2/18/1999	2/18/1999	2/18/1999	2/18/1999	2/18/1999	2/18/1999	10/25/1999
Sample Matrix	Soil	O/W Separator	O/W Separator	O/W Separator	Waste Oil Tank	Field Blank	Water	Water	Water	Water	Water	Water
Field Location	N/A	O/W Separator	O/W Separator	O/W Separator	Waste Oil Tank	Field Blank	Water	Water	Water	Water	Water	Water
Sample Depth	N/A	6ft.	6ft.	6ft.	6ft.	6ft.	6ft.	6ft.	6ft.	6ft.	6ft.	6ft.
Concentration	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Analyses	NYSDEC TAGM 4046	8021	ASP-95-1	ASP-95-1	8260	ASP-95-1	ASP-95-1	ASP-95-1	ASP-95-1	ASP-95-1	ASP-95-1	ASP-95-1
cis-1,2-Dichloroethene	250	250	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
1,2-Dichloroethene	NL	250U	250U	250U	2,500U	10U	10U	10U	10U	10U	10U	10U
trans-1,2-Dichloroethene	300	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
1,2-Dichloropropane	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
1,3-Dichloropropane	300	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
2,2-Dichloropropane	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
cis-1,3-Dichloropropane	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
trans-1,3-Dichloropropane	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
trans-1,3-Dichlorobutadiene	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
Hexachlorobutadiene	5,500	597	9300	8000	2,500U	10U	10U	10U	10U	10U	10U	10U
Ethylbenzene	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
1,1-Dichloropropene	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
2-Hexanone	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
Methylene chloride	100	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
4-Isopropyltoluene	NL	1,360	NA	NA	7,600	NA	NA	NA	NA	NA	NA	NA
Methyl-tert-butyl ether	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
4-Methyl-2-pentanone	1,000	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
n-Propylbenzene	NL	1,140	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
Styrene	NL	1,140	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
Isopropylbenzene	NL	666	NA	NA	2,500U	10U	10U	10U	10U	10U	10U	10U
Naphthalene	NL	8,700	NA	NA	42,000	NA	NA	NA	NA	NA	NA	NA
1,1,1,2-Tetrachloroethane	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
1,1,2,2-Tetrachloroethane	600	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
Tetrachloroethene	1,400	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
Toluene	1,500	673	7600	6200	2,500U	10U	10U	10U	10U	10U	10U	10U
1,2,3-Trichlorobenzene	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
1,2,4-Trichlorobenzene	3,400	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
1,1,1-Trichloroethane	760	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
Trichloroethene	700	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
1,1,2-Trichloroethane	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
1,2,3-Trichloropropane	340	311	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
Trichlorofluoromethane	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
1,2,4-Trimethylbenzene	NL	14,300	NA	NA	60,000	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	NL	6,120	NA	NA	37,000	NA	NA	NA	NA	NA	NA	NA
Vinyl acetate	NL	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
Vinyl chloride	120	250U	2800U	2500U	2,500U	10U	10U	10U	10U	10U	10U	10U
m,p-Xylene	NL	3,910	NA	NA	6,500	10U	10U	10U	10U	10U	10U	10U
o-Xylene	NL	2,280	NA	NA	4,500	10U	10U	10U	10U	10U	10U	10U
Total Xylene	1,200	6,190	85000	78000	11,000	NA	10U	10U	10U	10U	10U	10U
Tics	N/A	N/A	545000	486000	N/A	6J	12J	16J	10U	10U	10U	7NJ

TABLE 2
Soil Results of Semi-Volatile Organic Compounds ("SVOCs")
TNT-Red Star Express Site
NYSDEC Site #704028
Kirkwood, New York

EPA Sample Number	N/A	1	B-5
Sampling Date	N/A	10/29/1999	10/29/1999
Sample Matrix	Soil	Soil	Soil
Field Location	TAGM	Drainage Swale	B-5
Sample Depth	N/A	0-6 in.	6 -8 ft.
Concentration	ug/Kg	ug/Kg	ug/Kg
Analyses		8270-STARS	8270-STARS
Acenaphthene	91,000	22000U	350U
Anthracene	700,000	22000U	350U
Benzo (a) Anthracene	3,000	22000U	350U
Benzo (a) Pyrene	11,000	22000U	350U
Benzo (b) Fluoranthene	1,100	22000U	350U
Benzo (G,H,I) Perylene	800,000	22000U	350U
Benzo (k) Fluoranthene	1,100	22000U	350U
Indeno (1,2,3-cd) Pyrene	3,200	22000U	350U
Chrysene	400	22000U	350U
Dibenzo (a,h) Anthracene	165,000	22000U	350U
Fluoranthene	1,900,000	22000U	350U
Fluorene	350,000	22000U	350U
Naphthalene	13,000	13000U	210U
Phenanthrene	220,000	22000U	350U
Pyrene	650,000	22000U	350U

TABLE 3
Summary of Monitoring Well Sample Results
May 14, 2014
TNT Red Star Express Site
Kirkwood, New York

Client Sample ID	MW-2	MW-4	MW 5	GP-2	PW-1	PW-3	PW-4	PW-7	PW-9	DUPLICATE MW-5
Parameter										
1,1-Dichloroethane	ND	ND	ND	3	ND	ND	18	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	2	ND	ND	ND
2-Butanone (MEK)	ND	ND	ND	ND	ND	ND	ND	ND	10	ND
Tetrachloroethene	ND	9.4	28	1.3	5.4	1.3	ND	14	ND	28
1,1,1-Trichloroethane	ND	ND	ND	16	ND	ND	2.3	ND	1.7	ND
Trichloroethene	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND
Total Volatiles	0	10.8	28	20.3	5.4	1.3	22.3	14	11.7	28

Notes:

All concentrations in units of micrograms per liter.

ND = Not detected above analytical reporting limit.

TABLE 4
Groundwater Results of Semi-Volatile Organic Compounds, PCBs, and Metals
TNT-Red Star Express Site
NYSDEC Site #704028
Kirkwood, New York

EPA Sample Number	N/A	MW-4	MW Dup 2 (Dup MW-4)	MW FB2
Sampling Date	N/A	4/1/1999	4/1/1999	4/1/1999
Sample Matrix	Groundwater	Groundwater	Groundwater	Water
	New York State Water Quality Reg. 6 NYCRR Part 703, GA			
Field Location	Groundwater Standards	MW-4	MW-4	Field Blank
Sample Depth	N/A	10-15 ft.	10-15ft.	Bailer
Concentration	ug/Liter	ug/Liter	ug/Liter	ug/Liter
Analyte		95-3	95-3	95-3
Phenol	1	11U	10U	11U
bis(2-Chloroethyl) Ether	1	11U	10U	11U
2-Chlorophenol	50	11U	10U	11U
1,3-Dichlorobenzene	No Standard	11U	10U	11U
1,4-Dichlorobenzene	No Standard	11U	10U	11U
1,2-Dichlorobenzene	No Standard	11U	10U	11U
2,2-oxybis(1-Chloropropane)	No Standard	11U	10U	11U
2-Methylphenol	5	11U	10U	11U
N-Nitroso-Di-n-propylamine	No Standard	11U	10U	11U
Hexachloroethane	No Standard	11U	10U	11U
4-Methylphenol	50	11U	10U	11U
Nitrobenzene	5	11U	10U	11U
Isophorone	50	11U	10U	11U
2-Nitrophenol	5	11U	10U	11U
2,4-Dimethylphenol	0.3	11U	10U	11U
bis(2-Chloroethoxy) Methane	No Standard	11U	10U	11U
2,4-Dichlorophenol	1	11U	10U	11U
1,2,4-Trichlorobenzene	No Standard	11U	10U	11U
Naphthalene	10	11U	10U	11U
4-Chloroaniline	5	11U	10U	11U
Hexachlorobutadiene	No Standard	11U	10U	11U
4-Chloro-3-methylphenol	5	11U	10U	11U
2-Methylnaphthalene	50	11U	10U	11U
Hexachlorocyclopentadiene	No Standard	11U	10U	11U
2,4,6-Trichlorophenol	1	11U	10U	11U
2,4,5-Trichlorophenol	No Standard	27U	25U	29U
2-Chloronaphthalene	10	11U	10U	11U
2-Nitroaniline	No Standard	27U	25U	29U
Acenaphthylene	20	11U	10U	11U
Dimethyl Phthalate	50	11U	10U	11U
2,6-Dinitrotoluene	5	11U	10U	11U
Acenaphthene	20	11U	10U	11U
3-Nitroaniline	5	27U	25U	29U
2,4-Dinitrophenol	5	27U	25U	29U
Dibenzofuran	5	11U	10U	11U
2,4-Dinitrotoluene	No Standard	11U	10U	11U
4-Nitrophenol	5	27U	25U	29U
Fluorene	50	11U	10U	11U
4-Chlorophenyl-phenylether	No Standard	11U	10U	11U
Diethylphthalate	50	11U	10U	11U
4-Nitroaniline	5	27U	25U	29U
4,6-Dinitro-2-methylphenol	No Standard	27U	25U	29U
N-Nitrosodiphenylamine	No Standard	11U	10U	11U
4-Bromophenyl-phenylther	No Standard	11U	10U	11U
Hexachlorobenzene	0.35	11U	10U	11U

TABLE 4
Groundwater Results of Semi-Volatile Organic Compounds, PCBs, and Metals
TNT-Red Star Express Site
NYSDEC Site #704028
Kirkwood, New York

EPA Sample Number	N/A	MW-4	MW Dup 2 (Dup MW-4)	MW FB2
Sampling Date	N/A	4/1/1999	4/1/1999	4/1/1999
Sample Matrix	Groundwater	Groundwater	Groundwater	Water
	New York State Water Quality Reg. 6 NYCRR Part 703, GA			
Field Location	Groundwater Standards	MW-4	MW-4	Field Blank
Sample Depth	N/A	10-15 ft.	10-15ft.	Bailer
Concentration	ug/Liter	ug/Liter	ug/Liter	ug/Liter
Analyte		95-3	95-3	95-3
Pentachlorophenol	1	27U	25U	29U
Phenanthrene	50	11U	10U	11U
Anthracene	50	11U	10U	11U
Carbazole	No Standard	11U	10U	11U
Di-n-Butylphthalate	50	11U	10U	11U
Fluoranthene	50	11U	10U	11U
Pyrene	50	11U	10U	11U
Butylbenzyl phthalate	50	11U	10U	11U
3,3-Dichlorobenzidine	No Standard	11U	10U	11U
Benzo(a)Anthracene	0.002	11U	10U	11U
Chrysene	0.002	11U	10U	11U
Bis(2-Ethylhexyl)Phthalate	50	19	30	11U
Di-n-octyl phthalate	50	11U	10U	11U
Benzo(b)Fluoranthene	0.002	11U	10U	11U
Benzo(k)Fluoranthene	0.002	11U	10U	11U
Benzo(a)Pyrene	0.002	11U	10U	11U
Indeno(1,2,3-cd)Pyrene	0.002	11U	10U	11U
Dibenz(a,h)anthracene	50	11U	10U	11U
Benzo(g, h, i)Perylene	5	11U	10U	11U
PCBs				
PCB 1016	0.1	0.5U	0.5U	0.5U
PCB 1221	0.1	0.5U	0.5U	0.5U
PCB 1232	0.1	0.5U	0.5U	0.5U
PCB 1242	0.1	0.5U	0.5U	0.5U
PCB 1248	0.1	0.5U	0.5U	0.5U
PCB 1254	0.1	0.5U	0.5U	0.5U
PCB 1260	0.1	0.5U	0.5U	0.5U
TAL Metals				
Aluminum	No Standard	6,710.0	8,250.0	42.1U
Antimony	No Standard	8.8B	13.1B	7.7U
Arsenic	25.0	2.7U	2.7U	2.7U
Barium	1,000.0	130B	143.0B	4.4U
Beryllium	No Standard	0.17U	0.17U	0.17U
Cadmium	10.0	2.5B	1.9B	0.63U
Calcium	No Standard	63,700.0	62,500.0	171U
Chromium	50.0	6.2B	7.8B	0.64U
Cobalt	No Standard	1.9B	4.1B	1.2U
Copper	200.0	9.8B	14.2B	1.2U
Iron	300*	8,710.0	15,100.0	11.1U
Lead	25.0	7.0	12.7	2.6U
Magnesium	No Standard	15,300.0	16,100.0	51.4U
Manganese	300*	216.0	528.0	0.92U
Mercury	No Standard	0.04U	0.04U	0.04U
Nickel	No Standard	10.0UB	18.7B	0.89U

TABLE 4
Groundwater Results of Semi-Volatile Organic Compounds, PCBs, and Metals
TNT-Red Star Express Site
NYSDEC Site #704028
Kirkwood, New York

EPA Sample Number	N/A	MW-4	MW Dup 2 (Dup MW-4)	MW FB2
Sampling Date	N/A	4/1/1999	4/1/1999	4/1/1999
Sample Matrix	Groundwater	Groundwater	Groundwater	Water
Field Location	New York State Water Quality Reg. 6 NYCRR Part 703, GA Groundwater Standards	MW-4	MW-4	Field Blank
Sample Depth	N/A	10-15 ft.	10-15ft.	Bailer
Concentration	ug/Liter	ug/Liter	ug/Liter	ug/Liter
Analyte		95-3	95-3	95-3
Potassium	No Standard	3930B	4460B	624U
Selenium	10.0	3.0U	3.0U	3.0U
Silver	50.0	1.3U	1.3U	1.3U
Sodium	No Standard	142,000.0	150,000.0	192U
Thallium	No Standard	5.3U	5.3U	5.3U
Vanadium	No Standard	11.8B	13.3B	2.7U
Zinc	300.0	37.4	46.8	1.7U

Notes:

ND = Indicates the compound was analyzed for, but not detected.

1. TAGM 4046 - The general soil cleanup guideline for semi-volatiles: total concentration for non-carcinogenic semi-volatile compounds

* Standard for combined total of iron and manganese = 300 ug/Liter

Table 5
Results of Indoor Ambient Air and Subslab Vapor Sampling
Former TNT Red Star Express Site
NYSDEC Site #704028
Kirkwood, New York

		DeCarolis Sub-slab Sample	DeCarolis Sub-slab Sample	Overnight Office Sub-slab Sample	Herlthy Office Sub-slab Sample
Collection Date		1/1/2007	1/28/2008	3/26/2006	3/26/2006
Parameter	Units	Value	Value	Value	Value
Acetone	µg/m3	140	430	ND	ND
Benzene	µg/m3	1	2	3.2	35
Benzyl Chloride	µg/m3	ND	ND	ND	ND
tert-Butyl alcohol	µg/m3	ND	1.6	ND	ND
Carbon disulfide	µg/m3	ND	1.2	ND	2.7
Chlorobenzene	µg/m3	ND	ND	ND	ND
Chloroethane	µg/m3	0.63	0.66	ND	ND
Chloroform	µg/m3	3.5	6.3	ND	ND
Chloromethane	µg/m3	0.62	0.66	1.8	ND
Cyclohexane	µg/m3	ND	4.8	ND	52
1,4-Dichlorobenzene	µg/m3	ND	ND	2.1	4.6
1,1-Dichloroethane	µg/m3	22	22	ND	ND
cis-1,2-Dichloroethene	µg/m3	ND	29	ND	ND
Ethanol	µg/m3	64	28	41	11
Ethylbenzene	µg/m3	1.2	ND	1.7	7.8
4-Ethyltoluene	µg/m3	ND	ND	ND	3.7
Freon-11	µg/m3	ND	2	ND	ND
Freon-12	µg/m3	2800	3000	64	21
Freon-113	µg/m3	ND	ND	ND	ND
Heptane	µg/m3	ND	2.6	1.3	14
Hexachloro-1,3-butadiene	µg/m3	ND	ND	ND	ND

ND = Not detected.
 ug/M³ = micrograms per cubic meter

Table 5
Results of Indoor Ambient Air and Subslab Vapor Sampling
Former TNT Red Star Express Site
NYSDEC Site #704028
Kirkwood, New York

Collection Date Parameter	Units	DeCarolis Sub-slab Sample		DeCarolis Sub-slab Sample		Overnight Office Sub-slab Sample		Herlhy Office Sub-slab Sample	
		1/1/2007	Value	1/28/2008	Value	3/26/2006	Value	3/26/2006	Value
Acetone	µg/m3		140		430		ND		ND
Benzene	µg/m3		1		2		3.2		35
Benzyl Chloride	µg/m3		ND		ND		ND		ND
tert-Butyl alcohol	µg/m3		ND		1.6		ND		ND
Carbon disulfide	µg/m3		ND		1.2		ND		2.7
Chlorobenzene	µg/m3		ND		ND		ND		ND
Chloroethane	µg/m3		0.63		0.66		ND		ND
Chloroform	µg/m3		3.5		6.3		ND		ND
Chloromethane	µg/m3		0.62		0.66		1.8		ND
Cyclohexane	µg/m3		ND		4.8		ND		52
1,4-Dichlorobenzene	µg/m3		ND		ND		2.1		4.6
1,1-Dichloroethane	µg/m3		22		22		ND		ND
cis-1,2-Dichloroethene	µg/m3		ND		29		ND		ND
Ethanol	µg/m3		64		28		41		11
Ethylbenzene	µg/m3		1.2		ND		1.7		7.8
4-Ethyltoluene	µg/m3		ND		ND		ND		3.7
Freon-11	µg/m3		ND		2		ND		ND
Freon-12	µg/m3		2800		3000		64		21
Freon-113	µg/m3		ND		ND		ND		ND
Heptane	µg/m3		ND		2.6		1.3		14
Hexachloro-1,3-butadiene	µg/m3		ND		ND		ND		ND

ND = Not detected.
 ug/M³ = micrograms per cubic meter

Table 5
Results of Indoor Ambient Air and Subslab Vapor Sampling
Former TNT Red Star Express Site
NYSDEC Site #704028
Kirkwood, New York

Collection Date Parameter	Units	DeCarolis Sub-slab Sample		DeCarolis Sub-slab Sample		Overnight Office Sub-slab Sample		Herlhy Office Sub-slab Sample	
		1/1/2007	Value	1/28/2008	Value	3/26/2006	Value	3/26/2006	Value
n-Hexane	µg/m3	1.3		3.1		1.6		53	
Methylene Chloride	µg/m3	ND		3.5		ND		9.7	
Methyl Ethyl Ketone	µg/m3	23		17		ND		4.1	
Methyl Isobutyl Ketone	µg/m3	ND		ND		ND		ND	
2-Propanol	µg/m3	4.7		7.6		4.4		ND	
Propene	µg/m3	ND		4.8		ND		ND	
Styrene	µg/m3	ND		ND		1.7		8.9	
Tetrachloroethylene	µg/m3	3.6		16		3.3		3.1	
Tetrahydrofuran	µg/m3	ND		2.1		6.8		ND	
Toluene	µg/m3	26		3		ND		38	
1,1,1-Trichloroethane	µg/m3	1400		650		ND		ND	
Trichloroethylene	µg/m3	ND		13		1.7		ND	
1,2,4-Trimethylbenzene	µg/m3	4.8		ND		1.5		6.9	
1,3,5-Trimethylbenzene	µg/m3	ND		ND		ND		2	
2,2,4-Trimethylpentane	µg/m3	ND		1		ND		ND	
Vinyl chloride	µg/m3	ND		1.2		ND		ND	
m&p-Xylene	µg/m3	4.8		ND		4.8		24	
o-Xylene	µg/m3	1.7		ND		1.3		6.9	

ND = Not detected.
 ug/M³ = micrograms per cubic meter

Table 5
Results of Indoor Ambient Air and Subslab Vapor Sampling
Former TNT Red Star Express Site
NYSDEC Site #704028
Kirkwood, New York

Collection Date	Parameter	Units	SV-1		SV-2		SV-3		SV-4		SV-5		SV-6		SV-7		SV-8		SV-9		SV-10	
			Value		Value		Value		Value		Value		Value		Value		Value		Value		Value	
	Acetone	µg/m ³	ND		ND		6.2		3.6		ND		ND		ND		4.8		ND		ND	
	Benzene	µg/m ³	0.99		13		10		5.1		2.9		1.6		ND		5.1		3.2		2.3	
	Benzyl Chloride	µg/m ³	1.7		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	tert-Butyl alcohol	µg/m ³	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	Carbon disulfide	µg/m ³	1.4		3.1		10		16		1.3		21		2.4		6.8		3.4		4.4	
	Chlorobenzene	µg/m ³	ND		ND		ND		ND		ND		1.9		ND		ND		1.6		ND	
	Chloroethane	µg/m ³	ND		ND		2600		98		ND		ND		ND		2.9		1.8		ND	
	Chloroform	µg/m ³	ND		2		ND		ND		ND		ND		ND		ND		1.4		ND	
	Chloromethane	µg/m ³	ND		ND		1		1.5		ND		ND		ND		ND		0.81		0.7	
	Cyclohexane	µg/m ³	1.4		20		19		ND		ND		ND		ND		ND		5.5		3.4	
	1,4-Dichlorobenzene	µg/m ³	2.9		4.9		17		ND		ND		ND		18		ND		ND		ND	
	1,1-Dichloroethane	µg/m ³	40		17		340		16		63		ND		ND		ND		ND		ND	
	cis-1,2-Dichloroethene	µg/m ³	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	Ethanol	µg/m ³	12		47		21		14		14		14		7.5		25		36		18	
	Ethylbenzene	µg/m ³	3.7		3		140		2.3		4.3		100		1.9		27		43		2.6	
	4-Ethyltoluene	µg/m ³	1.2		5.4		4.2		ND		ND		2		1.2		1.4		4.9		2.7	
	Freon-11	µg/m ³	ND		ND		ND		ND		5.3		ND		ND		ND		ND		ND	
	Freon-12	µg/m ³	7.4		6.4		18		14		590		29		3.5		15		8.4		7.9	
	Freon-113	µg/m ³	ND		ND		ND		ND		23		ND		ND		ND		ND		ND	
	Heptane	µg/m ³	2.6		7.8		22		29		3.1		2.3		ND		11		9		4.5	
	Hexachloro-1,3-butadiene	µg/m ³	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	

ND = Not detected.
 ug/M³ = micrograms per cubic meter

Table 5
Results of Indoor Ambient Air and Subslab Vapor Sampling
Former TNT Red Star Express Site
NYSDEC Site #704028
Kirkwood, New York

Collection Date Parameter	Units	SV-1		SV-2		SV-3		SV-4		SV-5		SV-6		SV-7		SV-8		SV-9		SV-10	
		Value		Value		Value		Value		Value		Value		Value		Value		Value		Value	
n-Hexane	µg/m3	2.5		26		32		19		3.2		2.7		ND		4.9		16		7.4	
Methylene Chloride	µg/m3	2.8		59		12		4.2		ND		2.3		ND		3.8		24		11	
Methyl Ethyl Ketone	µg/m3	ND		6.5		20		9.4		6.5		ND		ND		16		7.4		ND	
Methyl Isobutyl Ketone	µg/m3	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Propanol	µg/m3	6.9		52		18		12		9.6		8.4		4.2		18		54		21	
Propene	µg/m3	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Styrene	µg/m3	2.5		2		ND		ND		ND		ND		1.9		1.2		ND		ND	
Tetrachloroethylene	µg/m3	24		95		3.1		ND		750		520		5.3		17		10		75	
Tetrahydrofuran	µg/m3	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Toluene	µg/m3	13		29		570		200		53		280		7.2		450		150		11	
1,1,1-Trichloroethane	µg/m3	26		22		ND		60		1500		18		ND		8.2		ND		ND	
Trichloroethylene	µg/m3	1.6		2.5		2.8		1.1		33		ND		ND		1.7		ND		ND	
1,2,4-Trimethylbenzene	µg/m3	2.5		6.9		4.9		1.2		2.6		1.6		3.7		1.9		4.9		3.8	
1,3,5-Trimethylbenzene	µg/m3	ND		2.8		1.8		ND		ND		ND		ND		ND		2.1		1.4	
2,2,4-Trimethylpentane	µg/m3	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Vinyl chloride	µg/m3	ND		ND		31		3.1		ND		ND		ND		ND		ND		ND	
m&p-Xylene	µg/m3	11		10		350		3.3		11		260		6.9		43		130		9.5	
o-Xylene	µg/m3	3.5		3.8		110		ND		1.8		91		2.3		7.4		43		3.3	

ND = Not detected.
 ug/M³ = micrograms per cubic meter

Table 6: Annual Certification Schedule

Task	Reporting Frequency*
Site Wide Inspections	Annual per year or when required based on site related activities.
Annual Certification Form	This certification will be prepared within 7-days of completion of the annual inspection. The certification will be submitted with the next Periodic Review Report.
Periodic Review	The Periodic Review Report will be submitted within 15-months of approval of the Final Engineers Report then every 5-years thereafter.

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC.

APPENDIX 1 – METES AND BOUNDS

Southern Tier Surveying, Inc.

**39 GRISWOLD STREET
BINGHAMTON, NEW YORK 13904**

PHONE 607-722-7765

FAX 607-722-9323

Roger H. Holmes, PLS

Surveyor's Description 5.107± Acre Parcel

ALL THAT TRACT OR PARCEL OF LAND situate in the Town of Kirkwood, County of Broome and State of New York bounded and described as follows:

Beginning at a rebar with cap set in the westerly boundary of the Perimeter Road at its intersection with the southwesterly boundary of the property now or formerly owned by the Broome County Industrial Development Agency by deed recorded in the Broome County Clerk's Office in Liber 1504 at page 73.

Thence along said property of the Broome County Industrial Development Agency the following two courses and distances:

- 1) N 51-26-11 W a distance of 515.00 feet to an iron found;
- 2) N 38-34-19 E a distance of 705.09 feet to an iron found in the westerly boundary of the Perimeter Road.

Thence along the westerly boundary of the Perimeter Road the following four courses and distances:

- 1) S 12-48-54 E a distance of 104.15 feet to an iron found;
- 2) Southerly along a tangent curve to the right having a radius of 360.00 feet an arc distance of 71.82 feet to an iron found;
- 3) S 01-17-41 E a distance of 465.32 feet to an iron found;
- 4) Southerly along a tangent curve to the right having a radius of 360.00 feet an arc distance of 252.62 feet to the Point of Beginning. Containing 5.107± acres.



TAX MAP No. 162.01-1-11
BROOME COUNTY INDUSTRIAL
DEVELOPMENT AGENCY (R/D)
L1874 P1213

TAX MAP No. 162.02-1-2
S. 102+ AC.
L1504 P73
SURVEY BY
HAWK ENGINEERING, P.C.
FEBRUARY 28, 1984

TAX MAP No. 162.01-1-12
UNIVERSAL INSTRUMENTS CORPORATION (R/D)
L1855 P973

TAX MAP No. 162.02-2-2
SABRO REALTY CORPORATION (R/D)
L1819 P1365

Tax parcel is same as
property line

DI #1
TG=874.60
DI #2
TG=871.45
DI #3
TG=856.37
6' E IN=854.32
10 S OUT=853.82
DI #4
TG=857.99
6' E OUT=856.84
DI #5
TG=857.27
8' W IN=853.85
12' E OUT=853.72
DI #6
TG=858.24
4' S OUT=857.31
DI #7
TG=858.96
8' S OUT=855.56
DI #8
TG=852.33
24' W IN=849.31
24' E OUT=849.31

MH #1
TG=854.64
Q INV.=846.80
MH #2
TG=854.91
Q INV.=847.31
MH #3
TG=854.82
8' W IN=847.56
Q INV.=847.56
MH #4
TG=854.81
Q INV.=847.78
MH #5
TG=855.24
Q INV.=848.61
MH #6
TG=858.20
MH #7
TG=861.76
8' N IN=854.23
Q INV.=854.23
MH #8
TG=876.71
Q INV.=869.50

BM #6
ELEV.
R.R. SPIKE POLE# NYSEG 3407/12-1
V. SIDE PERIMETER ROAD N. OF SLY.
ENTRANCE TO RED STAR TERMINAL
BM #7
ELEV.
PAINTED SQUARE CONC. FLOOR E.
SIDE GARAGE AT N END MIDDLE
OVERHEAD DOOR
BM #8
ELEV.
R.R. SPIKE POLE# NYSEG 15 E. SIDE
PERIMETER ROAD ABOUT OPPOSITE
N. END RED STAR TERMINAL BUILDING
MONITORING WELL 1 TOP=856.46
MONITORING WELL 2 TOP=857.83
MONITORING WELL 3 TOP=858.40
MONITORING WELL 4 TOP=855.10

854.59
859.95
858.00
LEGEND
o - PROPERTY IRON FOUND
Δ - N. Y. S. R. D. W. MONUMENT FOUND
o - REBAR WITH CAP SET
u - UTILITY POLE
s - SPOT ELEVATION
(R/D) - REPUTED OWNER(S)

NOTES:
1. ELEVATIONS BASED ON BM #2-NYSDDT CONTRACT No. D257816
BRIDGE REPLACEMENT-CR 177 OVER U.S. RT. 11 AND CONRAIL-TOWN
OF KIRKWOOD, BROOME COUNTY, NEW YORK
2. UNDERGROUND UTILITIES SHOWN ARE FROM FIELD LOCATIONS AND
MAY NOT BE COMPLETE. NOTIFY UPFD PRIOR TO ANY EXCAVATION.
3. DYE POURED INTO DI #4 WAS OBSERVED COMING OUT OF 12" OUTLET
INTO DITCH. SURVEYOR WAS UNABLE TO DETERMINE CONNECTIONS OF
PIPES GOING OUT OF DI #4, #6 AND #7.

MONITORING STRUCTURE ELEVATIONS
11/03/99

GP#1	GROUND	857.60	PW#1	TOP CASING	857.69
	TOP PVC	859.54		TOP PVC	857.42
GP#2	GROUND	855.63	PW#2	TOP CASING	854.88
	TOP PVC	857.46		TOP PVC	854.41
GP#3	GROUND	855.46	PW#3	TOP CASING	855.06
	TOP PVC	857.37		TOP PVC	854.82
GP#4	GROUND	855.63	PW#4	TOP CASING	857.84
	TOP PVC	857.11		TOP PVC	857.67
MW#3D	TOP PVC	857.73	PW#5	TOP CONC.	859.76
			PW#6	TOP CASING	858.70
				TOP PVC	858.54
			PW#7	TOP CASING	860.38
				TOP PVC	860.22
			PW#8	TOP CASING	859.96
				TOP PVC	859.80
			PW#9	TOP CASING	862.32
				TOP PVC	862.18

REVISED 11/03/99 - MARS, PW#1-6, & GP#1-4 ADDED

SURVEY FOR
USF RED STAR EXPRESS, INC.
COUNTY ROUTE 181
TOWN OF KIRKWOOD
BROOME COUNTY, NEW YORK

SCALE: 1 INCH = 50 FEET

MARCH 11, 1999

STS SOUTHERN TIER SURVEYING, LLP

RONALD C. SCHIESS, PLS
71 TIRRELL ROAD
HARPURSVILLE, NEW YORK
N.Y. LIC. No. 049554

ROGER H. HOLMES, PLS
1233 TRACY CREEK ROAD
VESTAL, NEW YORK
N.Y. LIC. No. 050206
PA. LIC. No. SU-051533-E

*UNAUTHORIZED ALTERATION OR ADDITION TO
A SURVEY MAP, BEARING A LICENSED LAND
SURVEYOR'S SEAL, IS A VIOLATION OF
SECTION 2000, SUBSECTION 1, OF THE
NEW YORK STATE EDUCATION LAW.

APPENDIX 2 – ANNUAL CERTIFICATION FORM

For each institutional control (“IC”) for the Site, I certify that all of the following statements are true:

1. The inspection of the Site to confirm the effectiveness of the IC’s required by the Environmental Easement was performed under my direction.
2. The ICs employed at the Site are unchanged from the date the controls were put into place, or last approved by the Department;
3. Nothing has occurred that would impair the ability of the IC to protect the public health and environment;
4. Nothing has occurred that would constitute a violation or failure to comply with the SMP for this control;
5. Access to the Site will continue to be provided to the Department to evaluate the remedy;
6. The use of the site is compliant with the environmental easement.
7. I understand that a false statement made herein is punishable as a Class “A” misdemeanor, pursuant to Section 210.45 of the Penal Law.
8. To the best of my knowledge and belief, I _____, of _____, as the Owner or the Owner’s Designated Site Representative, certify that all information and statements in this certification are true.

APPENDIX 3 – EXCAVATION WORK PLAN

1. Notification

At least 14 days prior to the start of any activity that is anticipated to encounter remaining contamination, the Site owner or their representative will notify the Department. Currently, this notification will be made to:

NYSDEC Project Manager
625 Broadway, Albany, New York 12233-7016

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact the buildings or Site conditions.
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling.
- A schedule for the work, detailing the start and completion of all intrusive work.
- A summary of the applicable components of this Excavation Work Plan (“EWP”).
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120.

- A copy of the contractor's health and safety plan, in electronic format. Attachment 2 provides an example HASP.
- Identification of disposal facilities for potential project waste streams.
- Identification of source of backfill, along with all required chemical testing results.

2. Soil Screening Methods

Visual, olfactory and instrument-based soil screening will be performed by a qualified environmental professional during all excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed when excavation or invasive work is performed near or below the groundwater surface.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

3. Stockpile Methods

In general, contaminated materials will not be encountered unless the water table is penetrated in those areas identified on Figure 6. The following stockpile procedures are applicable in instances when contaminated materials are encountered and will require off-site disposal or when the excavation and stockpiled material will be on Site for more than one day (overnight).

Soil stockpiles will be placed on and covered with plastic when not in use. The stockpiles will also be encircled with hay bales, silt fencing or similar type material to form a continuous berm to prevent sediment laden runoff from leaving the Site. Silt fencing, hay bales, or a suitable filter fabric will be used as needed encircle or cover catch basins, placed along the shorelines of surface waters, and other potential discharge points to prevent sediment from entering these systems or water ways.

Stockpiles containing potentially contaminated materials will be placed on plastic and kept covered when not in use with appropriately anchored tarps until laboratory analysis confirms their suitability for re-use. An environmental professional will review all sample results to determine the environmental quality of the suspect soil. Stockpiles will be routinely inspected and damaged tarp covers and berms will be promptly replaced. Stockpiles, catch basins, and storm water discharges will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC.

4. Materials Excavation and Load Out

A qualified environmental professional or person under their supervision will oversee all invasive exploratory work, excavation, and the load-out of all excavated contaminated material to comply with the SMP. The owner of the property and their contractor(s) are solely responsible for safe execution of all invasive and other supporting work performed under this EWP including the location and evaluation of utilities, property lines, and easements potentially impacted by the planned work. The excavation contractor will determine if buried utilities are a potential risk or impediment to the planned work. The location of easements and property line will also have to be evaluated for the planned work and whether crossing an easement or property line will require notification of a third party or necessitate conforming to special requirements, such as this SMP.

If needed, based on Site conditions and the proposed scope of work, a truck wash will be operated on-site to ensure no contaminated material is left on the vehicle (wheels, vehicle undercarriages, tailgates, etc.) leaving the Site. The truck wash will also be used to decontaminate excavating equipment and loading equipment if this equipment is leaving the excavation work area or once the contaminated material has been removed or covered in the work area. All material removed from the vehicles and all wash water will be collected as needed or at the end of each day and containerized for testing and proper disposal. A qualified environmental professional or their designee will be responsible for ensuring vehicles exposed to contaminated soil or groundwater will be washed at the truck wash before leaving the Site.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking and kept clean of dirt and other materials derived from the Site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials, as required by the town's building/construction permit, or the Site's storm water pollution prevention plan, if applicable.

5. Materials Transported Off-Site

All contaminated materials removed from the Site will be done by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded based on the waste materials they will be hauling. Each driver will also be given a manifest or bill of lading, based on the load's Department of Transportation ("DOT") classification. The manifest or bill of lading will also identify the volume or weight of the load, the load's destination, the hauler's name and contact information, and emergency contact information in the event of a spill. Trucks or dump trailers receiving contaminated material will be lined, as needed to retain free liquids, the load will be securely covered, and the truck will be free of any loose debris or waste material which can fall onto the road prior to leaving the Site.

Truck transport routes from the Site will be decided by the contractor in consultation with the hauler to evaluate the best route to the selected disposal facility. In most cases this will mean leaving the property to the south (right) onto Industrial Park Drive and traveling to the intersection with Colesville Road, where the driver may turn right or left depending on whether they are traveling on US Route 81 north or south.

6. Materials Disposal Off-Site

Soil/fill/solid waste excavated below the water table within the plume area as defined in Figure 6 will be treated as potentially contaminated and sampled for characterization. Those materials containing contaminants above levels identified in 6 NYCRR Part 375 for commercial use will be transported and disposed in accordance with all local, State (including 6 NYCRR Part 360) and Federal regulations. Soils with soil cleanup objectives (“SCO”) equal to, or below those identified in 6 NYCRR Part 375 for commercial use may be put back into the excavation after a formal request is made and accepted by the NYSDEC or disposed of offsite.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by waste type and disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, recycling facility, etc. The actual quantities of waste removed for disposal and the associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils not suitable for re-use on Site will be taken off-site for proper disposal. Construction and demolition debris that does not meet Track 1 unrestricted SCO of 6 NYCRR Part 375 is prohibited from being taken to a New York State recycling facility (6 NYCRR Part 360-16 Registration Facility).

7. Materials Reuse On-Site

Reuse of on-site material will be analyzed for only the Target Compound List volatile organic compounds since volatile organic compounds are the only contaminants of concern on this Site. The number of samples analyzed will be based on the sampling frequency identified in NYSDEC’s Technical Guidance for Site Environmental Remediation DER-10 (“DER-1”), Table 5.4(e)10, but Contaminant concentrations found in the soil will be compared to 6 NYCRR Part 375 SCOs for commercial property and then compared to the soil quality criteria found on DER-10 Table 5.4(e)4. In general, these soils can only be placed beneath pavement. If the soil will be used beneath a new building or addition that has a sub-slab depressurization system, then the impacted soil may be

used under the building provided the soil will not be placed above the vapor barrier or drainage gravel placed below the building's concrete floor or adjacent to the building foundation where a foundation drain or depressurization system may be located.

If the purpose of the excavation is for utility repair or placement, the excavated soil must meet the SCO's for unrestricted use or it cannot be reused. Contaminated material exceeding unrestricted use SCO's will not be reused within a cover soil layer or within landscaping berms.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste will not be reused on-site.

If the ground surface material changes from that which exists prior to any activity (i.e., pavement replaced by a new building), this constitutes a change of use of the Site use and will require a 60-day advance notice to NYSDEC. These proposed or constructed changes or any site excavation activity will be noted in the Periodic Review Report and in any updates to the SMP.

8. Fluids Management

Liquids generated from the following Site activities will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations: excavation dewatering; vehicle decontamination when generated from the cleaning of excavation equipment used the contaminated groundwater zone; and storm water from potentially contaminated areas.

Discharge of storm water generated during construction activities to surface waters (i.e. a local pond, stream or river) or the municipal sewer will only be performed under permit from NYSDEC.

9. Backfilling

After the completion of an excavation in the contaminated groundwater area, the excavation area will be backfilled using the following guidance.

The guidance is based on how the quality of the soil to be used compares to the SCOs found in 6 NYCRR Part 375, see Section 7. If the soil to be used meets the unrestricted use criteria the soil can be used throughout the Site regardless of the location provided it meets the project's geotechnical specifications. If the soil originates from below the water table the soil can be returned to the excavation without sampling if it is placed below the water table. If the soil is to be placed above the water table it must meet the SCO's for commercial use and:

- Be placed below a concrete or asphalt pavement;
- In a building area and it can shown the soil will not impact indoor air quality;
- The building is being built with a sub-slab depressurization system, see Section 7 for more details.

If the soil is to be reused in a utility trench, building slab or foundation drainage system, berm, or landscaping area the soil quality must be SCO's for unrestricted use.

10. Backfill from Off-Site Sources

All backfill materials proposed for import onto the Site will be evaluated by a qualified environmental professional and the Site's architect or geotechnical engineer. The evaluation will consider if the material meets the environmental quality requirements of the SMP and if the material meets the design specifications for the intended use. The soil will also be sampled and analyzed in accordance with DER-10 Section 5.4(e)10 and Table 5.4(e)10. The evaluation will be done prior to receiving the material on the Site.

In general, the imported material cannot come from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites. All imported soils will meet the backfill and cover soil quality standards for unrestricted use established in 6NYCRR 375-6.7(d) and 6NYCRR 375-6.8(a).

Trucks entering the Site with imported soils will be securely covered. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases and migration with storm water runoff as needed.

11. Stormwater Pollution Prevention

For larger excavations or soil disturbances exceeding 1-acre, NYSDEC Stormwater Pollution Prevention regulations for construction sites must be followed and a stormwater pollution prevention plan prepared by a knowledgeable person; for example the Site engineer, architect, or environmental professional. The Stormwater Pollution Prevention Plan and results of inspections will be maintained at the Site during construction and made available for inspection.

12. Contingency Plan

If previously unidentified contaminant sources are found during site development activities all excavation work in this area will be stopped and response actions conducted. Response actions will be done by trained workers to control or mitigate a release from the suspected contaminated material, and to stabilize the contaminated material until further characterization can be done.

Characterization will include assessing the extent of the contamination and the collection of soil and, or groundwater samples to determine the nature of the contamination and the disposal requirements of the impacted material. The chemical analysis to be performed will include a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, and PCBs), unless the Site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the periodic reports prepared pursuant to Section 3.2 of the SMP.

13. Community Air Monitoring Plan

In the event excavation work is conducted on the Site a Community Air Monitoring Plan ("CAMP") will be developed commensurate to the size of the work planned. See Attachment 1 for an example of a CAMP and Attachment 3 for a guidance related to fugitive dust. In general,

the CAMP will be required for any excavation work in the area where contaminated groundwater can reasonably be expected to be encountered, see Figure 6.

If the excavation portion of the project will last more than one week and disturb more than one acre of land three permanent air sampling stations will be used and located based on the daily prevailing wind conditions. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and two downwind monitoring stations. Permanent air monitoring locations may use similar equipment as the environmental professional as long as they have an ability to provide instantaneous data and to log and review data over the course of the work day.

In addition to these permanent air monitoring locations, the environmental professional or their designee will monitor the work area and truck loading operations using portable organic vapor analyzers and a dust meter. Monitoring will be conducted on a continuous basis or at least in 15-minute intervals. Upwind and downwind locations will be monitored.

Action levels for workers will be defined in the Site and work specific HASP, but in general the monitoring requirements in the Generic CAMP and fugitive dust and particulate monitoring specifications identified in DER-10 Appendix A1 and 1B will be used. For organic contaminants a 5 part per million ("ppm"), 15-minute average, will necessitate a work stoppage until contaminant levels subside or can be controlled. If the concentration of organic vapors exceed 5 ppm but is less than 25 ppm work must be halted until the source can be identified, corrective actions can be taken and monitoring can be continued. After these steps are taken, work can resume provided that the total organic vapor concentration level 200-feet downwind of the exclusion zone or half the distance to the nearest receptor, whichever is less, is below 5 ppm over the background concentration; for a 15-minute average. If organic vapor concentrations exceed 25 ppm at the perimeter of the work area, activities in the work area must stop.

Fugitive dust and particulate concentrations requiring action will be initiated at a concentration of 100 micrograms per cubic meter. If the dust and particulate concentration exceeds 150 micrograms per cubic meter downwind of the work area all work will stop until the concentration drops.

Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH, and 15-minute readings and instantaneous measurements must be available for inspection.

14. Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-site [and on-site, if there are tenants on the property]. If nuisance odors are identified at the Site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the property owner's environmental professional, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent the generation of on-site nuisance odors and the migration of those odors off-site. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foam blankets to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of employees to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, work will stop until a suitable control can be evaluated and brought to the site.

15. Dust Control Plan

Dust management during invasive on-site work will prevent the migration of dust from the work area and off the site. Attachment 3 provides the NYSDEC DER-10 fugitive dust guidance "Appendix 1B" for additional information. Methods to be utilized may include:

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon, spray bars, or hose

capable of spraying water directly onto off-road areas including excavations and stockpiles.

- Surface stripping or clearing will be done in stages to limit the area of exposed, soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.

ATTACHMENT 1
Generic Community Air Monitoring Plan
("CAMP")

Appendix 1A

New York State Department of Health Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.
4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed $150 \text{ mcg}/\text{m}^3$ above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than $150 \text{ mcg}/\text{m}^3$ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within $150 \text{ mcg}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

ATTACHEMENT 2

Example of Health and Safety Plan ("HASP")

HEALTH AND SAFETY PLAN

(Generic)

**97 Industrial Parkway
Town of Kirkwood, Broome County, New York**

Prepared for:

Prepared by:

**Leader Professional Services, Inc.
271 Marsh Road, Suite 2
Pittsford, New York 14534**

March 2015



Table of Contents

1.0	Project Personnel Responsibilities	1
1.1	Principle-In-Charge	1
1.2	Project Manager and Supervisor	1
1.3	Health and Safety Officer.....	1
1.4	Project Team.....	1
1.5	Project Organization.....	2
2.0	Site Standard Operating Safety Procedures	2
2.1	Personal Precautions.....	2
2.2	Operations	3
3.0	Health and Safety Hazards.....	3
4.0	Personal Protective Equipment.....	4
4.1	Protective Equipment	4
4.2	Level C Protection.....	5
4.3	Level D Protection.....	6
5.0	Decontamination.....	6
5.1	Personnel Decontamination.....	6
5.2	Equipment Decontamination.....	7
6.0	Site Air Monitoring	8
7.0	Action Levels.....	9
8.0	Site Activities and Associated Personnel Protective Requirements.....	9
9.0	Contingency Plan.....	10
9.1	Assessment	10
9.2	Control Procedures	10
9.3	Fire and/or Explosion	10
9.4	Spill and/or Material Releases.....	11
10.0	Work Areas	11
11.0	Safety Equipment and Protective Clothing Specifications	12
12.0	Air Emissions Control.....	12
13.0	Additional Health and Safety Comments.....	13
14.0	Miscellaneous Health and Safety Items.....	14
14.1	Hypothermia.....	14

Table of Contents

14.2 Retention On-Site.....	15
14.3 Equipment and Material Decontamination	15
14.4 Communications	15
14.5 On-Site Hygiene Facilities	16
15.0 Tailgate Safety Meetings.....	16
16.0 Medical Surveillance	16

TABLES

Table 1	Known and Potential Health and Safety Hazards
Table 2	Action Levels
Table 3	Emergency Call List

ATTACHMENTS

Attachment A	Safety Meeting Sign-Off Sheets
Attachment B	MSDS

1.0 Project Personnel Responsibilities

Project organization is presented below in Section 1.5.

1.1 Principle-In-Charge

The Principle-In-Charge for this project will be _____. _____ will act in a supervisory capacity over all Leader Professional Services, Inc. (Leader) employees and their subcontractors and the planned site activities with respect to the project site. _____ has the authority to direct site operations, including the performance of this health and safety plan. The project manager will have the required 29CFR 1910.120 40-Hour Training and have an updated 8-Hour Refresher Training Certificate.

1.2 Project Manager and Supervisor

The Project Manager and Supervisor will be _____. If a substitute is required, the Project Supervisor will be an employee of Leader. The project supervisor oversees all field and related activities specific to the project when the project manager is not on the site. The project manager will have the required 29CFR 1910.120 40-Hour Training and have an updated 8-Hour Refresher Training Certificate.

1.3 Health and Safety Officer

_____ is the site's health and safety officer ("HSO"). _____ has the authority to stop work if any operation threatens the health and safety of workers or the public. The HSO may designate a member of the work party for site health and safety responsibilities when the HSO can not be on site. The HSO will have the required 29CFR 1910.120 40-Hour Training and have an updated 8-Hour Refresher Training Certificate.

1.4 Project Team

Personnel and subcontractors on the project team will be responsible for the completion of the work plan's required tasks. All personnel on the project team will comply with the site safety plan and ensure that the site safety and health officer or supervisor is notified of any unsafe conditions. It is anticipated that the project team will consist of one to three individuals. This may vary due to any changes that occur during the actual site work. All personnel on the project team

will have the required 29CFR 1910.120 40-Hour Training and participate in daily tailgate health and safety meetings.

1.5 Project Organization

Project Manager –
Site Supervisor -
Health and Safety Officer –

2.0 Site Standard Operating Safety Procedures

Standard operating and safety procedures include safety precautions and operating practices that all personnel will follow. These include:

2.1 Personal Precautions

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in any area designated contaminated.
- Hands and face must be thoroughly washed upon leaving the work area.
- Whenever decontamination procedures for outer garments are in effect, the entire body should be thoroughly washed as soon as possible after the protective garment is removed.
- No facial hair, which interferes with a satisfactory fit of the mask-to-face seal, is allowed on personnel required to wear respirators. Personnel will use the negative pressure fit test prior to each use of the equipment.
- Contact with contaminated or suspected contaminated surfaces should be avoided. Whenever possible, do not walk through puddles, leachate, discolored surfaces, kneel on ground, lean, sit or place equipment on drums, containers, or the ground.
- Medicine and alcohol can enhance or mask the effects from exposure to toxic chemicals. Prescribed drugs should not be taken by field personnel where the potential for absorption, inhalation, or ingestion of toxic substances exists unless specifically approved by a qualified physician. Alcoholic beverages should be avoided in the off-duty hours during the project.

2.2 Operations

- All personnel going on-site must be adequately trained and thoroughly briefed on anticipated hazards, equipment to be worn, safety practices to be followed, emergency procedures, and communications.
- All personnel going into areas designated for wearing protective equipment must wear any required respiratory protection and chemical protective clothing.
- Personnel on-site must use the buddy system when wearing respiratory protection. As a minimum, one person, suitably equipped, is required as safety backup during initial entry.
- Visual contact must be maintained between pairs on-site and safety personnel. Entry team members should remain together to assist each other during emergencies.
- During continual operations, on-site workers act as safety backup to each other. Off-site personnel provide emergency assistance.

Communications using radios, hand signals, signs, or other means must be maintained between team members at all times.

- Wind indicators visible to all site personnel should be strategically located throughout the site.
- Personnel and equipment in the contaminated area should be minimized to reduce the potential for cross-contamination and the generation of decontamination waste.
- The project manager, or his designee, and the HSO will establish work areas for various operational activities.
- Procedures for leaving a contaminated area must be planned and implemented prior to going on-site. Work areas and decontamination procedures have been established based on expected site conditions and are described in the project Work Plan.

3.0 Health and Safety Hazards

The potential hazards that may be experienced during the performance of the Work Plan include: chemical exposures from contact with contaminated soil and groundwater; hazards inherent to working with drilling or excavation equipment, unsupported excavations, and working within an active truck terminal; slip, trip,

and fall hazards; and heat stress from performing heavy work while wearing protective clothing. The extent of contamination is well known, but monitoring for the presence of organic vapors will be conducted. To prevent unnecessary exposures to vapors and to limit the potential for cross-contamination, all work areas will be limited from general access. The formation of distinctive work zones will also assist in reducing the potential hazards that may exist at working at the trucking terminal.

To further reduce the potential for accidents to involve moving trucks and forklifts, Leader will coordinate each field activity with the terminal manager(s) so drivers and terminal personnel know where investigative activities are occurring on the Site. To reduce accidents from occurring that involve slip, trip, and fall hazards and hypothermia, work will be monitored by the Site HSO and workers will be encouraged to use the “buddy-system” while lifting heavy tools or items to reduce early fatigue while wearing protective clothing.

Table 1 list potential health and safety hazards that may be encountered based on general Site tasks. This list has been compiled based on the scheduled activities and potential Site conditions.

4.0 Personal Protective Equipment

4.1 Protective Equipment

All personnel will be provided with appropriate personal safety equipment and protective clothing. Each individual will be properly trained in the use of this safety equipment before the start of field activities. Safety equipment and protective clothing shall be used as directed by the Project Manager and/or Site HSO. All such equipment and clothing will be cleaned and maintained in proper condition by the personnel. The Site HSO will monitor the maintenance of personnel protective equipment to ensure proper procedures are followed.

Personal protective equipment will be worn at all times designated by this Health and Safety Plan. Levels of protective clothing and equipment are not expected to exceed Level C. Results from the previous groundwater samplings and on-site readings will be used to set action levels and levels of personal protection.

The personal protective equipment levels designated below are in conformance with EPA criteria for Level A, B, C, and D protection. All respiratory protective equipment used will be approved by National Institute for Occupational Safety and Health (“NIOSH”) and Mine Safety and Health Administration (“MSHA”). Although the conditions within the proposed work areas are well known, monitoring will be completed at all times, but it is doubtful that levels of respiratory protection will exceed Level D.

4.2 Level C Protection

A. Personal Protective Equipment

- Half-face, air-purifying, canister-equipped respirator (MSHA/NIOSH approved) for acid/gas/organic vapor with particulate filter
- Chemical-resistant clothing (overalls and long sleeved jacket; coveralls or hooded, one piece or two-piece chemical-splash suit; disposable chemical resistant one-piece suits)
- Work Clothes (Long Sleeve Shirt and pants)
- Gloves (outer), chemical resistant
- Gloves (inner), chemical resistant
- Boots (inner), leather work shoe with steel toe and shank
- Boots (outer), chemical resistant (disposable*)
- Hard Hat (face shield*)
- Safety Glasses or goggles
- Taping between suit and gloves, and suit and boots

*Optional

B. Criteria for Selection

Meeting all of these criteria permits use of Level C Protection.

- Measured air concentration of identified substances will be reduced by the respirator to, at, or below the substance's Threshold Limit Value (TLV)/Permissible Exposure Limits (PEL) and the concentration is within the service limit of the canister.
- Atmospheric contaminant concentrations do not exceed IDLH levels.
- Atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect the small area of skin left unprotected by chemical resistant clothing.

4.3 Level D Protection

A. Personal Protective Equipment

- Work Clothes (Long sleeve shirt and pants)
- Leather, steel-toed boots
- As required:
 - Hard hat
 - Safety glasses/goggles
 - Hearing protection
 - Gloves

B. Criteria for Selection

Meeting all of these criteria permits the use of Level D Protection.

- Measured air concentrations of identified substances are below the substances Permissible Exposure Limit (PEL) or TLV.
- Oxygen content is > 19.5%.
- No unknown substances are present.

5.0 Decontamination

It is expected that the usual level of protection to be Level D. Level C will be used when potential exposures to contaminants justify increased protection. A decontamination zone will be set up at the entrance of each work zone. Based on the level of expected exposure to contaminants, the following decontamination protocol will be used.

5.1 Personnel Decontamination

It is expected that a minimum of Level D decontamination will be continually in effect at the site. On these occasions when higher levels of protection are required, appropriate decontamination procedures will be used. The extent of the decontamination procedures will be at the discretion of the site Health and Safety Officer.

In general, decontamination involves removing potentially contaminated soil from gloves and clothing, followed by scrubbing with a non-phosphate soap/water solution and clean water rinses. As a general rule, protective clothing will be removed in the reverse order as it was put on: gloves and boots off first, followed by protective suits and then breathing apparatus. As the different types of waste are generated, the team members will segregate the waste into different drums. Potentially contaminated soil and sediment will be placed into one drum and decontamination waste fluid into a second drum. All disposable items will be placed into a dry goods drum.

Certain parts of contaminated respirators, harness assemblies and leather or cloth components, are difficult to decontaminate. If grossly contaminated, they may have to be discarded. Rubber components can be soaked in soap and water and scrubbed with a brush. In addition to being decontaminated, all respirators, non-disposable protective clothing, and other personal articles must be sanitized before they can be used again unless they are assigned to individuals. The manufacturer's instruction should be followed in sanitizing the respirator masks. The Site HSO will be responsible for supervising the proper protective equipment.

All decontamination wastewaters will be collected and disposed of according to applicable regulations. This disposal will be done at the direction of the Project Manager.

5.2 *Equipment Decontamination*

Decontamination will be applicable to all activities on site and be completed in the contamination reduction zone ("CRZ") section of the exclusion zone. All equipment (i.e., tools, monitoring equipment, etc.) will receive initial decontamination. All equipment that has been in contact with contaminants shall be stored in an area within the limits of the existing exclusion zone or shall be thoroughly decontaminated prior to leaving the area. Decontamination will consist of cleaning of the entire piece of equipment to the satisfaction of the Site Supervisor or the HSO. Decontamination will be a multi-process task, first, all loose dirt or other foreign materials will be removed from equipment surface. Scrubbing with a synthetic wire brush may be required to remove materials that adhere to the surfaces. After the loose dirt is removed, the equipment will be washed using a detergent and water solution and a wire brush followed by successive rinses with clean water. Washing with hot water from a power washer may be substituted for a synthetic wire brush.

All dirty equipment will be stored on plastic sheeting in such a manner that decontamination waters can be collected and disposed of in accordance with applicable regulations. Clean equipment not in use will be covered with plastic and stored at a designated storage area.

Air monitoring equipment will be protected with an outer coating (i.e. plastic), if there is a potential for the equipment to come into contact with potentially contaminated materials prior to the initial entry into the exclusion zone. Decontamination will then consist of removal of the protective coating in a manner that will not contaminate the air monitoring equipment.

6.0 Site Air Monitoring

Field activities associated with the work tasks at the Site may pose hazardous conditions, such as the release of hazardous substances into the worker's breathing zone. These substances may be in the form of vapors, dusts, or mists that can enter the body through ingestion, inhalation, or direct skin or eye contact. If the HSO, relying on instrument observations and odor, determines that a condition exists in which workers may be exposed to airborne hazardous materials, the HSO will upgrade the team's level of respiratory protection and complete chemical specific monitoring.

The following paragraphs describe the monitoring parameters to be evaluated during the start of the project. As the project continues, other site-specific monitoring will be required based on site conditions and experience at the site. Because this project will be completed in the winter and the proposed work area is covered with asphalt, the concern about contaminated dust being an issue is reduced. Similarly, combustible materials have not been identified as a contaminant in the soil or groundwater, thus the necessity for oxygen and combustible gas monitors is not supported. All instruments to be used during site activities will meet the established requirements set forth by OSHA, MSHA, NIOSH, and state agencies where applicable.

Equipment observations will be made during work progress with direct reading organic vapor meter. Monitoring will take place in the work zone and workers breathing zone, up and down-wind from the work zone and at the Site perimeter. Monitoring within the work zone will be taken at least every 15 to 30-minutes. Monitoring up and down-wind of the work zone will be completed at least every 30 to 60 minutes and monitoring at the Site perimeter will be completed at least every 60 minutes. If elevated readings are obtained (elevated compared to up-wind readings or compared to Site specific action levels), then the frequency of taking measurements will be increased at the monitoring stations.

Based on preliminary monitoring well sampling data, it is anticipated that organic vapors will be below 1 ppm. Organic vapor concentrations will be the primary measure for upgrading or downgrading worker respiratory protective equipment and implementing additional precautions or procedures (See Table 2, Action Levels).

All site monitoring will be conducted by or under the direction of the Site HSO. All readings obtained will be recorded in a dedicated site notebook maintained by the Project Supervisor or designate. The Site HSO will maintain all monitoring instruments throughout the site investigation to ensure their reliability and proper operation.

7.0 Action Levels

Action levels have been established for the upgrade and downgrade in the levels of personal protective equipment. Table 2 lists the action levels, airborne concentrations and their respective personal protection for unknown sources of organic vapor concentrations. Section 8.0 discusses the minimal personal protection required for specific site activities based on current information. Changes to these specified levels are dependent on the result of air monitoring as outlined below.

8.0 Site Activities and Associated Personnel Protective Requirements

The levels of protection have been assigned anticipated Site activities (below) and represent a best estimate of exposure potential and protective equipment needed for that exposure. The site HSO will revise those levels of protection, up or down, based on air monitoring results, and on-site assessments of actual exposures.

- *Level D* - General site work with limited physical contact with contaminated soil by personnel. If workers must pick up contaminated tools or a soil samples, protective chemical resistant gloves will be worn. Respiratory protection is not required because contaminant action levels cited on Table 2 are not exceeded.
- *Modified Level C* - General site work where personnel will be in direct contact with contaminated soil or groundwater, but respiratory protection is not required because contaminant action levels cited on Table 2 are not exceeded.
- *Level C* - General site work where personnel will be in direct contact with contaminated soil or groundwater, and organic vapor measurements or dust measurements are greater than those action levels cited on Table 2.

9.0 Contingency Plan

The Project Supervisor or HSO is responsible for implementing the Contingency Plan whenever there is either a threat to human health or an environmental hazard. Possible Contingency Plan situations include actual or imminent fires, explosions or spills.

The individual discovering the emergency situation is to notify the Project Supervisor or HSO who will then notify the appropriate organizations as described in Table 3.

9.1 Assessment

The Project Supervisor is responsible for ascertaining any possible health or environmental hazards and determining the need for evacuation and notification of the proper authorities.

9.2 Control Procedures

The team member or site employee discovering a fire, explosion, spill or other emergency situation is responsible for notifying the Project Supervisor or Site HSO and as much as possible, provide the information listed in Table 3.0. The Project Supervisor or Emergency Response Coordinator will assess the situation to determine if it can be adequately handled by site personnel or if additional assistance is needed.

Before any team member attempts to extinguish a fire, clean-up and contain a spill or take any action, he or she must be aware of the properties of the material involved and its associated hazards. All team members are familiarized with this information during the initial tail grate safety meeting and are instructed on the proper protective clothing to be worn in such a situation.

Table 3 includes a list of the organizations that are available to provide emergency assistance.

9.3 Fire and/or Explosion

The most serious emergency situation that could be faced at the site would be a chemical release or major fire. In the event of a fire or explosion, the Project Supervisor or Site HSO should be notified as described in the preceding section. The Project Supervisor or Emergency Response Coordinator is responsible for determining the requirements for outside assistance as well as the necessity for site evacuation.

The Kirkwood Fire Department will be notified immediately once a fire is detected. Small fires can be extinguished using a fire extinguisher located at the site. Larger fires will require the assistance of the fire department. The fire department will be informed of the nature of the fire and wastes at the site, and if water can be used to extinguish fire.

9.4 Spill and/or Material Releases

The procedure for notification of the Project Supervisor and, or Site HSO are described in Section 9.2. In the event of a spill NYSDEC will be notified immediately. Spilled materials will be confined and absorbed with absorbent materials and the spent absorbents placed into drums or temporarily on plastic sheeting until it can be put into drums or a roll-off container for disposal.

10.0 Work Areas

The Project Supervisor and HSO, and if needed the Contractor, will clearly layout and identify work areas in the field and will limit equipment, operations, and personnel as defined in the following areas:

- a) "Exclusion Zone" - This area will include all areas where environmental monitoring has shown or it is suspected that a contamination may exist and be a potential exposure problem to workers. The level of personnel protective equipment required in these areas will be determined by the Site HSO. The area will be clearly delineated from the decontamination area. As work within the hazardous zone proceeds, the delineating boundary will be relocated as necessary to prevent the accidental contamination of nearby people and equipment. The Exclusion Zone will be delineated by plastic caution tape, barriers, or fencing (e.g., chain link, snow, or orange plastic fencing).
- b) Contamination Reduction Zone (CRZ) - This zone will occur at the interface of "Contaminated" and "Clean" areas and will provide for the decontamination of equipment and materials and the transfer of equipment from the Clean Area to the Exclusion Zone. This area will contain all required emergency equipment, etc. This area will be clearly delineated by plastic tape, barriers or fencing (e.g., chain link, snow, or orange plastic fencing).
- c) Support Zone ("Clean" Area) - This area is the remainder of the work site and project site. The "Clean" area will be clearly delineated and procedures implemented to prevent active or passive contamination from the work site.

The function of the “Clean” area includes:

- 1) An entry area for personnel, material, and equipment to the “Contaminated Zone” area of site operations through the neutral zone.
- 2) An exit for decontaminated personnel, materials, and equipment from the “CRZ” area of site operations; and
- 3) A clean storage area for safety and work equipment.

11.0 Safety Equipment and Protective Clothing Specifications

All project team members and contractors will have the following safety equipment:

- Air purifying respirator with appropriate cartridges
- All protective clothing including, but not limited to:
 - Tyvek and washable PVC rain suits
 - Gloves
 - Boots
- Safety glasses
- Hearing protection
- Hard hats

12.0 Air Emissions Control

The Project Team and subcontractor shall have on site all equipment and personnel necessary to monitor and control air emissions.

It is not expected that air emissions will pose a significant risk to health and safety or to the environment due to the nature of the contaminants on this project.

The Project Manager(s) and/or the Site HSO will make the determination for requiring monitoring and control of air emissions with the assistance of the following monitoring equipment and the action levels cited on Table 2. It is anticipated that an organic vapor analyzer and chemical specific detection tubes will be used to measure the concentration of most organic contaminants in the air. These two measurement devices will handle the bulk of the real-time contaminant monitoring.

13.0 Additional Health and Safety Comments

- 1) The Site HSO will ensure that all safety equipment and protective clothing is kept clean and well maintained.
- 2) All prescription eyeglasses in use on this project will be safety glasses and will be compatible with respirators. No contact lenses shall be allowed on-site.
- 3) All disposable or reusable gloves worn on the site will be approved by the HSO.
- 4) During periods of prolonged respirator usage in contaminated areas, respirator filters will be changed upon breakthrough and at a minimum filters will be changed daily.
- 5) Footwear used on-site will be covered by rubber over-boots when entering or working in the "Exclusion Zone" area or "CRZ." Boots will be washed with water and detergents to remove dirt and contaminated sediment before leaving the "CRZ."
- 6) All personnel protective equipment used on-site will be decontaminated or disposed of at the end of the workday.
- 7) All air purifying respirators will be individually assigned and not interchanged between workers without cleaning and sanitizing.
- 8) Any team member or Contractor unable to pass a fit test as a result of facial hair or facial configuration shall not enter or work in an area that requires respiratory protection.
- 9) The Contractor will ensure that all project team members shall have vision or corrected vision to at least 20/40 in one eye.
- 10) Team members found to be disregarding any provision of this plan will, at the request of the HSO, be barred from the project.
- 11) Used disposable outerwear will be removed upon leaving CRZ and will be placed inside disposable containers labeled for that purpose. These containers will be stored at the site at the designated staging area. Leader will be responsible for proper disposal of these materials at the completion of the project.
- 12) Tyvek or PVC rain suits that become torn or badly soiled will be replaced immediately.

- 13) Eating, drinking, chewing gum or tobacco, smoking, etc., will be prohibited in the exclusion zones and CRZ zones.
- 14) All personnel will thoroughly cleanse their hands, face, forearms, and other exposed areas prior to eating, smoking, or drinking.
- 15) All personnel will wash their hands, face, and forearms before using toilet facilities.
- 16) No alcohol, firearms, or drugs (without prescription) will be allowed on-site at any time.

14.0 Miscellaneous Health and Safety Items

14.1 Hypothermia

Pervious Clothing: When the ambient air temperature dips below 40° F. the Site HSO will begin to monitor employees for signs of hypothermia. Monitoring will take the form of measuring oral temperatures. The air temperature will be measured two times a day when the air temperature is expected to be below 40° F or as determined by the Site HSO.

Impervious Clothing: When the ambient air temperature has dip below 40° F. the Site HSO will begin to monitor employees for signs of hypothermia. Monitoring will take the form of measuring oral temperatures and checking an individual's verbal and physical responses. As the air temperature dips below 32° F., oral temperatures will be measured at the direction of the Site HSO and, or every hour during work periods.

In the event that the oral temperature at the beginning of the rest period drops below 96° F., the employee will be decontaminated and be advised to proceed to a heated room or vehicle and remove wet clothing and to drink warm fluids. At the end of the rest period, the oral temperature will be taken again to ensure that the employee's temperature is above 96° F. If the oral temperature has remained below 96° F., the employee will be advised to take a shower to increase his/her temperature. However, if the oral temperature still remains below 96° F. after the shower, the employee will be immediately sent to consult with a physician.

A fluid/electrolyte replacement will be used as necessary to minimize fluid loss. This liquid supplement will be stored in a cooler or thermos at the edge of the decontamination zone in plastic squeeze bottles. The plastic bottles will be marked with individual's names. Disposable cups with lids and straws may be used in place of the squeeze bottles.

Prior to drinking within the decontamination zone, the project personnel shall follow the following decontamination procedures:

- 1) Personnel shall wash and rinse their outer gloves and remove them.
- 2) Personnel shall remove their hard hats and respirators and place on a table.
- 3) Personnel shall remove their inner gloves and place them on a table.
- 4) Personnel shall wash and rinse their face and hands.
- 5) Personnel shall carefully remove their personal bottle or cup from the cooler to ensure that their outer clothes do not touch any bottles, cups, etc.
- 6) The used bottle or cups will not be returned to the cooler, but will be placed in a receptacle or container to be cleaned or disposed of.
- 7) Personnel shall replace their respirators, hard hats, gloves, and tape gloves prior to re-entering the hazardous zone.

14.2 Retention On-Site

During the course of the project, it is expected that waste materials will be retained on-site until removed by Leader or USF. All waste containers will be labeled according to DOT and other regulations where appropriate. Waste materials, both drummed and bulk, will be stored in designated areas. All waste drums will be sealed before they are moved from the exclusion zone.

14.3 Equipment and Material Decontamination

All equipment and material used in this project shall be thoroughly decontaminated using procedures described in the project Work Plan before it is removed from the project site. Debris and contaminated clothing and tools which cannot be decontaminated, shall be disposed of.

14.4 Communications

Telephone communications will be available at all times on the site. A telephone will be maintained in the Project Manager/Site Supervisor's vehicle.

Communication procedures are outlined in the Contingency Plan in Section 9.0 of the Health and Safety Plan.

Table 3 contains an emergency call list and will be posted in one of the team member's vehicles.

14.5 On-Site Hygiene Facilities

The office lavatories will be available for decontaminated team members and subcontractors in building the garage building or terminal building. Water will be available in the CRZ for decontamination.

A first aid kit will be kept in the support zone at the Site at all times.

15.0 Tailgate Safety Meetings

The HSO or the designated representative will conduct daily tailgate safety meetings each workday and will be mandatory for all project personnel. The meetings will provide information on the anticipated site conditions and the work to be completed that day. Attachment A contains a form for documenting Safety Meetings. Completed forms will be retained in Leader's project file.

Additional safety meetings will be held on an as required basis.

16.0 Medical Surveillance

All team members and subcontractors that may potentially have contact with hazardous substances at concentrations above the permissible exposure level (PEL) will be part of a Medical Monitoring Program as outlined in 29CFR 1910.134 and 29CFR 1910.120.

TABLE 1

**KNOWN AND POTENTIAL HEALTH AND SAFETY HAZARDS
KIRKWOOD, NEW YORK**

Known and Potential Site Hazards: *Chemical* (See Attachment B for information sheets and/or MSDSs)

1) Contaminants

- Chlorinated solvents
- Ketones
- Aromatics
- PAHs

2) Known Chemical Hazards

See Attached

3) Review of Symptoms

Symptoms of exposure to hazardous wastes and in particular to the contaminants above will be reviewed with all site personnel. Symptoms of both acute and chronic exposures will be covered. In addition, the on-site coordinators will be advised to watch for outward evidence of changes in workers' health. These outward symptoms may include fatigue, loss of appetite, depression, drowsiness, vertigo, dizziness, nervousness or irritability, skin irritations or discoloration, eye irritation, or muscular soreness.

Note the number and nature of potential contaminants mandate that contact of waste materials with the exposed skin must not be allowed to occur under any circumstances.

Known and Potential Site Hazards: *Non-Chemical*

- General Physical Hazards. Since the project will take place at an active truck terminal, the physical hazards include:
 - Vehicular traffic
 - Moving parts of drilling equipment
 - Underground and aboveground utilities
 - Slip, trip, and fall
 - Splashing and spraying liquids

TABLE 2
ACTION LEVELS
KIRKWOOD, NEW YORK

Unknown Organic Vapor Concentrations (ppm) ¹	Level of Protection
< 1	Level D
≥ 1 < 10	Level C
>10	Level B

Anticipated Chemical Contaminants ²	Time Weight Average (ppm)
<i>Perchloroethylene</i>	100
1,1,1-Trichloroethane	350
1,1-Dichloroethane	100
1,2-Dichloroethylene	50
Trichloroethylene	100
Vinyl Chloride	1

Note:

- 1 Unknown organic vapor action levels are based on the lowest known exposure limits for chlorine (PEL = 1 ppm, IDLH = 30 ppm). The air purifying cartridge limitation for chlorine is 10 ppm.
- 2 Petroleum oil and Diesel fuel are present in tanks on the site and the chlorinated compounds have been either identified in groundwater samples or they are common breakdown products of perchloroethylene.

TABLE 3

**EMERGENCY CALL LIST
KIRKWOOD, NEW YORK**

Fires - Spills

Kirkwood Fire Department	911
Police	
Ambulance	

Provide the following information to the agencies:

- Name of person making the call
- Company and location
- Nature of fire (fire calls only)
- Name and estimated amount of chemical released to the environment (spills only)
- Time of release
- Remedial action taken to correct the problem

Site Contacts

ATTACHMENT A

SAFETY MEETING SIGN-OFF SHEETS

[illegible]

ATTACHMENT B

MATERIAL SAFETY DATA SHEETS

**Material Safety
Data Sheets****Division of Facilities Services****DOD Hazardous Material Information (ANSI Format)
For Cornell University Convenience Only****TETRACHLOROETHENE, 0-663**

<u>Section 1 - Product and Company Identification</u>	<u>Section 9 - Physical & Chemical Properties</u>
<u>Section 2 - Composition/Information on Ingredients</u>	<u>Section 10 - Stability & Reactivity Data</u>
<u>Section 3 - Hazards Identification Including Emergency Overview</u>	<u>Section 11 - Toxicological Information</u>
<u>Section 4 - First Aid Measures</u>	<u>Section 12 - Ecological Information</u>
<u>Section 5 - Fire Fighting Measures</u>	<u>Section 13 - Disposal Considerations</u>
<u>Section 6 - Accidental Release Measures</u>	<u>Section 14 - MSDS Transport Information</u>
<u>Section 7 - Handling and Storage</u>	<u>Section 15 - Regulatory Information</u>
<u>Section 8 - Exposure Controls & Personal Protection</u>	<u>Section 16 - Other Information</u>

The information in this document is compiled from information maintained by the United States Department of Defense (DOD). Anyone using this information is solely responsible for the accuracy and applicability of this information to a particular use or situation.

Cornell University does not in any way warrant or imply the applicability, viability or use of this information to any person or for use in any situation.

**Section 1 - Product and Company Identification
TETRACHLOROETHENE, 0-663**

Product Identification: TETRACHLOROETHENE, 0-663
Date of MSDS: 07/01/1988 **Technical Review Date:** 11/03/1994
FSC: 6810 **NIIN:** LIIN: 00N054677
Submitter: N EN
Status Code: C
MFN: 01
Article: N
Kit Part: N

Manufacturer's Information

Manufacturer's Name: CHEM SERVICE INC
Post Office Box: 3108
Manufacturer's Address1:
Manufacturer's Address2: WEST CHESTER, PA 19381
Manufacturer's Country: US
General Information Telephone: 215-692-3026
Emergency Telephone: 215-692-3026
Emergency Telephone: 215-692-3026
MSDS Preparer's Name: N/P
Proprietary: N
Reviewed: N
Published: Y
CAGE: 84898
Special Project Code: N

Contractor Information

Contractor's Name: CHEM SERVICE INC
Post Office Box: 3108
Contractor's Address1: N/K
Contractor's Address2: WEST CHESTER, PA 19381
Contractor's Telephone: 215-692-3026
Contractor's CAGE: 84898

Contractor Information

Contractor's Name: CHEM SERVICE, INC
Post Office Box: 599
Contractor's Address1: 660 TOWER LN
Contractor's Address2: WEST CHESTER, PA 19301-9650
Contractor's Telephone: 610-692-3026
Contractor's CAGE: 8Y898

Section 2 - Composition/Information on Ingredients
TETRACHLOROETHENE, 0-663

Ingredient Name: ETHYLENE, TETRACHLORO-; (TETRACHLOROETHYLENE) (SARA III)
Ingredient CAS Number: 127-18-4 **Ingredient CAS Code:** M
RTECS Number: KX3850000 **RTECS Code:** M
=WT: =WT Code:
=Volume: =Volume Code:
>WT: >WT Code:
>Volume: >Volume Code:
<WT: <WT Code:
<Volume: <Volume Code:
% Low WT: % Low WT Code:
% High WT: % High WT Code:
% Low Volume: % Low Volume Code:
% High Volume: % High Volume Code:

% Text: N/K
% Enviromental Weight:
Other REC Limits: N/K
OSHA PEL: 25 PPM OSHA PEL Code: M
OSHA STEL: OSHA STEL Code:
ACGIH TLV: 25 PPM;100 PPM STEL ACGIH TLV Code: M
ACGIH STEL: N/P ACGIH STEL Code:
EPA Reporting Quantity: 100 LBS
DOT Reporting Quantity: 100 LBS
Ozone Depleting Chemical: N

Ingredient Name: EYE PROTECTION: FULL LENGTH FACESHIELD (FP N).

Ingredient CAS Number: Ingredient CAS Code: X

RTECS Number: 9999999ZZ RTECS Code: M

=WT: =WT Code:

=Volume: =Volume Code:

>WT: >WT Code:

>Volume: >Volume Code:

<WT: <WT Code:

<Volume: <Volume Code:

% Low WT: % Low WT Code:

% High WT: % High WT Code:

% Low Volume: % Low Volume Code:

% High Volume: % High Volume Code:

% Text: N/K

% Enviromental Weight:

Other REC Limits: N/K

OSHA PEL: N/K (FP N) OSHA PEL Code: M

OSHA STEL: OSHA STEL Code:

ACGIH TLV: N/K (FP N) ACGIH TLV Code: M

ACGIH STEL: N/P ACGIH STEL Code:

EPA Reporting Quantity:

DOT Reporting Quantity:

Ozone Depleting Chemical:

Ingredient Name: ING 2: ARRIVED. INGESTION: CALL MD IMMEDIATELY (FP N).

Ingredient CAS Number: Ingredient CAS Code: X

RTECS Number: 9999999ZZ RTECS Code: M

=WT: =WT Code:

=Volume: =Volume Code:

>WT: >WT Code:

>Volume: >Volume Code:

<WT: <WT Code:

<Volume: <Volume Code:

% Low WT: % Low WT Code:

% High WT: % High WT Code:

% Low Volume: % Low Volume Code:

% High Volume: % High Volume Code:

% Text: N/K

% Enviromental Weight:

Other REC Limits: N/K

OSHA PEL: N/K (FP N) OSHA PEL Code: M
OSHA STEL: OSHA STEL Code:
ACGIH TLV: N/K (FP N) ACGIH TLV Code: M
ACGIH STEL: N/P ACGIH STEL Code:
EPA Reporting Quantity:
DOT Reporting Quantity:
Ozone Depleting Chemical:

Ingredient Name: SUPP DATA: RESPS. IF PATIENT IS IN CARD ARREST ADMIN CPR.
CONTINUE LIFE SUPPORTING MEASURES UNTIL MED ASSIST HAS (ING 3)

Ingredient CAS Number: **Ingredient CAS Code:** X

RTECS Number: 9999999ZZ **RTECS Code:** M

=WT: =WT Code:

=Volume: =Volume Code:

>WT: >WT Code:

>Volume: >Volume Code:

<WT: <WT Code:

<Volume: <Volume Code:

% Low WT: % Low WT Code:

% High WT: % High WT Code:

% Low Volume: % Low Volume Code:

% High Volume: % High Volume Code:

% Text: N/K

% Enviromental Weight:

Other REC Limits: N/K

OSHA PEL: N/K (FP N) OSHA PEL Code: M

OSHA STEL: OSHA STEL Code:

ACGIH TLV: N/K (FP N) ACGIH TLV Code: M

ACGIH STEL: N/P ACGIH STEL Code:

EPA Reporting Quantity:

DOT Reporting Quantity:

Ozone Depleting Chemical:

Section 3 - Hazards Identification, Including Emergency Overview

TETRACHLOROETHENE, 0-663

Health Hazards Acute & Chronic: CONT LENSES SHOULD NOT BE WORN IN LAB. ALL CHEMS SHOULD BE CONSIDERED HAZ-AVOID DIRECT PHYS CONT! CAN BE HARMFUL IF ABSORB THRU SKIN. CAN BE HARMFUL IF INHALED. CAN BE FATAL IF ABSORB THRU SKIN! CAN B E FATAL IF INHALED! MAY BE FATAL IF SWALLOWED! SUSPECTED CARCIN-MAY PRDCE CANCER. LACHRYMATOR-CAUSES (EFTS OF OVEREXP)

Signs & Symptoms of Overexposure:

HLTH HAZ: SEV EYE IRRIT. VAPS &/OR DIRECT EYE CONT CAN CAUSE SEV EYE BURNS. CAN CAUSE EYE IRRIT. VAPS &/OR DIRECT EYE CONT CAN CAUSE SEV EYE BURNS. CAN CAUSE EYE IRRIT. CAN CAUSE SKIN IRRIT. CAN CAUSE SKIN BURNS. CAN CAUSE SEV SKIN BURNS. CAN BE HARMFUL IF SWALLOWED. CAN CAUSE LIVER INJ. CAN CAUSE KIDNEY INJ. (SUPDAT)

Medical Conditions Aggravated by Exposure:

NONE SPECIFIED BY MANUFACTURER.

LD50 LC50 Mixture: LD50 (ORAL,RAT): 8850 MG/KG.

Route of Entry Indicators:

Inhalation: YES

Skin: YES

Ingestion: YES

Carcinogenicity Indicators

NTP: YES

IARC: YES

OSHA: NO

Carcinogenicity Explanation: TETRACHLOROETHYLENE: IARC MONOGRAPHS SUPP, VOL 7, PG 355, 1987: GRP 2B. NTP 7TH ANNUAL REPORT ON CARCINS, 1994: (SUPDAT)

Section 4 - First Aid Measures
TETRACHLOROETHENE, 0-663

First Aid:

AN ANTIDOTE IS SUBSTANCE INTENDED TO COUNTERACT EFT OF POIS. IT SHOULD BE ADMIN ONLY BY PHYS/TRAINED EMER PERS. MED ADVICE CAN BE OBTAINED FROM POIS CNTRL CNTR. EYE: FLUSH CONTINUOUSLY W/WATER FOR AT LST 15-20 MINS. SKIN: FLUSH W/WATER FOR 15-20 MINS. IF NO BURNS HAVE OCCURRED-USE SOAP & WATER TO CLEANSE SKIN. INHAL: REMOVE PATIENT TO FRESH AIR. ADMIN OXYGEN IF PATIENT IS HAVING DFCLTY (SUPDAT)

Section 5 - Fire Fighting Measures
TETRACHLOROETHENE, 0-663

Fire Fighting Procedures:

WEAR NIOSH/MSHA APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT (FP N).

Unusual Fire or Explosion Hazard:

NONE SPECIFIED BY MANUFACTURER.

Extinguishing Media:

CARBON DIOXIDE, DRY CHEMICAL POWDER OR SPRAY.

Flash Point: Flash Point Text: NON-FLAMMABLE

Autoignition Temperature:

Autoignition Temperature Text: N/A

Lower Limit(s): N/A

Upper Limit(s): N/A

Section 6 - Accidental Release Measures
TETRACHLOROETHENE, 0-663

Spill Release Procedures:

EVACUATE AREA. WEAR APPROPRIATE OSHA REGULATED EQUIPMENT. VENTILATE AREA. ABSORB ON VERMICULITE OR SIMILAR MATERIAL. SWEEP UP AND PLACE IN AN

APPROPRIATE CONTAINER. HOLD FOR DISPOSAL. WASH CONTAMINATED SURFACES TO REMOVE ANY RESIDUES.

Section 7 - Handling and Storage
TETRACHLOROETHENE, 0-663

Handling and Storage Precautions:

Other Precautions:

Section 8 - Exposure Controls & Personal Protection
TETRACHLOROETHENE, 0-663

Respiratory Protection:

WEAR NIOSH/MSHA APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN (FP N).

Ventilation:

CHEMICAL SHOULD BE HANDLED ONLY IN HOOD.

Protective Gloves:

IMPERVIOUS GLOVES (FP N).

Eye Protection: ANSI APPROVED CHEM WORKERS GOGGLES & (ING 4)

Other Protective Equipment: USE APPROPRIATE OSHA/MSHA APPROVED SAFETY EQUIPMENT. EMER EYEWASH & DELUGE SHOWER WHICH MEET ANSI DESIGN CRITERIA (FP N).

Work Hygienic Practices: NONE SPECIFIED BY MANUFACTURER.

Supplemental Health & Safety Information: EXPLAN OF CARCIN: ANTIC TO BE CARCIN. ANIMAL: LIVER TUMORS. EFTS OF OVEREXP: CAN BE IRRIT TO MUC MEMB. PRLNGD EXPOS MAY CAUSE NAUS/HDCH, DIZZ &/OR EYE DMG. AVOID CONSUMPTION OF ALCOHOL BEFORE & AFTER HANDLING OF CMPD BECAUSE IT WILL INCR TOX OF CMPD. FIRST AID PROC: BRTHG. IF PATIENT HAS STOPPED BRTHG ADMIN ARTF (ING 2)

Section 9 - Physical & Chemical Properties
TETRACHLOROETHENE, 0-663

HCC:

NRC/State License Number:

Net Property Weight for Ammo:

Boiling Point: Boiling Point Text: 250F, 121C

Melting/Freezing Point: Melting/Freezing Text: 71.6F, 22C

Decomposition Point: Decomposition Text: N/K

Vapor Pressure: 14 @ 20C Vapor Density: N/A

Percent Volatile Organic Content:

Specific Gravity: 1.623

Volatile Organic Content Pounds per Gallon:

pH: N/K

Volatile Organic Content Grams per Liter:

Viscosity: N/P

Evaporation Weight and Reference: NOT APPLICABLE

Solubility in Water: INSOLUBLE

Appearance and Odor: COLORLESS LIQUID.

Percent Volatiles by Volume: N/K

Corrosion Rate: N/K

Section 10 - Stability & Reactivity Data
TETRACHLOROETHENE, 0-663

Stability Indicator: YES

Materials to Avoid:

STRONG BASES, OXIDIZING AGENTS.

Stability Condition to Avoid:

NONE SPECIFIED BY MANUFACTURER.

Hazardous Decomposition Products:

DECOMPOSITION LIBERATES TOXIC FUMES. DECOMPOSITION PRODUCTS ARE CORROSIVE.

Hazardous Polymerization Indicator: NO

Conditions to Avoid Polymerization:

NOT RELEVANT.

Section 11 - Toxicological Information
TETRACHLOROETHENE, 0-663

Toxicological Information:

N/P

Section 12 - Ecological Information
TETRACHLOROETHENE, 0-663

Ecological Information:

N/P

Section 13 - Disposal Considerations
TETRACHLOROETHENE, 0-663

Waste Disposal Methods:

BURN IN CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER. DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS (FP N).

Section 14 - MSDS Transport Information
TETRACHLOROETHENE, 0-663

Transport Information:

N/P

Section 15 - Regulatory Information
TETRACHLOROETHENE, 0-663

SARA Title III Information:

N/P

Federal Regulatory Information:

N/P

State Regulatory Information:

N/P

Section 16 - Other Information
TETRACHLOROETHENE, 0-663

Other Information:

N/P

HAZCOM Label Information**Product Identification:** TETRACHLOROETHENE, 0-663**CAGE:** 84898**Assigned Individual:** N**Company Name:** CHEM SERVICE INC**Company PO Box:** 3108**Company Street Address1:** N/K**Company Street Address2:** WEST CHESTER, PA 19381 US**Health Emergency Telephone:** 215-692-3026**Label Required Indicator:** Y**Date Label Reviewed:** 11/03/1994**Status Code:** C**Manufacturer's Label Number:****Date of Label:** 11/03/1994**Year Procured:** N/K**Organization Code:** G**Chronic Hazard Indicator:** Y**Eye Protection Indicator:** YES**Skin Protection Indicator:** YES**Respiratory Protection Indicator:** YES**Signal Word:** WARNING**Health Hazard:** Moderate**Contact Hazard:** Moderate**Fire Hazard:** None**Reactivity Hazard:** None

8/9/2002 8:48:02 AM



Material Safety Data Sheets

Division of Facilities Services

DOD Hazardous Material Information (ANSI Format) For Cornell University Convenience Only

111 TRICHLOROETHANE

<u>Section 1 - Product and Company Identification</u>	<u>Section 9 - Physical & Chemical Properties</u>
<u>Section 2 - Composition/Information on Ingredients</u>	<u>Section 10 - Stability & Reactivity Data</u>
<u>Section 3 - Hazards Identification Including Emergency Overview</u>	<u>Section 11 - Toxicological Information</u>
<u>Section 4 - First Aid Measures</u>	<u>Section 12 - Ecological Information</u>
<u>Section 5 - Fire Fighting Measures</u>	<u>Section 13 - Disposal Considerations</u>
<u>Section 6 - Accidental Release Measures</u>	<u>Section 14 - MSDS Transport Information</u>
<u>Section 7 - Handling and Storage</u>	<u>Section 15 - Regulatory Information</u>
<u>Section 8 - Exposure Controls & Personal Protection</u>	<u>Section 16 - Other Information</u>

The information in this document is compiled from information maintained by the United States Department of Defense (DOD). Anyone using this information is solely responsible for the accuracy and applicability of this information to a particular use or situation.

Cornell University does not in any way warrant or imply the applicability, viability or use of this information to any person or for use in any situation.

Section 1 - Product and Company Identification 111 TRICHLOROETHANE

Product Identification: 111 TRICHLOROETHANE

Date of MSDS: 01/01/1987 **Technical Review Date:** 12/05/1998

FSC: 6810 **NIIN:** 00-930-6311

Submitter: GAW

Status Code: C

MFN: 01

Article: N

Kit Part: N

Manufacturer's Information

Manufacturer's Name: DIHOMA CHEMICAL MANUFACTURING, INC.
Manufacturer's Address1: ROUTE 3, BOX 375
Manufacturer's Address2: MULLINS, SC 29574
Manufacturer's Country: US
General Information Telephone: 803-423-7799
Emergency Telephone: 803-423-7799
Emergency Telephone: 803-423-7799
MSDS Preparer's Name: N/P
Proprietary: N
Reviewed: Y
Published: Y
CAGE: 0FMP6
Special Project Code: N

Item Description

Item Name: TRICHLOROETHANE, TECHNICAL
Item Manager:
Specification Number: 0-T-620
Type/Grade/Class: TYPE III
Unit of Issue:
Unit of Issue Quantity:
Type of Container: CAN

Contractor Information

Contractor's Name: DIHOMA CHEMICAL & MFG INC
Contractor's Address1: RT 3
Contractor's Address2: MULLINS, SC 29574
Contractor's Telephone: 803-423-7799
Contractor's CAGE: 0FMP6

Section 2 - Composition/Information on Ingredients
111 TRICHLOROETHANE

Ingredient Name: 111 TRICHLORO ETHANE
Ingredient CAS Number: 71-55-6 **Ingredient CAS Code:** M
RTECS Number: KJ2975000 **RTECS Code:** M
=WT: =WT Code:
=Volume: =Volume Code:
>WT: >WT Code:
>Volume: >Volume Code:
<WT: <WT Code:
<Volume: <Volume Code:
% Low WT: % Low WT Code:
% High WT: % High WT Code:
% Low Volume: % Low Volume Code:
% High Volume: % High Volume Code:
% Text: <95.0

% Enviromental Weight:
Other REC Limits: NONE RECOMMENDED
OSHA PEL: 350 PPM **OSHA PEL Code:** M
OSHA STEL: **OSHA STEL Code:**
ACGIH TLV: 350 PPM **ACGIH TLV Code:** M
ACGIH STEL: N/P **ACGIH STEL Code:**
EPA Reporting Quantity: 1000 LBS
DOT Reporting Quantity: 1000 LBS
Ozone Depleting Chemical: 1

Ingredient Name: CARBON DIOXIDE (PROPELLANT)
Ingredient CAS Number: 124-38-9 **Ingredient CAS Code:** M
RTECS Number: FF6400000 **RTECS Code:** M
=WT: **=WT Code:**
=Volume: **=Volume Code:**
>WT: **>WT Code:**
>Volume: **>Volume Code:**
<WT: **<WT Code:**
<Volume: **<Volume Code:**
% Low WT: **% Low WT Code:**
% High WT: **% High WT Code:**
% Low Volume: **% Low Volume Code:**
% High Volume: **% High Volume Code:**
% Text: NK
% Enviromental Weight:
Other REC Limits: NONE RECOMMENDED
OSHA PEL: NOT ESTABLISHED **OSHA PEL Code:** M
OSHA STEL: **OSHA STEL Code:**
ACGIH TLV: NOT ESTABLISHED **ACGIH TLV Code:** M
ACGIH STEL: N/P **ACGIH STEL Code:**
EPA Reporting Quantity:
DOT Reporting Quantity:
Ozone Depleting Chemical: N

Section 3 - Hazards Identification, Including Emergency Overview
111 TRICHLOROETHANE

Health Hazards Acute & Chronic: N/P

Signs & Symptoms of Overexposure:
N/P

Medical Conditions Aggravated by Exposure:
N/P

LD50 LC50 Mixture: N/P

Route of Entry Indicators:
Inhalation: N/P
Skin: N/P

Ingestion: N/P

Carcenogenicity Indicators

NTP: N/P

IARC: N/P

OSHA: N/P

Carcinogenicity Explanation: N/P

Section 4 - First Aid Measures
111 TRICHLOROETHANE

First Aid:
N/P

Section 5 - Fire Fighting Measures
111 TRICHLOROETHANE

Fire Fighting Procedures:

N/P

Unusual Fire or Explosion Hazard:

N/P

Extinguishing Media:

N/P

Flash Point: Flash Point Text: NONE

Autoignition Temperature:

Autoignition Temperature Text: NK

Lower Limit(s):

Upper Limit(s):

Section 6 - Accidental Release Measures
111 TRICHLOROETHANE

Spill Release Procedures:

N/P

Section 7 - Handling and Storage
111 TRICHLOROETHANE

Handling and Storage Precautions:

Other Precautions:

Section 8 - Exposure Controls & Personal Protection
111 TRICHLOROETHANE

Respiratory Protection:

N/P

Ventilation:

N/P

Protective Gloves:

N/P

Eye Protection: N/P

Other Protective Equipment: N/P

Work Hygienic Practices: N/P

Supplemental Health & Safety Information: N/P

Section 9 - Physical & Chemical Properties
111 TRICHLOROETHANE

HCC: V2

NRC/State License Number:

Net Property Weight for Ammo:

Boiling Point: Boiling Point Text: N/A

Melting/Freezing Point: Melting/Freezing Text: N/A

Decomposition Point: Decomposition Text: N/A

Vapor Pressure: N/P **Vapor Density:** N/P

Percent Volatile Organic Content:

Specific Gravity: N/P

Volatile Organic Content Pounds per Gallon:

pH: N/P

Volatile Organic Content Grams per Liter:

Viscosity: NK

Evaporation Weight and Reference: N/P

Solubility in Water: N/P

Appearance and Odor:

Percent Volatiles by Volume: N/P

Corrosion Rate: N/P

Section 10 - Stability & Reactivity Data
111 TRICHLOROETHANE

Stability Indicator: N/P

Materials to Avoid:

N/P

Stability Condition to Avoid:

N/P

Hazardous Decomposition Products:

N/P

Hazardous Polymerization Indicator: N/P

Conditions to Avoid Polymerization:

N/P

Section 11 - Toxicological Information
111 TRICHLOROETHANE

Toxicological Information:

N/P

Section 12 - Ecological Information
111 TRICHLOROETHANE

Ecological Information:N/P

Section 13 - Disposal Considerations**111 TRICHLOROETHANE**

Waste Disposal Methods:N/P

Section 14 - MSDS Transport Information**111 TRICHLOROETHANE**

Transport Information:N/P

Section 15 - Regulatory Information**111 TRICHLOROETHANE**

SARA Title III Information:

N/P

Federal Regulatory Information:

N/P

State Regulatory Information:N/P

Section 16 - Other Information**111 TRICHLOROETHANE**

Other Information:

N/P

HMIS Transportation Information**Product Identification:** 111 TRICHLOROETHANE**Transportation ID Number:** 92803**Responsible Party CAGE:** 0FMP6**Date MSDS Prepared:** 01/01/1987**Date MSDS Reviewed:** 10/09/1996**MFN:** 10/09/1996**Submitter:** G AW**Status Code:** C**Container Information****Unit of Issue:****Container Quantity:****Type of Container:** CAN**Net Unit Weight:** NK**Article without MSDS:** N**Technical Entry NOS Shipping Number:** NK**Radioactivity:** NK**Form:****Net Explosive Weight:** NK

Coast Guard Ammunition Code: NK
Magnetism: N/P
AF MMAC Code: NK
DOD Exemption Number: NK
Limited Quantity Indicator:
Multiple Kit Number: 0
Kit Indicator: N
Kit Part Indicator: N
Review Indicator: Y
Additional Data:
NK

Department of Transportation Information

DOT Proper Shipping Name: CONSUMER COMMODITY
DOT PSN Code: DTJ
Symbols: D
DOT PSN Modifier:
Hazard Class: ORM-D
UN ID Number:
DOT Packaging Group:
Label: NONE
Special Provision(s):
Packaging Exception:
Non Bulk Packaging: 156,306
Bulk Packaging: NONE
Maximum Quantity in Passenger Area: 30KGGROSS
Maximum Quantity in Cargo Area: 30KGGROSS
Stow in Vessel Requirements: A
Requirements Water/Sp/Other:

IMO Detail Information

IMO Proper Shipping Name: AEROSOLS/AEROSOL PRODUCT ?
IMO PSN Code: AKH
IMO PSN Modifier:
IMDG Page Number: SEE 9022
UN Number: 1950
UN Hazard Class: 9?
IMO Packaging Group: -
Subsidiary Risk Label: -
EMS Number: 2-13
Medical First Aid Guide Number:

IATA Detail Information

IATA Proper Shipping Name: AEROSOLS, FLAMMABLE
IATA PSN Code: ALS
IATA PSN Modifier: (EACH NOT EXCEEDING 1 L CAPACITY)
IATA UN Id Number: 1950
IATA UN Class: 2.1
Subsidiary Risk Class:
UN Packaging Group:
IATA Label: FLAMMABLE GAS
Packaging Note for Passengers: 203
Maximum Quantity for Passengers: 75KG

Packaging Note for Cargo: 203

Maximum Quantity for Cargo: 150KG

Exceptions:

AFI Detail Information

AFI Proper Shipping Name: AEROSOLS, FLAMMABLE, N.O.S.

AFI Symbols: *

AFI PSN Code: ALR

AFI PSN Modifier: (EACH NOT EXCEEDING 1L CAPACITY)

AFI UN Id Number: UN1950

AFI Hazard Class: 2.1

AFI Packing Group: N/A

AFI Label:

Special Provisions: P4

Back Pack Reference: A6.3

HAZCOM Label Information

Product Identification: 111 TRICHLOROETHANE

CAGE: 0FMP6

Assigned Individual: N

Company Name: DIHOMA CHEMICAL & MFG INC

Company PO Box:

Company Street Address1: RT 3

Company Street Address2: MULLINS, SC 29574 US

Health Emergency Telephone: 803-423-7799

Label Required Indicator: Y

Date Label Reviewed: 10/12/1999

Status Code: A

Manufacturer's Label Number:

Date of Label:

Year Procured: N/K

Organization Code: G

Chronic Hazard Indicator: N/P

Eye Protection Indicator: N/P

Skin Protection Indicator: N/P

Respiratory Protection Indicator: N/P

Signal Word: N/P

Health Hazard:

Contact Hazard:

Fire Hazard:

Reactivity Hazard:

8/8/2002 1:08:44 AM

ATTACHMENT 3

DER-10

Appendix 1B

Fugitive Dust Guidance

Appendix 1B

Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.
2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.
3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:
 - (a) Objects to be measured: Dust, mists or aerosols;
 - (b) Measurement Ranges: 0.001 to 400 mg/m³ (1 to 400,000 :ug/m³);
 - (c) Precision (2-sigma) at constant temperature: +/- 10 :g/m³ for one second averaging; and +/- 1.5 g/m³ for sixty second averaging;
 - (d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
 - (e) Resolution: 0.1% of reading or 1g/m³, whichever is larger;
 - (f) Particle Size Range of Maximum Response: 0.1-10;
 - (g) Total Number of Data Points in Memory: 10,000;
 - (h) Logged Data: Each data point with average concentration, time/date and data point number
 - (i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
 - (j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
 - (k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
 - (l) Operating Temperature: -10 to 50° C (14 to 122° F);
 - (m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.
4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.
5. The action level will be established at 150 ug/m³ (15 minutes average). While conservative,

this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m³, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m³ above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m³ continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM₁₀ at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

- (a) Applying water on haul roads;
- (b) Wetting equipment and excavation faces;
- (c) Spraying water on buckets during excavation and dumping;
- (d) Hauling materials in properly tarped or watertight containers;
- (e) Restricting vehicle speeds to 10 mph;
- (f) Covering excavated areas and material after excavation activity ceases; and
- (g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m³ action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

APPENDIX 4- MONITORING WELL BORING AND CONSTRUCTION LOGS

LEADER ENVIRONMENTAL, INC

Environmental Engineers & Scientists

LOG OF BORING

Project USF Red Star Location Kirkwood, NY
 Date Drilled February 18, 1999 Drilling Co.: Northstar Drilling Company
 Total Depth 30 ft. Method Used: Hollowstem Augers
 Inspector P. von Schondorf Organic Vapor Inst: MicroTIP Water elev: _____

BORING #: B1
 Page 1 of 2
 Permit #: NA
 Job #: 161.001

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Unified Class.	Permeability
2	1	3-4-4	0.5' - 2'	NR	0	Brown, silt little clay, sand, slightly plastic, soft.	ML	Low
4	2	10-10-12-12	2' - 4'	.5	1.9	Brown gray, silt, some clay, sand, fine gravel, slightly plastic, moist.	ML/CL	Low
6	3	NR	4' - 6'	1.8	2.1	Brown orange silt, sand and gravel, dry dense, crumbly.	ML/SM	Low-Med.
8	4	11-10-9-10	6' - 8'	1.9	2.5	Same as above.	ML/SM	Low-Med.
10	5	12-16-17-17	8' - 10'	1.9	9.8	Same as above.	ML/SM	Low-Med.
12	6	14-26-21-14	10' - 12'	1.9	9.8	Brown, silt and sand, trace gravel dense, wet.	ML/SM	Med.
14	7	8-10-12-14	12' - 14'	2	24	Brown very fine sand, little silt change at 13.5 ft. dark brown silt and sand varved, wet.	SM	Med.
16	8	8-20-15-18	14' - 16'	2	14.6	Gray brown silt, sand, gravel, dense, tight, damp.	ML/SM	Low-Med.
18	9	10-7-10-15	16' - 18'	2	9.7	Gray silt, sand, fine gravel, tight, change to red clay-silt at 18 ft.	ML/SM	Low-Med.
20	10	9-15-21-16	18' - 20'	1	2.2	Red brown silt and clay dense.	ML/CL	Low
22	11	6-8-11-14	20' - 22'	1	2.1	Red brown very fine sand, silt, clay, slightly plastic, dense.	ML/CL	Low
24	12	16-28-15-16	22' - 24'	1.9	2.4	Same as above.	ML/CL	Low

Environmental Engineers & Scientists

Location Kirkwood, NY

Permit #: NA

o:\forms\B1.xls 10/28/2013

LEADER ENVIRONMENTAL, INC

Environmental Engineers & Scientists

LOG OF BORING

Project USF Red Star Location Kirkwood, NY
 Date Drilled February 16, 1999 Drilling Co.: Northstar Drilling Company
 Total Depth 28 ft. Method Used: Hollowstem Augers
 Inspector P. von Schondorf Organic Vapor Inst: MicroTIP Water elev: _____

BORING # B2

Page 1 of 2

Permit #: NA

Job #: 161.001

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Unified Class.	Permeability
2	1	NR	5-2'	1.5	0	0-.5' Asphalt and stone road base Olive brown, very fine sand and silt some large to fine angular gravel dry, nonplastic.	Fill ML/GM	Low
4	2	NR	2' - 4'	2	7.8	Olive brown, very fine sand and silt some large to fine angular gravel dry, nonplastic.	ML/GM	Low-Med.
6	3	NR	4'-6'	2	5.2	Same as above.		Low-Med.
8	4	NR	6'-8'	2	11	Gray, very fine sand and silt some large to fine gravel, dry to damp, at 6.5 ft. very fine sand wet, nonplastic.	ML/GM	Low-Med.
10	5	NR	8' - 10'	2	7.2	Same as above.	ML/GM	Low-Med.
12	6	NR	10' - 12'	2	2.3	Same as above.	ML/GM	Low-Med.
14	7	NR	12' - 14'	2	10.2	Gray, silt some large to fine gravel, angular to round fine gravel.	ML/GM	Low-Med.
16	8	NR	14' - 16'	2	17.8	Same as above.	ML/GM	Low-Med.
18	9	NR	16' - 18'	1	1.8	Gray silt and clay little fine to coarse sand, occ. gravel. moist to wet in gravel.	ML	Low
20	10	NR	18' - 20'	1.8	1.8	Gray silt and gravel, many broken pieces of gravel, damp.	GM	Low-Med.
22	11	NR	20' - 22'	1.8	1.8	Gray clay and silt, some gravel and sand, gummy plastic, wet	CL/GM	Low
24	12	NR	22' - 24'	.4	2.0	Gray silty clay, sand and gravel, wet	CL/SM	Low

Environmental Engineers & Scientists

Permit #: NA

o:\forms\B2.xls 10/28/2013

LEADER ENVIRONMENTAL, INC

Environmental Engineers & Scientists

LOG OF BORING

Project USF Red Star Location Kirkwood, NY
 Date Drilled February 17, 1999 Drilling Co.: Northstar Drilling Company
 Total Depth 28 ft. Method Used: Hollowstem Augers
 Inspector P. von Schondorf Organic Vapor Inst: MicroTIP Water elev: 9.3

BORING # B3

Page 1 of 2

Permit #: NA

Job #: 161.001

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Unified Class.	Permeability
2	1	25-14-8	5'-2'	1.8	2.6	0-.5' Asphalt and stone road base Dark gry silt below asphalt Brown sand and fine gravel at 2' dark gray silt slightly plastic.	Fill ML SP ML	Low
4	2	6-5-5-5	2' - 4'	2	2.4	Brown silt, trace-little sand, moist slightly plastic. dry, nonplastic.	ML	Low
6	3	NR	4'-6'	2	2.3	Brown/Orange silt and gravel, miost slightly plastic	ML/GM	Low
8	4	NR	6'-8'	2	2.8	Same as above.	ML/GM	Low
10	5	10-14-15-17	8' - 10'	2	2.5	Same as above.	ML/GM	Low
12	6	10-20-25-12	10' - 12'	2	1.9	Brown v. fine sand silt and fine-medium gravel, dense, no cohesion wet.	SM/GM	Med.
14	7	18-15-12-12	12' - 14'	2	1.9	Same as above.	SM/GM	Med.
16	8	10-11-12-12	14' - 16'	2	1.9	Same as above, more gravel.	SM/GM	Med.
18	9	14-14-14-14	16' - 18'	2	1.7	Same as above, occ. dry-moist lenses	SM/GM	Med.
20	10	NR	18' - 20'	0	NR	No recovery.		
22	11	NR	20' - 22'	2	1.2	Brown Silt, sand, gravel, tight, some damp lenses, slightly plastic.	ML/GM	Low
24	12	NR	22' - 24'	1	1.2	Same as above.	ML/GM	Low

Environmental Engineers & Scientists

Permit #: NA

o:\forms\B3.xls 10/28/2013

LEADER PROFESSIONAL SERVICES

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

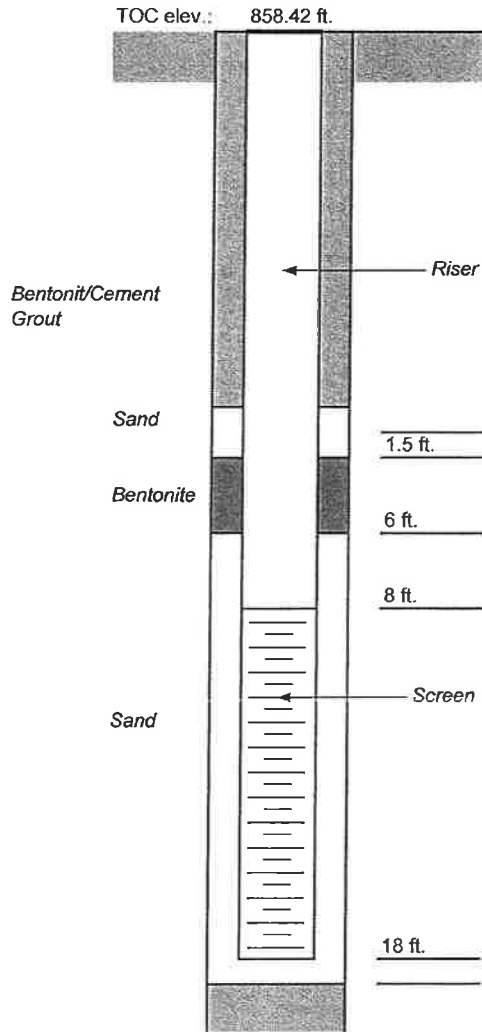
Project: TNT Red Star

Location: Kirkwood

Well No.: MW-3R

Permit No.: NA

TOC elev.: 858.42 ft.



DRILLING SUMMARY

Drilling Company: Parratt Wolf Drillers: Layne
Drill Rig/Model: CME 55
Borehole Diameters: 4.25 in. Drilling Fluid: None
Bits/Depths: _____
Total Depth: 18 ft. Depth To Water: 9.23 ft.
Supervisor Geologist: P.von Schondorf

WELL DESIGN

Casing Material: PVC Diameter: 2 in.
Screen Size: PVC Diameter: 2 in.
Slot Size: 0.01 Setting: 8 to 18 ft.
Backfill: _____ Setting: _____
Filter Material: Sand Setting: 6 to 18 ft.
Seals Material: Bentonite Setting: 1.5 to 6 ft.
Sand Cap: _____ Setting: _____
Grout: _____ Setting: _____
Surface Casing Material: Roadbox Setting: _____

TIME LOG

	Started	Completed
Drilling:	<u>22-Sep-05</u>	<u>22-Sep-05</u>
Installation:	<u>22-Sep-05</u>	<u>22-Sep-05</u>
Development:	_____	_____

WELL DEVELOPMENT

Method: Bailing
Static Depth to Water: 9.23 ft.
Pumping Depth To Water: _____
Pumping Rate: _____ Spec. Capacity: _____
Volume Pumped: 15 gallons

LEADER ENVIRONMENTAL, INC

Environmental Engineers & Scientists

LOG OF BORING

Project USF Red Star

Location Kirkwood, NY

BORING #: B4

Page 2 of 3

Permit #: NA

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Permeability
24						See Log B-1		
26								
28								
30								
32	4	8-9-18-19	30' - 32'	0.8	1.9	Red/brown silt some gravel, slightly plastic, moist.	ML/GM	Low
34	5	20-21-21-19	32' -34'	1	4.4	Brown sand with silt and clay at 35.5' gravel present, moist.	SM/CL	Low
36	6	NR	34' -36'	0.6	4.3	Same as above.	SM/CL	Low
38	7	NR	36' - 37.25'	1	4.4	No Recovery		
40	8	NR	38' - 40'	0.3	2.5	Brown gray silt varved, occ. fine gravel and coarse sand.	ML	Low
42	9	6-8-10-30	40' - 42'	1.8	0.2	Red/brown clay, plastic, change at 41.5' gray silt and fine-coarse sand occ. gravel.	CL	Low
44	10	NR	42' - 42.8'	.8'	0.2	Gravel and clay, possible cavings	GM/CL	Low
46	11	16-20-28-28	44' - 46'	1.75	0.7	Gray/Brown silt, sand, and gravel, moist	ML	Low - Med.

Environmental Engineers & Scientists

Project USF Red Star

Location Kirkwood, NY

Page 3 of 3

Permit #: NA

Boring Log

LEADER ENVIRONMENTAL, INC.

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

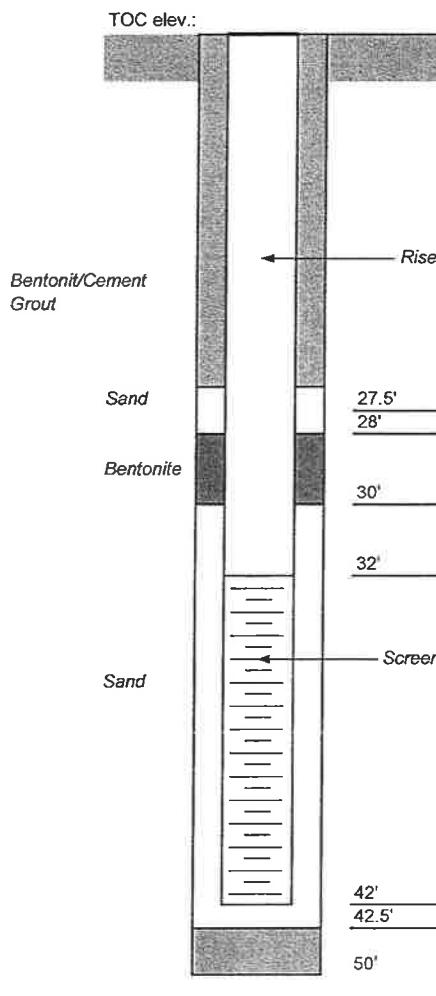
Project: USF Red Star

Location: Kirkwood, N.Y.

Well No.: MW-3D

Permit No.: NA

TOC elev.: _____

 <p>TOC elev.: _____</p> <p>← Riser</p> <p>Bentonite/Cement Grout</p> <p>Sand 27.5' 28'</p> <p>Bentonite 30'</p> <p>32'</p> <p>← Screen</p> <p>Sand</p> <p>42' 42.5'</p> <p>50'</p>	DRILLING SUMMARY	
	Drilling Company: <u>North Star Drilling</u> Drillers: <u>Jeff Thew</u>	
	Drill Rig/Model: <u>CME 55</u>	
	Borehole Diameters: <u>8.25 "</u> Drilling Fluid: <u>None</u>	
	Bits/Depths: <u>50'</u>	
	Total Depth: <u>50'</u> Depth To Water: <u>8.6 ft. bgs.</u>	
	Supervisor Geologist: <u>P.von Schondorf</u>	
	WELL DESIGN	
	Casing Material: <u>PVC</u> Diameter: <u>2"</u>	
	Screen Size: <u>10ft.</u> Diameter: <u>2"</u>	
Slot Size: <u>0.020 in.</u> Setting: <u>42'</u>		
Backfill Cavings and Grout Setting: <u>42.5 -50'</u>		
Filter Material: <u>Sand</u> Setting: <u>30 - 42.5</u>		
Seals Material: <u>Bentonite</u> Setting: <u>28 - 30'</u>		
Sand Cap <u>Sand</u> Setting: <u>28 - 27.5'</u>		
Grout: <u>Bentonite-Cement</u> Setting: <u>5 - 27.5</u>		
Surface Casing Material: <u>Flush Mounted</u> Setting: <u>Surface</u>		
TIME LOG		
Started _____ Completed _____		
Drilling: <u>18-Feb-99</u> 19-Feb-99		
Installation: <u>19-Feb-99</u> 19-Feb-99		
Development: <u>22-Feb-99</u> _____		
WELL DEVELOPMENT		
Method: <u>Bailing</u>		
Static Depth to Water: <u>8.6</u>		
Pumping Depth To Water: <u>NA</u>		

Environmental Engineers & Scientists

Project	USF Red Star	Location	Kirkwood, NY	Permit #:	NA
Date Drilled	October 29, 1999	Drilling Co.:	Northstar Drilling Company	Job #:	161.001
Total Depth	12 ft.	Method Used:	Hollowstem Augers		
Inspector	P. von Schondorf	Organic Vapor Inst:	MicroTIP	Water elev:	

o:\forms\B5.xls 10/28/2013

LEADER PROFESSIONAL SERVICES

Environmental Engineers & Scientists

LOG OF BORING

Project TNT-Red Star Location Kirkwood BORING # MW-5
 Date Drilled 9/21/05 Drilling Co.: Parratt Wolf Page 1 of 1
 Total Depth 12.8 ft. Method Used: Hollowstem Augers Permit #: NA
 Inspector P. von Schondorf Organic Vapor Inst: MicroTIP Job #:
 Water elev: 848.08 ft.

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Unified Class.	Permeability
5						Auger to 5 ft.		
6		12-20						
7	1	21-21						
8		3-7				No Sample		
9	2	12-7	7-9 ft.	1.4	0		GM	Poor
10		3-9						
11	3	12-7	9-11	1.75	0	Brown Sand, silt, wet at 10.5 ft.	SM	Poor
12		6-16				Brown Gravel, silt, wet, dense.		
13		50/3in.	11-12.4 ft.	1	0		GM	Good

LEADER PROFESSIONAL SERVICES

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

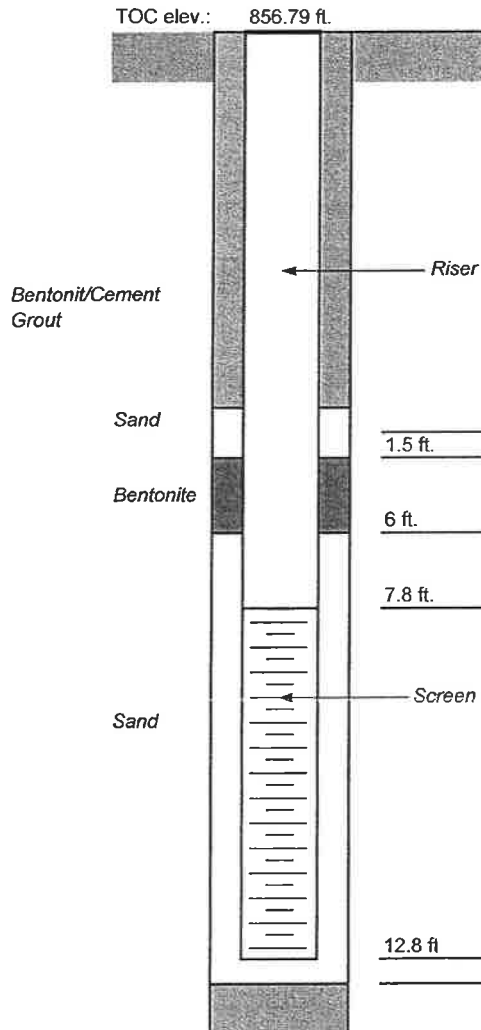
Project: TNT Red Star

Location: Kirkwood

Well No.: MW-5

Permit No.: NA

TOC elev.: 856.79 ft.



DRILLING SUMMARY

Drilling Company: Parratt Wolf Drillers: Layne
Drill Rig/Model: CME 55
Borehole Diameters: 4.25 in. Drilling Fluid: None
Bits/Depths: _____
Total Depth: 12.8 ft. Depth To Water: 8.71ft.
Supervisor Geologist: P.von Schondorf

WELL DESIGN

Casing Material: PVC Diameter: 2 in.
Screen Size: PVC Diameter: 2 in.
Slot Size: 0.01 Setting: 7.8 ft. to 12.8ft.
Backfill: _____ Setting: _____
Filter Material: Sand Setting: 6 to 12.8ft.
Seals Material: Bentonite Setting: 1.5 to 6 ft.
Sand Cap: _____ Setting: _____
Grout: _____ Setting: _____
Surface Casing Material: Roadbox Setting: _____

TIME LOG

	Started	Completed
Drilling:	<u>21-Sep-05</u>	<u>21-Sep-05</u>
Installation:	<u>21-Sep-05</u>	<u>21-Sep-05</u>
Development:	_____	_____

WELL DEVELOPMENT

Method: Bailing
Static Depth to Water: 8.71 ft.
Pumping Depth To Water: _____
Pumping Rate: _____ Spec. Capacity: _____
Volume Pumped: 15-gallons

Environmental Engineers & Scientists

Project	USF Red Star	Location	Kirkwood, NY	Permit #:	NA
Date Drilled	October 29, 1999	Drilling Co.:	Northstar Drilling Company	Job #:	161.001
Total Depth	22'	Method Used:	Hollowstem Augers		
Inspector	P. von Schondorf	Organic Vapor Inst:	MicroTIP	Water elv:	846.08

Page 1 of 2

Permit #: NA

Job #: 16

Water elv: 846.08

Well Log Pg 1

LEADER ENVIRONMENTAL, INC.

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

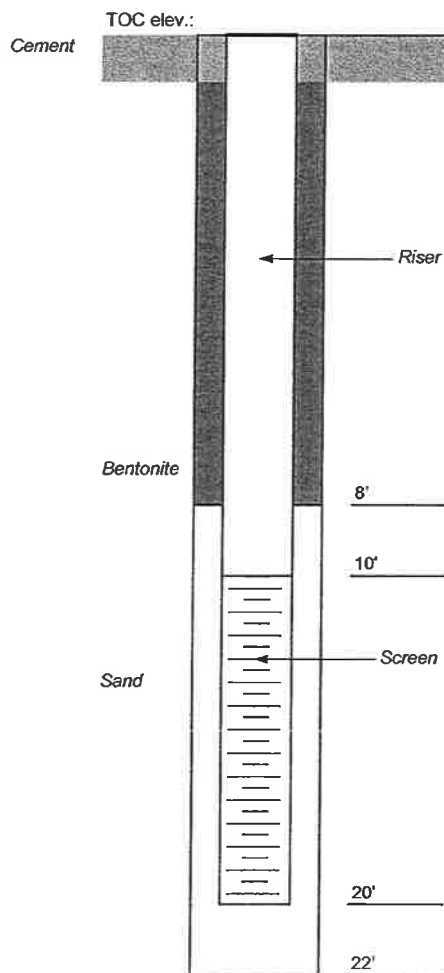
Project: USF Red Star

Location: Kirkwood, N.Y.

Well No.: PW-1

Permit No.: NA

TOC elev.: 857.69



DRILLING SUMMARY

Drilling Company: North Star Drilling Drillers: Jeff Thew
Drill Rig/Model: CME 55
Borehole Diameters: 4" Drilling Fluid: None
Bits/Depths: 22'
Total Depth: 22' Depth To Water: 10.65'
Supervisor Geologist: P.von Schondorf

WELL DESIGN

Casing Material: PVC Diameter: 1"
Screen Size: 10 ft. Diameter: 1"
Slot Size: 0.020 in. Setting: 20'
Backfill: Bentonite Setting: 1' - 8'
Filter Material: Sand Setting: 8' - 22'
Seals Material: Bentonite Setting: 1' - 8'
Sand Cap: None Setting:
Grout: Cement Setting: 0' - 1'
Surface Casing Material: Flush Mounted Setting: Surface

TIME LOG

	Started	Completed
Drilling:	<u>29-Oct-99</u>	<u>29-Oct-99</u>
Installation:	<u>29-Oct-99</u>	<u>29-Oct-99</u>
Development:	<u>29-Oct-99</u>	<u>29-Oct-99</u>

WELL DEVELOPMENT

Method: Bailing
Static Depth to Water: 12.5'
Pumping Depth To Water: NA
Pumping Rate: NA Spec. Capacity: NA
Volume Pumped: 2 gallons

Environmental Engineers & Scientists

Project	USF Red Star	Location	Kirkwood, NY	Permit #	NA
Date Drilled	October 29, 1999	Drilling Co.:	Northstar Drilling Company	Job #:	161.001
Total Depth	22'	Method Used:	Hollowstem Augers		
Inspector	P. von Schondorf	Organic Vapor Inst:	MicroTIP	Water elev:	845.77

Water elev: 845.77

PW2.xls

LEADER ENVIRONMENTAL, INC.

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

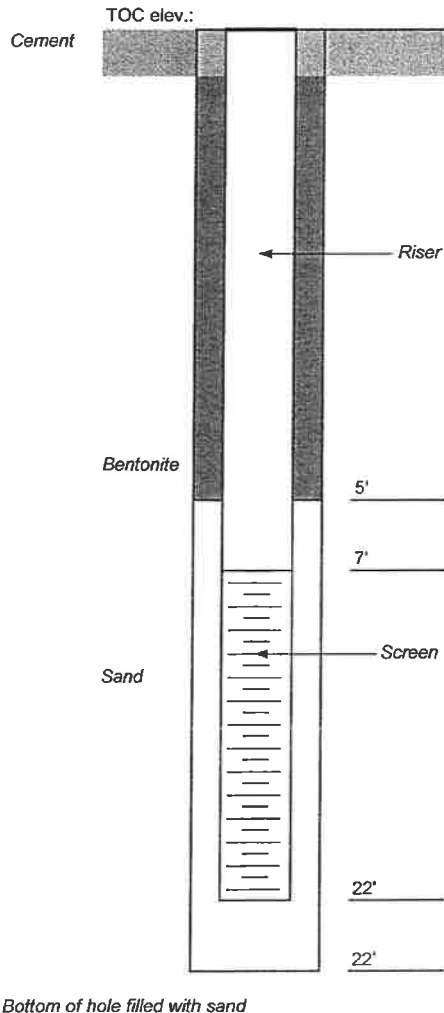
Project: USF Red Star

Location: Kirkwood, N.Y.

Well No.: PW-2

Permit No.: NA

TOC elev.: 854.41



DRILLING SUMMARY

Drilling Company: North Star Drilling Drillers: Jeff Thew
Drill Rig/Model: CME 55
Borehole Diameters: 4" Drilling Fluid: None
Bits/Depths: 22'
Total Depth: 22' Depth To Water: 12.5'
Supervisor Geologist: P. von Schondorf

WELL DESIGN

Casing Material: PVC Diameter: 1"
Screen Size: 15 ft. Diameter: 1"
Slot Size: 0.020 in. Setting: 22'
Backfill: Bentonite Setting: 1' - 5'
Filter Material: Sand Setting: 5' - 22'
Seals Material: Bentonite Setting: 1' - 5'
Sand Cap: None Setting:
Grout: Cement Setting: 0' - 1'
Surface Casing Material: Flush Mounted Setting: Surface

TIME LOG

	Started	Completed
Drilling:	<u>29-Oct-99</u>	<u>29-Oct-99</u>
Installation:	<u>29-Oct-99</u>	<u>29-Oct-99</u>
Development:	<u>29-Oct-99</u>	<u>29-Oct-99</u>

WELL DEVELOPMENT

Method: Bailing
Static Depth to Water: 12.5'
Pumping Depth To Water: NA
Pumping Rate: NA Spec. Capacity: NA
Volume Pumped: 2 gallons

Environmental Engineers & Scientists

Project	USF Red Star	Location	Kirkwood, NY	Permit #:	NA
Date Drilled	October 29, 1999	Drilling Co.:	Northstar Drilling Company	Job #:	161.001
Total Depth	22'	Method Used:	Hollowstem Augers		
Inspector	P. von Schondorf	Organic Vapor Inst:	MicroTIP	Water elev:	845.59

Job #: 161.001

o:\forms\PW3.xls 10/28/2013

LEADER ENVIRONMENTAL, INC.

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

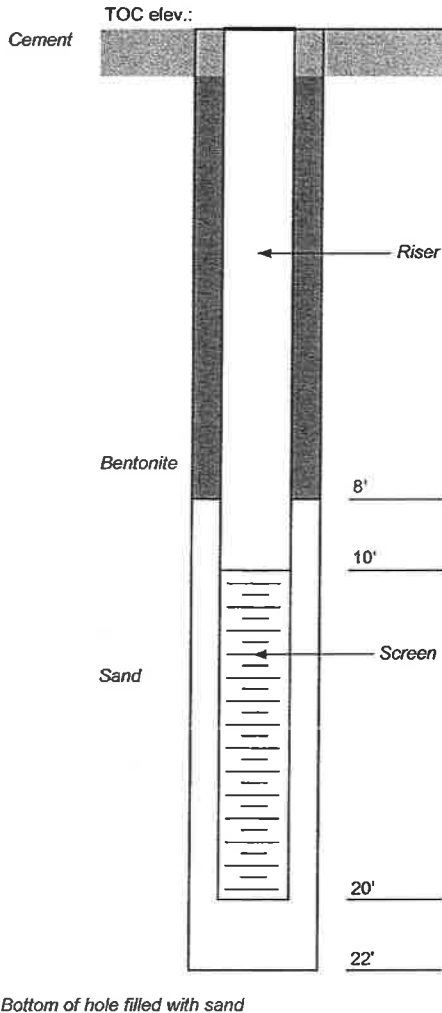
Project: USF Red Star

Location: Kirkwood, N.Y.

Well No.: PW-3

Permit No.: NA

TOC elev.: 855.06



DRILLING SUMMARY

Drilling Company: North Star Drilling Drillers: Jeff Thew
Drill Rig/Model: CME 55
Borehole Diameters: 4" Drilling Fluid: None
Bits/Depths: 22'
Total Depth: 22' Depth To Water: 9.5 ft.
Supervisor Geologist: P.von Schondorf

WELL DESIGN

Casing Material: PVC Diameter: 1"
Screen Size: 10ft Diameter: 1"
Slot Size: 0.020 in. Setting: 20'
Backfill: Bentonite Setting: 1' - 8'
Filter Material: Sand Setting: 8' - 22'
Seals Material: Bentonite Setting: 1' - 8'
Sand Cap: None Setting:
Grout: Cement Setting: 0' - 1'
Surface Casing Material: Flush Mounted Setting: Surface

TIME LOG

	Started	Completed
Drilling:	<u>29-Oct-99</u>	<u>29-Oct-99</u>
Installation:	<u>29-Oct-99</u>	<u>29-Oct-99</u>
Development:	<u>29-Oct-99</u>	<u>29-Oct-99</u>

WELL DEVELOPMENT

Method: Bailing
Static Depth to Water: 7.1
Pumping Depth To Water: NA
Pumping Rate: NA Spec. Capacity: NA
Volume Pumped: 3 gallons

LEADER ENVIRONMENTAL, INC

Environmental Engineers & Scientists

LOG OF BORING

Project USF Red Star Location Kirkwood, NY
 Date Drilled October 25, 1999 Drilling Co.: Northstar Drilling Company
 Total Depth 19' Method Used: Hollowstem Augers
 Inspector P. von Schondorf Organic Vapor Inst: MicroTIP Water elev: _____

BORING # PW-4

Page 1 of 2

Permit #: NA

Job #: 161.001

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Unified Class.	Permeability
2	1	16-28-34	.5' - 2'	.8	0	Gray, medium-coarse sand, gravel, dry.	SM/GM	Good
4	2	18-10-9-10	2' - 4'	0	0	No Recovery		
6	3	NR	4' - 6'	2	0	Gray, silt, sand, gravel, dense.	ML/SM	Fair
8	4	5-9-9-16	6' - 8'	2	0	Same as above.	ML/SM	Fair
10	5	23-21-22-23	8' - 10'	1.5	0	Same as above.	ML/SM	Fair
12	6	15-25-50/4	10' - 11.4'	1.8	5.9	Same as above, wet.	ML/SM	Fair
14	7	24-26-9-4	12' - 14'	2	205	Gray sand and gravel, little silt, dry to moist.	SM/GM	Good
	8	12-14-11-12	14' - 16'	1.5	0	Gray sand and gravel, wet.	SM/GM	Good
	9	35-65	16' - 17'	2	0	Brown silt, occasional gravel, damp dense.	ML/GM	Poor
						Auger to 19'		
						Boring terminated at 19'		

LEADER PROFESSIONAL SERVICES

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

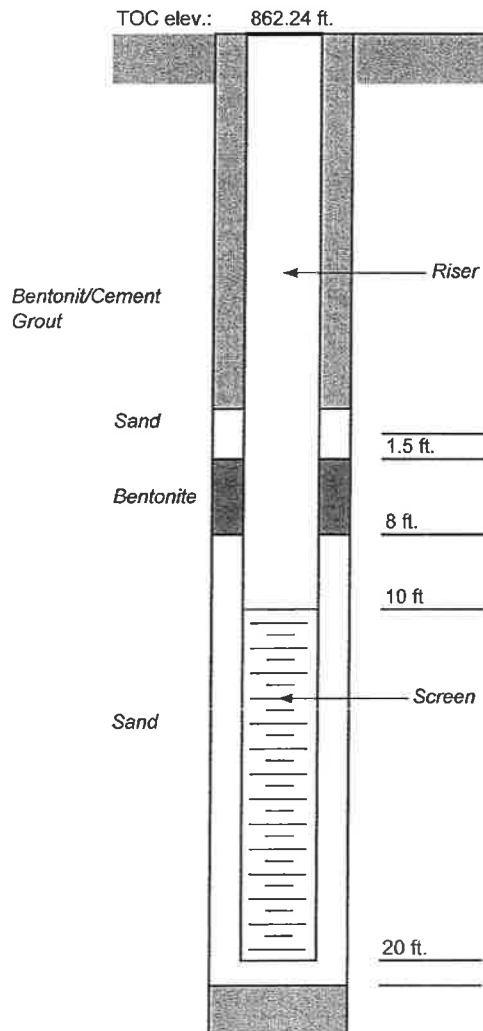
Project: TNT Red Star

Location: Kirkwood

Well No.: PW4R

Permit No.: NA

TOC elev.: 862.24 ft.



DRILLING SUMMARY

Drilling Company: Parratt Wolf Drillers: Layne
 Drill Rig/Model: CME 55
 Borehole Diameters: 4.25 in. Drilling Fluid: None
 Bits/Depths: 18 ft. Depth To Water: 10.13 ft.
 Supervisor Geologist: P.von Schondorf

WELL DESIGN

Casing Material: PVC Diameter: 2 in.
 Screen Size: PVC Diameter: 2 in.
 Slot Size: 0.01 Setting: 10 to 20ft.
 Backfill: Setting:
 Filter Material: Sand Setting: 8 to 20 ft.
 Seals Material: Bentonite Setting: 1.5 to 8 ft.
 Sand Cap: Setting:
 Grout: Setting:
 Surface Casing Material: Roadbox Setting:

TIME LOG

Started 21-Sep-05 Completed 21-Sep-05
 Drilling: 21-Sep-05
 Installation: 21-Sep-05
 Development:

WELL DEVELOPMENT

Method: Bailing
 Static Depth to Water: 10.13 ft
 Pumping Depth To Water:
 Pumping Rate: Spec. Capacity:
 Volume Pumped: 15 gallons

LEADER ENVIRONMENTAL, INC

Environmental Engineers & Scientists

LOG OF BORING

Project USF Red Star Location Kirkwood, NY
 Date Drilled October 26, 1999 Drilling Co.: Northstar Drilling Company
 Total Depth 29' Method Used: Hollowstem Augers
 Inspector P. von Schondorf Organic Vapor Inst: MicroTIP Water elev: _____

BORING #: PW-5

Page 1 of 2

Permit #: NA

Job #: 161.001

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Unified Class.	Permeability
2	1	12-14-36-36	0' - 2'	1	0	Brown silt and v. fine sand, gravel dry.	ML/SM	Fair
4	2	NR	2' - 4'	2	0	Same as above.	ML/SM	Fair
6	3	NR	4' - 6'	.25	0	Brown, gray silt and gravel, dry.	ML/GM	Fair/Poor
8	4	18-25-25-22	6' - 8'	2	0	Brown, gray silt occ. gravel grading to light brown silt and gravel - Till.	ML	Poor
10	5	28-32-35-36	8' - 10'	1.5	0	Brown, gray silt occ. gravel, dry.	ML	Poor
12	6	50/2	10' - 10.2'	.2	0	No sample, gravel.		Poor
14	7	15-16-21-22	12' - 14'	1	0	Brown gray silt till, dry, dense.	ML	Poor
16	8	26-27-26-28	14' - 16'	2	0	Brown gray silt, gravel till, dry, dense.	ML/GM	Poor
27	9	NR	25' - 27'	1	0	Same as above.	ML/GM	Poor
29	10	NR	27' - 29'	1	0	Same as above.	ML/GM	Poor
						No water in hole after 12 hrs. Boring backfilled with soil and cement		

Environmental Engineers & Scientists

Project	USF Red Star	Location	Kirkwood, NY	Permit #:	NA
Date Drilled	October 26, 1999	Drilling Co.:	Northstar Drilling Company	Job #:	161.001
Total Depth	22'	Method Used:	Hollowstem Augers		
Inspector	P. von Schondorf	Organic Vapor Inst:	MicroTIP	Water elev:	846.23

Water elv: 846.23

o:\forms\PW7.xls 10/28/2013

Environmental Engineers & Scientists

Job #: 161.001

Water elv: 848.24

PW6.xls

LEADER ENVIRONMENTAL, INC.

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

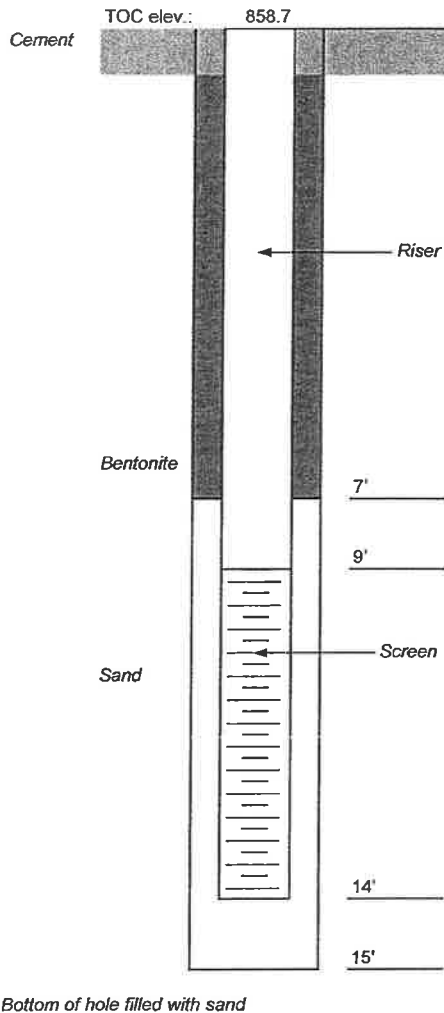
Project: USF Red Star

Location: Kirkwood, N.Y.

Well No.: PW-6

Permit No.: NA

TOC elev.: _____



DRILLING SUMMARY

Drilling Company: North Star Drilling Drillers: Jeff Thew
Drill Rig/Model: CME 55
Borehole Diameters: 4" Drilling Fluid: None
Bits/Depths: 15'
Total Depth: 14' Depth To Water: 14.5'
Supervisor Geologist: P.von Schondorf

WELL DESIGN

Casing Material: PVC Diameter: 1"
Screen Size: 5 ft. Diameter: 1"
Slot Size: 0.020 in. Setting: 14'
Backfill: Bentonite Setting: 1' - 7'
Filter Material: Sand Setting: 7' - 15'
Seals Material: Bentonite Setting: 1' - 7'
Sand Cap: None Setting: _____
Grout: Cement Setting: 0' - 1'
Surface Casing Material: Flush Mounted Setting: Surface

TIME LOG

	Started	Completed
Drilling:	<u>26-Oct-99</u>	<u>26-Oct-99</u>
Installation:	<u>26-Oct-99</u>	<u>26-Oct-99</u>
Development:	<u>26-Oct-99</u>	<u>26-Oct-99</u>

WELL DEVELOPMENT

Method: Bailing
Static Depth to Water: 0, 14.5 after 24 hours
Pumping Depth To Water: NA
Pumping Rate: NA Spec. Capacity: NA
Volume Pumped: 0.25 gallons

LEADER ENVIRONMENTAL, INC.

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

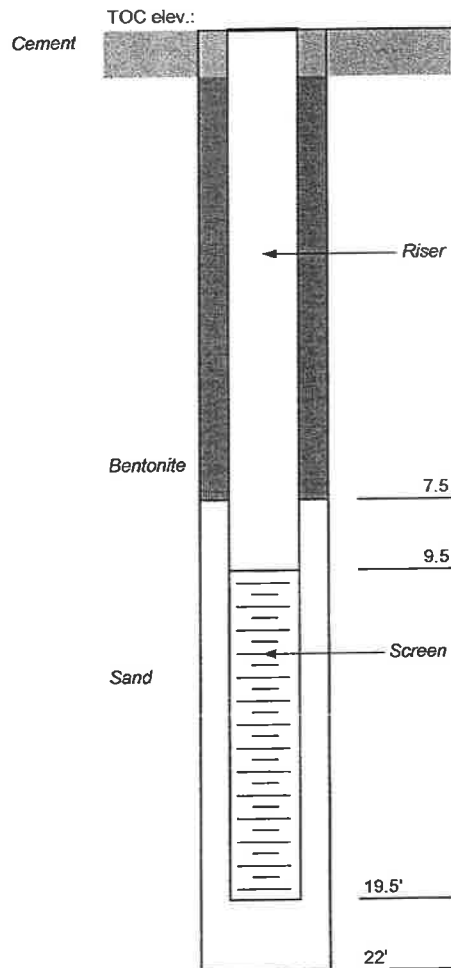
Project: USF Red Star

Location: Kirkwood, N.Y.

Well No.: PW-7

Permit No.: NA

TOC elev.: 860.38



DRILLING SUMMARY

Drilling Company: North Star Drilling Drillers: Jeff Thew
Drill Rig/Model: CME 55
Borehole Diameters: 4" Drilling Fluid: None
Bits/Depths: 22'
Total Depth: 22' Depth To Water: 14.2'
Supervisor Geologist: P.von Schondorf

WELL DESIGN

Casing Material: PVC Diameter: 1"
Screen Size: 10ft. Diameter: 1"
Slot Size: 0.020 in. Setting: 19.5'
Backfill: Bentonite Setting: 1' - 7.5'
Filter Material: Sand Setting: 7.5' - 22'
Seals Material: Bentonite Setting: 1' - 7.5'
Sand Cap: None Setting:
Grout: Cement Setting: 0' - 1'
Surface Casing Material: Flush Mounted Setting: Surface

TIME LOG

	Started	Completed
Drilling:	<u>26-Oct-99</u>	<u>26-Oct-99</u>
Installation:	<u>26-Oct-99</u>	<u>26-Oct-99</u>
Development:	<u>26-Oct-99</u>	<u>26-Oct-99</u>

WELL DEVELOPMENT

Method: Bailing
Static Depth to Water: 14.2
Pumping Depth To Water: NA
Pumping Rate: NA Spec. Capacity: NA
Volume Pumped: 3 gallons

Environmental Engineers & Scientists

Project	USF Red Star	Location	Kirkwood, NY	Permit #:	NA
Date Drilled	October 26, 1999	Drilling Co.:	Northstar Drilling Company	Job #:	161.001
Total Depth	16'	Method Used:	Hollowstem Augers		
Inspector	P. von Schondorf	Organic Vapor Inst:	MicroTIP	Water elv:	847.96

Water elv: 847.96

PW8.xls

LEADER ENVIRONMENTAL, INC.

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

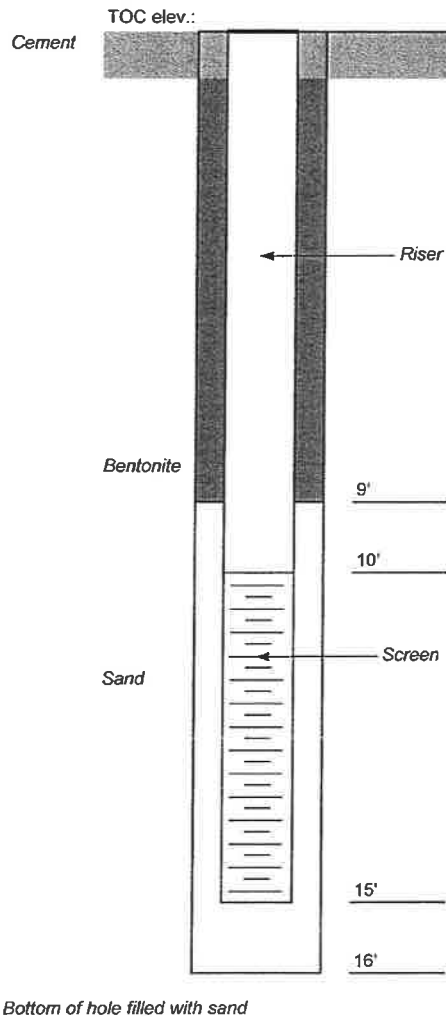
Project: USF Red Star

Location: Kirkwood, N.Y.

Well No.: PW-8

Permit No.: NA

TOC elev.: 859.96



DRILLING SUMMARY

Drilling Company: North Star Drilling Drillers: Jeff Thew
Drill Rig/Model: CME 55
Borehole Diameters: 4" Drilling Fluid: None
Bits/Depths: 16'
Total Depth: 16' Depth To Water: 15.5'
Supervisor Geologist: P.von Schondorf

WELL DESIGN

Casing Material: PVC Diameter: 1"
Screen Size: 5 ft. Diameter: 1"
Slot Size: 0.020 in. Setting: 15'
Backfill: Bentonite Grout Setting: 1' - 7'
Filter Material: Sand Setting: 9' - 16'
Seals Material: Bentonite Setting: 7' - 9'
Sand Cap: None Setting:
Grout: Cement Setting: 0' - 1'
Surface Casing Material: Flush Mounted Setting: Surface

TIME LOG

	Started	Completed
Drilling:	<u>26-Oct-99</u>	<u>26-Oct-99</u>
Installation:	<u>26-Oct-99</u>	<u>26-Oct-99</u>
Development:	<u>26-Oct-99</u>	<u>26-Oct-99</u>

WELL DEVELOPMENT

Method: Bailing
Static Depth to Water: 11.82
Pumping Depth To Water: NA
Pumping Rate: NA Spec. Capacity: NA
Volume Pumped: 3 gallons

Environmental Engineers & Scientists

Project	USF Red Star	Location	Kirkwood, NY	Permit #:	NA
Date Drilled	October 29, 1999	Drilling Co.:	Northstar Drilling Company	Job #:	161.001
Total Depth	27'	Method Used:	Hollowstem Augers		
Inspector	P. von Schondorf	Organic	Vapor Inst: MicroTIP	Water elev:	

Water elev:

PW9.xls

LEADER ENVIRONMENTAL, INC.

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

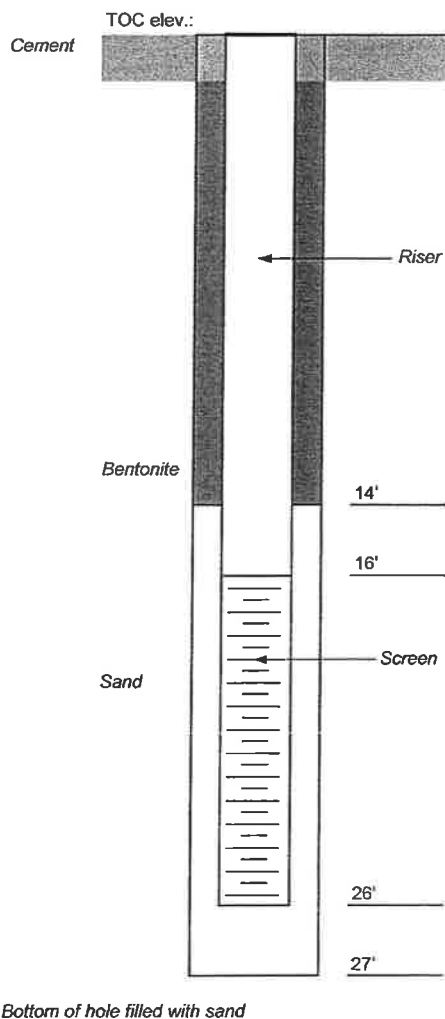
Project: USF Red Star

Location: Kirkwood, N.Y.

Well No.: PW-9

Permit No.: NA

TOC elev.: -



DRILLING SUMMARY

Drilling Company: North Star Drilling Drillers: Jeff Thew
 Drill Rig/Model: CME 55
 Borehole Diameters: 4" Drilling Fluid: None
 Bits/Depths: 22' Depth To Water: 15.2'
 Total Depth: 22'
 Supervisor Geologist: P.von Schondorf

WELL DESIGN

Casing Material: PVC Diameter: 1"
 Screen Size: 10 ft. Diameter: 1"
 Slot Size: 0.020 in. Setting: 26'
 Backfill: Bentonite Setting: 1' - 14'
 Filter Material: Sand Setting: 14' - 27'
 Seals Material: Bentonite Setting: 1' - 14'
 Sand Cap: None Setting:
 Grout: Cement Setting: 0' - 1'
 Surface Casing Material: Flush Mounted Setting: Surface

TIME LOG

	Started	Completed
Drilling:	<u>29-Nov-99</u>	<u>29-Nov-99</u>
Installation:	<u>29-Nov-99</u>	<u>29-Nov-99</u>
Development:	<u>29-Nov-99</u>	<u>29-Nov-99</u>

WELL DEVELOPMENT

Method: Bailing
 Static Depth to Water: 15.2
 Pumping Depth To Water: NA
 Pumping Rate: NA Spec. Capacity: NA
 Volume Pumped: 3 gallons

LEADER ENVIRONMENTAL, INC.

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

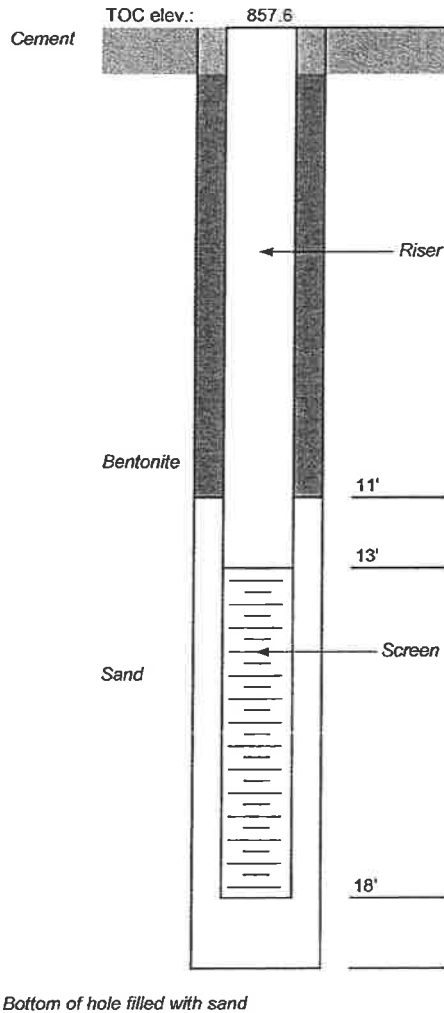
Project: USF Red Star

Location: Kirkwood, N.Y.

Well No.: GP-1

Permit No.: NA

TOC elev.: _____



DRILLING SUMMARY

Drilling Company: North Star Drilling Drillers: Jeff Thew
Drill Rig/Model: CME 55
Borehole Diameters: 4" Drilling Fluid: None
Bits/Depths: Auger
Total Depth: 18' Depth To Water: 10.35'
Supervisor Geologist: P.von Schondorf

WELL DESIGN

Casing Material: PVC Diameter: 1"
Screen Size: 5 ft. Diameter: 1"
Slot Size: 0.01 Setting: 18'
Backfill: Bentonite Setting: 1' - 8'
Filter Material: Sand Setting: 11'-18'
Seals Material: Bentonite Setting: 9' - 11'
Sand Cap: None Setting: _____
Grout: None Setting: 0' - 1'
Surface Casing Material: PVC Setting: 2' above g.s.

TIME LOG

	Started	Completed
Drilling:	<u>19-Feb-99</u>	<u>19-Feb-99</u>
Installation:	<u>19-Feb-99</u>	<u>19-Feb-99</u>
Development:	<u>19-Feb-99</u>	<u>19-Feb-99</u>

WELL DEVELOPMENT

Method: Bailing
Static Depth to Water: 17'
Pumping Depth To Water: NA
Pumping Rate: NA Spec. Capacity: NA
Volume Pumped: 0.5 gallons

LEADER PROFESSIONAL SERVICES

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

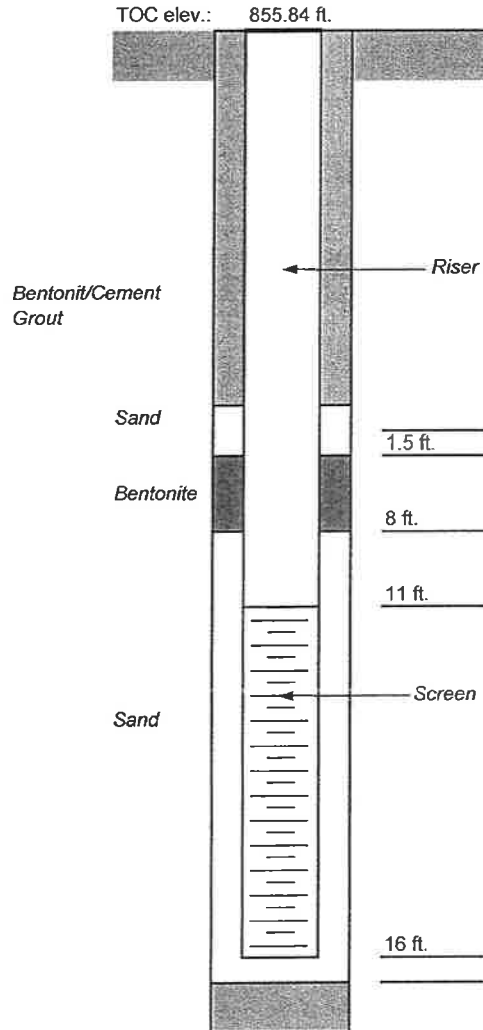
Project: TNT Red Star

Location: Kirkwood

Well No.: GP-2R

Permit No.: NA

TOC elev.: 855.84 ft.



DRILLING SUMMARY

Drilling Company: Parratt Wolf Drillers: Layne
Drill Rig/Model: CME 55
Borehole Diameters: 4.25 in. Drilling Fluid: None
Bits/Depths: _____
Total Depth: 16 ft. Depth To Water: 10 ft.
Supervisor Geologist: P.von Schondorf

WELL DESIGN

Casing Material: PVC Diameter: 2 in.
Screen Size: PVC Diameter: 2 in.
Slot Size: 0.01 Setting: 11 to 16ft.
Backfill: _____ Setting: _____
Filter Material: Sand Setting: 8 to 16 ft.
Seals Material: Bentonite Setting: 1.5 to 8 ft.
Sand Cap: _____ Setting: _____
Grout: _____ Setting: _____
Surface Casing Material: Roadbox Setting: _____

TIME LOG

	Started	Completed
Drilling:	<u>21-Sep-05</u>	<u>21-Sep-05</u>
Installation:	<u>21-Sep-05</u>	<u>21-Sep-05</u>
Development:	_____	_____

WELL DEVELOPMENT

Method: Bailer
Static Depth to Water: 8.35 ft.
Pumping Depth To Water: _____
Pumping Rate: _____ Spec. Capacity: _____
Volume Pumped: 15-gallons

LEADER ENVIRONMENTAL, INC.

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

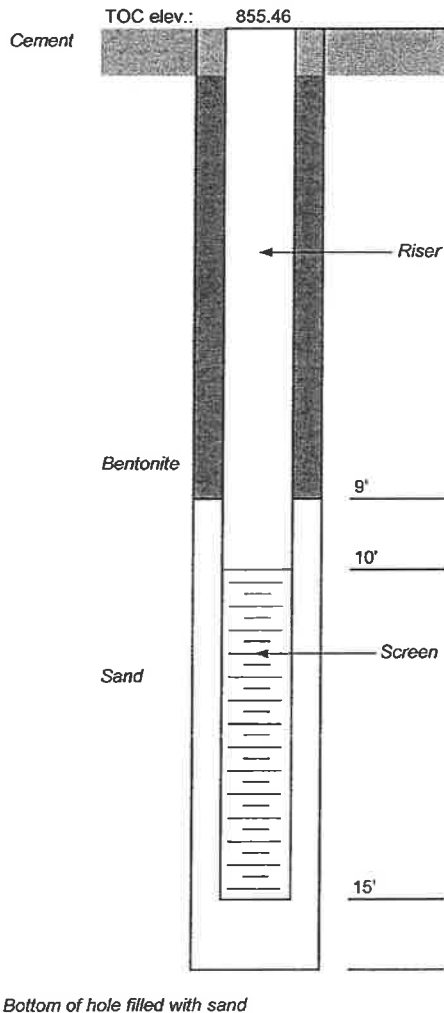
Project: USF Red Star

Location: Kirkwood, N.Y.

Well No.: GP-3

Permit No.: NA

TOC elev.: _____



DRILLING SUMMARY

Drilling Company: North Star Drilling Drillers: Jeff Thew
Drill Rig/Model: CME 55
Borehole Diameters: 4" Drilling Fluid: None
Bits/Depths: Auger
Total Depth: 15' Depth To Water: 8.9'
Supervisor Geologist: P.von Schondorf

WELL DESIGN

Casing Material: PVC Diameter: 1"
Screen Size: 5 ft. Diameter: 1"
Slot Size: 0.01 Setting: 15'
Backfill: Bentonite Setting: 0 - 7'
Filter Material: Sand Setting: 9' - 15'
Seals Material: Bentonite Setting: 7' - 9'
Sand Cap: None Setting: _____
Grout: None Setting: _____
Surface Casing Material: PVC Setting: 2' above g.s.

TIME LOG

	Started	Completed
Drilling:	<u>19-Feb-99</u>	<u>19-Feb-99</u>
Installation:	<u>19-Feb-99</u>	<u>19-Feb-99</u>
Development:	<u>19-Feb-99</u>	<u>19-Feb-99</u>

WELL DEVELOPMENT

Method: Bailing
Static Depth to Water: 14'
Pumping Depth To Water: NA
Pumping Rate: NA Spec. Capacity: NA
Volume Pumped: 0.5 gallons

LEADER ENVIRONMENTAL, INC.

Environmental Engineers & Scientists

WELL CONSTRUCTION SUMMARY

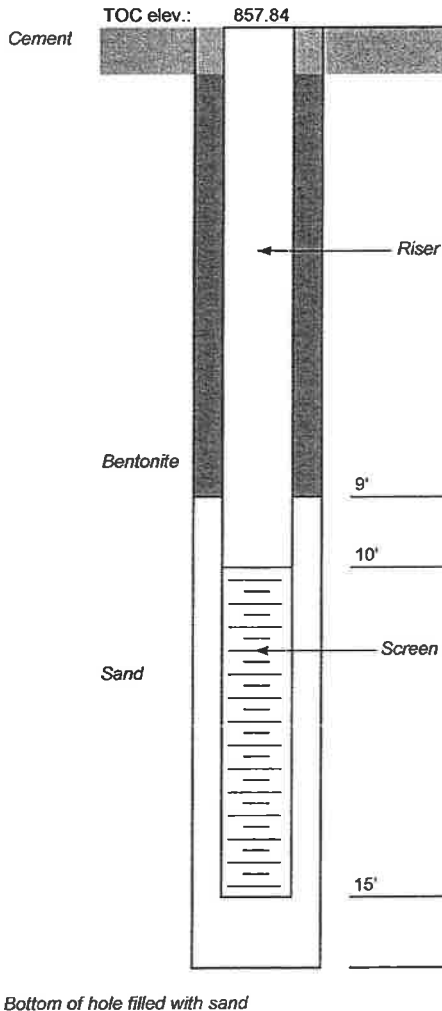
Project: USF Red Star

Location: Kirkwood, N.Y.

Well No.: GP-4

Permit No.: NA

TOC elev.: _____



DRILLING SUMMARY

Drilling Company: North Star Drilling Drillers: Jeff Thew
Drill Rig/Model: CME 55
Borehole Diameters: 4" Drilling Fluid: None
Bits/Depths: Auger
Total Depth: 15' Depth To Water: 8.86'
Supervisor Geologist: P.von Schondorf

WELL DESIGN

Casing Material: PVC Diameter: 1"
Screen Size: 5 ft. Diameter: 1"
Slot Size: 0.01 Setting: 15'
Backfill: Soil Setting: 0 - 7'
Filter Material: Sand Setting: 9' - 15'
Seals Material: Bentonite Setting: 7' - 9'
Sand Cap: None Setting: _____
Grout: None Setting: _____
Surface Casing Material: PVC Setting: 2' above g.s.

TIME LOG

	Started	Completed
Drilling:	<u>19-Feb-99</u>	<u>19-Feb-99</u>
Installation:	<u>19-Feb-99</u>	<u>19-Feb-99</u>
Development:	<u>19-Feb-99</u>	<u>19-Feb-99</u>

WELL DEVELOPMENT

Method: Bailing
Static Depth to Water: 14'
Pumping Depth To Water: NA
Pumping Rate: NA Spec. Capacity: NA
Volume Pumped: 0.5 gallons

Environmental Engineers & Scientists

Project	TNT-Red Star	Location	Kirkwood	Permit #:	NA
Date Drilled	6/23/10	Drilling Co.:	Trec Environmental	Job #:	
Total Depth	16 ft.	Method Used:	Geoprobe		
Inspector	P. von Schondorf	Organic Vapor Inst:	MicroTIP	Water elv:	848.43

Job #: _____

o:\forms\TW-1.xls 10/28/2013

Environmental Engineers & Scientists

Water elv: 847.97

o:\forms\TW-2.xls 10/28/2013

Environmental Engineers & Scientists

Water elv: 848.86

o:\forms\TW-3.xls 10/28/2013

Environmental Engineers & Scientists

Project <u>TNT-Red Star</u>	Location <u>Kirkwood</u>	Permit #: <u>NA</u>
Date Drilled <u>6/23/10</u>	Drilling Co.: <u>Trec Environmental</u>	Job #: <u></u>
Total Depth <u>16 ft.</u>	Method Used: <u>Geoprobe</u>	
Inspector <u>P. von Schondorf</u>	Organic Vapor Inst: <u>MicroTIP</u>	Water elev: <u>848.2</u>

100

WL 9.1 ft.

Environmental Engineers & Scientists

Project	TNT-Red Star	Location	Kirkwood	Permit #:	NA
Date Drilled	6/23/10	Drilling Co.:	Trec Environmental	Job #:	
Total Depth	16 ft.	Method Used:	Geoprobe		
Inspector	P. von Schondorf	Organic Vapor Inst:	MicroTIP	Water elev:	848.38

o:\forms\TW-5.xls 10/28/2013

Environmental Engineers & Scientists

Project	TNT-Red Star	Location	Kirkwood	Permit #:	NA
Date Drilled	6/23/10	Drilling Co.:	Trec Environmental	Job #:	
Total Depth	16 ft.	Method Used:	Geoprobe		
Inspector	P. von Schondorf	Organic Vapor Inst:	MicroTIP	Water elv:	848.05

o:\forms\TW-6.xls 10/28/2013

LEADER PROFESSIONAL SERVICES

Environmental Engineers & Scientists

LOG OF BORING

Project TNT-Red Star Location Kirkwood
 Date Drilled 6/23/10 Drilling Co.: Trec Environmental
 Total Depth 16 ft. Method Used: Geoprobe
 Inspector P. von Schondorf Organic Vapor Inst: MicroTIP Water elev: 847.56

BORING # TW-7

Page 1 of 1

Permit #: NA

Job #:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Unified Class.	Notes
4	1	N/A	0-4	4	0	Approx. 6-inch of asphalt 0.5 to 1 ft. Gravel fill. 1 to 1.2 ft. Gray Silt and Clay, organic matter, stiff. 1.2 to 4 ft. Silt and sand some gravel	ML/CL ML/SM	
8	2	N/A	4-8	4	0	4 to 8 ft. Brown Gravel some silt and sand, dry.	GM	WL 8.6 ft.
12	3	N/A	8-12	4	0	8 to 12 Brown Gravel and sand, little silt. Wet.	GM	
16	4	N/A	12-16	4	0	Same as above to 15 ft. 15 ft. Gray clay, some fine sand.	CL	

Environmental Engineers & Scientists

Project	TNT-Red Star	Location	Kirkwood	Permit #:	NA
Date Drilled	6/23/10	Drilling Co.:	Trec Environmental	Job #:	
Total Depth	16 ft.	Method Used:	Geoprobe		
Inspector	P. von Schondorf	Organic Vapor Inst:	MicroTIP	Water elv:	847.83

WL 10.4

Environmental Engineers & Scientists

Project	TNT-Red Star	Location	Kirkwood	Permit #:	NA
Date Drilled	6/23/10	Drilling Co.:	Trec Environmental	Job #:	
Total Depth	12 ft.	Method Used:	Geoprobe		
Inspector	P. von Schondorf	Organic Vapor Inst:	MicroTIP	Water elv:	851.08

Water elev: 851.08

Moist-wet
at 7.5 ft.

Environmental Engineers & Scientists

Project	TNT-Red Star	Location	Kirkwood	Permit #:	NA
Date Drilled	6/23/10	Drilling Co.:	Trec Environmental	Job #:	
Total Depth	16 ft.	Method Used:	Geoprobe		
Inspector	P. von Schondorf	Organic Vapor Inst:	MicroTIP	Water elev:	847.38

Water elv: 847.38

o:\forms\TW-10.xls 10/28/2013

APPENDIX 5 – SITE WIDE INSPECTION FORM

Site-Wide Inspection Form

FACILITY NAME AND LOCATION

INSPECTOR NAME AND ORGANIZATION

DATE

INSPECTION FINDINGS:

DESCRIPTION OF BUILDINGS, USES, AND OCCUPANTS:

- ***TERMINAL***
- ***GARAGE***

DESCRIPTION OF NEW FEATURES OR BUILDINGS (BUILDING RENOVATIONS, MONITORING WELLS, BUILDINGS WHERE INDIVIDUALS MIGHT WORK, PAVEMENT, UTILITIES, UNDERGROUND TANKS).

CONDITION OF SITE PROPERTY AND ADJACENT PROPERTY (DRAINAGE SWALES, PAVEMENT CONDITION [NOTICEABLE STAINS OR SPILLS], WASTE MANAGEMENT PRACTICES [PRESENCE OF UNSECURED DEBRIS, DRUMS, EQUIPMENT]).

SITE RECORDS ARE COMPLETE AND UP TO DATE, AND SITE'S GENERAL COMPLIANCE WITH SITE MANAGEMENT PLAN

ACTION ITEMS:

DATE ACTION ITEMS WERE ADDRESSED:

USE OF THE SITE IS COMPLIANT WITH THE ENVIRONMENTAL EASEMENT. YES/NO

I UNDERSTAND THAT A FALSE STATEMENT MADE HEREIN IS PUNISHABLE AS A CLASS "A" MISDEMEANOR, PURSUANT TO SECTION 210.45 OF THE PENAL LAW.

INSPECTOR SIGNATURE

DATE

APPENDIX 6
ENVIRONMENTAL EASEMENT
(To Be Provided)