OBG

REPORT

Remedial Investigation Report
Surface Soil Addendum

Former ITT Rochester Form Machine Facility
Site # 8-28-112
Town of Gates, NY

March 31, 2016

MARCH 31, 2016 | CLIENT # 3356 | PROJECT # 62490

Remedial Investigation Report Surface Soil Addendum

Former ITT Rochester Form Machine Facility
Site # 8-28-112
Town of Gates, New York

Prepared for: ITT Corporation

I, Douglas M. Crawford, certify that I am currently a NYS registered professional engineer and that this Remedial Investigation Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

DOUGLAS M. CRAWFORD, P.E., VICE PRESIDENT
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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ACRONYMS

4-4-DDE	1,1-bis-(4-chlorophenyl)-2,2-dichloroethene
4-4-DDT	dichloro-diphenyl-trichloroethane
AOC	area of concern
AST	above ground storage tank
bgs	below ground surface
COCs	primary constituents of concern
CP	Commissioners Policy
DBMS	data base management system
DCR	Declaration of Covenants and Restrictions
DUSR	Data Usability Summary Report
EDD	electronic data deliverable
ft	feet
HASP	Health and Safety Plan
ITT	ITT Corporation
NAD83	North American Datum of 1983
NAVD88	North American Vertical Datum of 1988
NELAP	National Environmental Laboratory Accreditation Program
NYS	New York State
NYSDEC	New York Department of Environmental Conservation
OBG	O'Brien & Gere Engineers, Inc.
PAHs	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyl
PPE	personal protective equipment
QAPP	Quality Assurance Project Plan
QHHEA	Qualitative Human Health Exposure Assessment
RFM	Former Rochester Form Machine
RI	Remedial Investigation
RIR	Remedial Investigation Report
SCOs	Soil Cleanup Objectives
SVOC	semi-volatile organic compound
TCA	1,1,1-trichloroethane
TCE	trichloroethylene
UST	underground storage tank
VOC	volatile organic compound

1. INTRODUCTION

1.1 ADDENDUM BACKGROUND

This document is an Addendum to the Remedial Investigation Report (RIR) for the Former Rochester Form Machine (RFM) Facility Site (Site # 8-28-112) located at 30 Pixley Industrial Parkway in the Town of Gates, New York (former RFM Site) (**Figure 1-1**). The RIR was prepared by O'Brien & Gere Engineers, Inc. (OBG) and was submitted to the New York State Department of Environmental Conservation (NYSDEC) on October 21, 2014. A RIR Soil Addendum was prepared by OBG and was submitted to NYSDEC on November 21, 2014. The Remedial Investigation (RI) was conducted by ITT Corporation (ITT) pursuant to an Order on Consent with NYSDEC, dated August 19, 2003 (Consent Order), with an effective date of August 29, 2003 (Index # B8-0614-02-05). A modification to the Consent Order, dated November 2, 2006, substitutes ITT Corporation for ITT Automotive, Inc. In addition, at the time the RI began, the site name was changed from ITT Automotive, Inc. to Former ITT Rochester Form Machine Facility Site, the former RFM Facility, or the former RFM Site. For the purposes of this Addendum, the RIR that addresses the former RFM Site will be referred to as the RFM RIR.

The purpose of this Surface Soil Addendum to the RFM RIR is to provide a presentation of surface soil sampling results obtained from the former RFM Site at the request of NYSDEC. Surface soil samples were collected from disturbed areas in the southern portion of the Site where potholing activities were completed for utility disconnection during demolition of the former RFM building.

2. SURFACE SOIL ADDENDUM METHODS

2.1 SURFACE SOIL SAMPLING

Potholing activities were performed during building demolition to locate utilities. These activities were completed in two general areas, in the southwest parking lot and in the southeastern grassy yard (**Figure 2-1**). At the request of NYSDEC (Sowers, 2015b), six surface soil samples were collected from the disturbed areas, two from the parking lot area and four from the grassy yard area. A surface soil sample record was completed for each sample describing the sample material and other pertinent observations. Surface soil sample records are included in **Appendix A**. Consistent with NYSDEC requests (NYSDEC, 2015), grab samples were collected from the 0- to 2-inch interval starting at the disturbed ground surface. Each soil sample was transferred from a disposable sampling spoon to the appropriate laboratory containers, labeled, and placed in a cooler containing ice. The analytical soil samples collected include six environmental samples, one field duplicate sample, one matrix spike sample, and one matrix spike duplicate sample. The samples were submitted to ALS Environmental (National Environmental Laboratory Approval Program #10145) under proper chain-of-custody protocols for analysis as identified in **Table 2-1**.

Soil samples were collected on November 24, 2015 and submitted to the laboratory for analysis. The laboratory missed the holding time for analysis of 1,4-dioxane. As a result, on December 14, 2015 samples were collected from the same locations (still marked in the field) as were sampled on November 24, 2015 and submitted to the laboratory for analysis of 1,4-dioxane only. Laboratory analytical reports are provided in **Appendix B**.

2.2 DATA MANAGEMENT

Analytical laboratory data was received in hardcopy and in electronic data deliverable (EDD) format. The electronic data was entered into a relational data base management system (DBMS) for use in preparation of data summary tables.

Data validation was performed by Vali-Data of Western New York, Inc. on each analytical report consistent with the Quality Assurance Project Plan (QAPP). Data usability summary reports (DUSRs) were prepared and data qualifiers identified in the DUSRs were entered into the database. DUSRs are provided in **Appendix C** of this report.

2.3 SURVEY

Horizontal coordinates were surveyed in North American Datum of 1983 (NAD83) New York West State Plane feet. Elevations were surveyed in feet above the North American Vertical Datum of 1988 (NAVD88). Surveying was performed by Popli Design Group. Survey coordinates are provided in **Table 2-1**.

3. SURFACE SOIL SAMPLING RESULTS

Detected concentrations were compared to the following three criteria:

- NYS Part 375 Restricted Commercial Use Soil Cleanup Objectives and NYS Commissioner's Policy (CP) CP-51 Restricted Commercial Use Soil Cleanup Objectives (Commercial Use SCOs),
- The NYS Part 375 Restricted Use Soil Cleanup Objectives for the Protection of Groundwater Resources and NYS CP-51 Restricted Use Soil Cleanup Objectives for the Protection of Groundwater Resources (Protection of Groundwater SCOs),
- New York State (NYS) Part 375 Unrestricted Use Soil Cleanup Objectives (Unrestricted Use SCOs) and NYS CP-51 Residential Use Soil Cleanup Objectives (Residential Use SCOs).

Results are discussed below and presented in **Figure 3-1 and Tables 3-1 through 3-5**. The Unrestricted Use SCOs and Residential Use SCOs were used for comparison in tables and figures but will not be discussed in the text below.

3.1 VOLATILE ORGANIC COMPOUND RESULTS

Volatile organic compounds (VOCs) including methylene chloride, toluene and trichloroethene (TCE) were detected in surface soils. However, no VOCs exceeded Commercial SCOs or Protection of Groundwater SCOs (**Table 3-1**).

3.2 SEMI-VOLATILE ORGANIC COMPOUND RESULTS

Semi-volatile organic compound (SVOC) detections were limited to polycyclic aromatic hydrocarbons (PAHs), which were detected in each surface soil sample collected but only exceeded Commercial SCOs at locations SS-3, SS-4, and SS-8 (**Table 3-2**). SS-3 and SS-4 are located within the parking lot and SS-8 is located along the edge of the pavement.

Benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, dibenzo[a,h]anthracene and indeno[1,2,3-cd]pyrene exceeded commercial SCOs at location SS-4. Benzo[a]pyrene exceeded Commercial SCOs at locations SS-3 and SS-8.

Benzo[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene and indeno[1,2,3-cd]pyrene exceeded Protection of Groundwater SCOs at one or more of the following locations: SS-3, SS-4 and SS-8.

Review of soil sample records for the two locations in the parking lot area indicates that one sample (SS-3) included asphalt fragments while the remaining sample (SS-4) included black fill and crushed stone with no odor, most likely crushed blacktop. PAHs are commonly associated with asphalt and elevated detections would be expected with soil mixed with asphalt as a result of potholing activities, as was the case at locations SS-3 and SS-4. Additionally, SS-8 is located along the edge of the pavement. Snow removal activities commonly deposited snow and pieces of asphalt along the edge of the pavement where SS-8 is located. Elevated PAHs at this location would also be expected as a result.

3.3 INORGANIC RESULTS

Several inorganics were detected in surface soils (**Table 3-3**). However, no inorganics exceeded Commercial SCOs or Protection of Groundwater SCOs.

3.4 PESTICIDE RESULTS

1,1-Bis-(4-chlorophenyl)-2,2-dichloroethene (4-4-DDE) and dichloro-diphenyl-trichloroethane (4-4-DDT) were detected in surface soils (**Table 3-4**). However, no pesticides exceeded Commercial SCOs or Protection of Groundwater SCOs.

3.5 POLYCHLORINATED BIPHENYLS RESULTS

No polychlorinated biphenyls (PCBs) were detected in surface soils (**Table 3-5**).

4. QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT

The RIR for the RFM Site (OBG, 2014a), which included a Qualitative Human Health Exposure Assessment (QHHEA), was submitted to the NYSDEC on October 21, 2014. In a letter dated January 6, 2015, NYSDEC indicated that the RIR was acceptable for developing the Feasibility Study for the Site (Sowers, 2015a). The QHHEA presented in the RIR identified and characterized the potentially exposed human population(s) under current and reasonably anticipated future use scenarios, and evaluated the completeness of exposure pathways linking these receptor populations and Site-related constituents of concern (COCs).

This section is an addendum to the QHHEA presented in the RIR, and evaluates potential human exposures to surface soils within disturbed areas in the southern portion of the Site and was completed in accordance with NYSDOH guidance (Appendix 3B of NYSDEC's DER-10 guidance) (NYSDEC, 2010a). This section focuses on COCs identified in surface soil and the potentially complete pathways of exposure to surface soil COCs identified from the November-December 2015 surface soil samples. To provide context for this QHHEA, a summary of the QHHEA from the RIR is presented in **Section 4.1** below.

4.1 RIR QHHEA SUMMARY

The subsequent sections review the findings of the QHHEA submitted as part of the RIR (OBG, 2014a).

4.1.1 Potential AOCs and Site COCs

The QHHEA included in the RIR was developed utilizing site information, data from existing reports, and data collected during the RI. Potential historic areas of concern (AOCs) were identified for the former RFM Site (OBG, 2014a) including; (1) the northern portion of the former RFM building which had a 500- to 1,000-gallon heating oil underground storage tank (UST), a degreaser, and a brazing waste dumpster (H2M Group, 1993); and (2) the southern portion of the former RFM building which had four 275-gallon above ground storage tanks (ASTs) which contained 1,1,1-trichloroethane (TCA), two 500-gallon acid wash tanks, and a degreaser.

The RI and pre-RI investigations characterized the nature and extent of overburden soils, bedrock, groundwater, soil vapor, and the potential for vapor intrusion at the former RFM Site and at select off-Site properties. The RIR concluded the primary COCs associated with the former RFM Site included TCA, with associated degradation products, and 1,4-dioxane. Site operations included the use of TCA as a degreasing product and 1,4-dioxane as a TCA stabilizing agent (NYSDEC, 2001). Other compounds, including PCE and associated degradation products, were detected at the Site but were not considered to be related to activities at the former RFM Site.

4.1.2 COC Migration Pathways and Affected Media

Organic COCs (e.g., TCA, 1,4-dioxane) are present in subsurface soils (2 to 10 feet [ft] below ground surface [bgs]) beneath portions of the former RFM building. The vertical extent of these COCs extends down to the top of bedrock. Because these soils are located under the former RFM building, transport of these chemicals is limited to the migration of the vapors and transport by groundwater. Based on the Henry's Law Constants for TCA and its various breakdown products (e.g., 1,1-DCA), volatilization of these constituents to soil vapor is expected to occur. The compound 1,4-dioxane has a much lower Henry's Law Constant and therefore is not likely to migrate in the soil vapor. As evidenced by the indoor air sampling results for the former RFM building, cracks or other permeable penetrations in the building slab allow soil vapors to migrate into the building. The premise that 1,4-dioxane is unlikely to migrate to indoor air is consistent with the results of the vapor intrusion investigation for

the Site. This COC was not detected in all five indoor air samples collected within the former RFM building, despite the presence of 1,4-dioxane in one of the sub-slab soil samples.

Sorption to soil matrix can retard the migration of VOCs. The naturally occurring carbon content of the soils will affect the degree of VOC sorption. Abiotic and biological processes could act to degrade VOCs in the subsurface. Dispersion processes and dilution can act to reduce VOC concentrations in soil vapors and VOC concentrations when soil vapors discharge to a building or the ambient air.

The water table was observed in the Eramosa Dolomite across much of the former RFM Site; however, groundwater was intermittently observed in the overburden in certain areas on the Site. The RI data suggest that the overburden is generally unsaturated except for those locations and times when groundwater elevations extend above the elevation of the top of bedrock. When groundwater is in contact with impacted soils, the COCs are expected to dissolve into and then migrate with the groundwater. The overburden groundwater is expected to migrate down into the bedrock and become part of the bedrock groundwater system. Groundwater flow and transport of COCs in bedrock at the former RFM Site primarily occurs within the bedrock fractures.

4.1.3 Current and Future Land Use

The site is vacant and mostly paved, with only a few small vegetated areas, and it is zoned as "General Industrial" (Monroe County, 2001). Based on the current and likely continued industrial use zoning designation and the 2004 Declaration of Covenants and Restrictions (DCR) restriction for industrial re-use only, it is reasonable to anticipate the former RFM Site will continue to be used for industrial purposes. The most likely future exposure scenario at the Site envisions limited penetration of paved areas, and thus exposure to surface and subsurface soil, during excavation activities. An alternate hypothetical scenario assumed that the soils currently under the existing building would be exposed.

4.1.4 Potential Receptors and Exposure Pathways

Points of potential contact with COCs by human receptors were considered based on current and potential future uses of the Site. The demography of local populations and land use characteristics were taken into consideration when the pathways were developed.

The specific receptors/pathways considered in the QHHEA for the former RFM Site as presented in the RIR (OBG, 2014a) were as follows:

- ***Current/future trespasser (adolescent and adult)***: A trespasser is a person who gained access to the Site without permission. The Site currently is not in use. Exposure to soil by a current trespasser was considered *de minimis* in the QHHEA due to the predominance of impermeable surfaces, which precluded exposure to soil across the majority of the Site. The few unpaved portions were not associated with documented areas of impact, are small, and are covered by maintained grass that further reduces potential exposure.

  The alternative hypothetical future scenario assumed soils currently under the existing building were exposed following demolition and removal of the building and its foundation. This scenario was included to understand the exposure associated with soils beneath the building slab. Under this hypothetical redevelopment scenario, future trespassers were assumed to be exposed to surface soil (0-2 ft bgs) through incidental ingestion, dermal contact, and inhalation of fugitive dust.

- ***Current/future maintenance worker (adult)***: This receptor was anticipated to perform a variety of general service functions at the Site, including maintenance of the former RFM building and Site grounds. Exposure for the current maintenance worker was anticipated to be minimal for the reasons discussed above for the current trespasser.

  Under the hypothetical future scenario, which assumes removal of the building slab and asphalt lots, maintenance workers were assumed to be exposed to surface soil (0-2 ft bgs). As discussed previously for the trespasser, the evaluation of the future maintenance worker was included to characterize the potential exposure to soils which are currently under the existing building slab. Therefore, a future maintenance

worker may be exposed to Site-related constituents in surface soil through incidental ingestion, dermal contact, and inhalation of fugitive dust.

- ***Future industrial worker (adult)***: Future industrial workers were assumed to work within the existing building or another building in its place, and were a potential receptor population under a hypothetical future scenario that entails the rehabilitation of the existing building for industrial use or redevelopment of the property for industrial use. Under a future industrial use scenario, indirect exposure via inhalation of groundwater-derived and/or soil-derived vapors in the interior space of the building was considered a complete exposure pathway.
- ***Future construction worker (adult)***: The hypothetical future construction worker was selected as a receptor for the QHHEA due to the potential for excavation or construction to occur at the Site in the future. These workers could receive significant exposure to surface and subsurface soil during excavation activities. The construction worker may be exposed to Site-related COCs in surface soil (0-2 ft bgs) and subsurface soil (2-10 ft bgs) through incidental ingestion, dermal contact, and inhalation of fugitive dust. Ten ft was selected as a reasonable maximum depth at which construction workers were likely to be exposed based on the depths of typical construction excavations. This depth also roughly corresponds to the lower depth of overburden soil (and upper depth of bedrock) across much of the Site.
- ***Future sewer/water line worker (adult)***: Underground sewer and/or water lines may require periodic inspection, servicing, and maintenance. Therefore, a sewer/water line worker was evaluated in a future scenario that includes potential excavation and/or construction activities. The sewer/water line worker may be exposed to Site-related COCs in surface soil (0-2 ft bgs) and subsurface soil (2-10 ft bgs) through incidental ingestion, dermal contact, and inhalation of fugitive dust. Sewer or water lines were not likely to extend below 10 ft bgs; therefore, this depth was selected as the lower limit for sewer/water line worker exposures.

Site contractors/subcontractors associated with the collection and handling of environmental samples and with the potential treatment of impacted soil and groundwater were not evaluated. Contractor/subcontractor activities are typically covered under a Site-specific health and safety plan (HASP), which provides for the use of personal protective equipment (PPE) and includes preventative procedures for eliminating exposure and maximizing personal safety.

4.2 QHHEA FOR RECENTLY COLLECTED SURFACE SOIL SAMPLES

Surface soil samples (0 to 2 inches bgs) were collected from disturbed areas in the southern portion of the Site where potholing activities were completed for utility disconnection during demolition of the former RFM building. The 0- to 2-inch bgs sample interval represents the highest probability of receptor contact within the RI defined surface soil interval (0 to 2 ft bgs).

This QHHEA focuses on potential receptor surface soil exposure pathways at the Site. Potentially complete exposure pathways associated with surface soils at the former RFM Site include direct contact with soil via dermal contact or incidental ingestion, and indirect contact via inhalation of particulates and/or soil vapor in ambient or indoor air.

4.2.1 Summary of COCs in Surface Soils

Soil data were compared to the following three criteria:

- NYS Part 375 Restricted Commercial Use SCOs and NYS CP-51 Restricted Commercial Use SCOs (Commercial Use SCOs),
- The NYS Part 375 Restricted Use SCOs for the Protection of Groundwater Resources and NYS CP-51 Restricted Use SCOs for the Protection of Groundwater Resources (Protection of Groundwater SCOs),
- New York State (NYS) Part 375 Unrestricted Use SCOs (Unrestricted Use SCOs) and NYS CP-51 Residential Use SCOs (Residential Use SCOs).

None of the primary Site COCs noted above in **Section 4.1.1** exceeded applicable SCOs. Surface soil constituents exceeding applicable SCOs in at least one sample location included one metal (iron), seven PAH compounds (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, indeno[1,2,3-cd]pyrene, and two pesticides (4-4-DDE and 4-4-DDT).

Metals are not associated with Site operations and therefore iron was removed from consideration as a Site-related COC.

The seven PAH compounds are often associated with urban settings and can be the result of anthropogenic impacts such as asphalt paving, vehicle emissions, tire wear and coal tar-based sealcoats (Bradley *et al.*, 1994; Mahler *et al.*, 2012). Additionally, asphalt fragments (*e.g.,* black fill and crushed stone) were observed in surface soil samples and were likely deposited as a result of potholing and/or snow removal activities on Site. The presence of these PAHs in Site soils is likely related to the urban environment and not indicative of historic operations at the Site. As such, PAHs were ruled out as Site-related COCs in soil.

Concentrations of the two pesticide compounds were marginally above screening criteria, and were likely deposited on the land surface through depositional activities. 4-4-DDE and 4-4-DDT can be carried significant distances in the atmosphere through repetitive cycles of evaporation and deposition (ATSDR, 2002). The presence of these pesticides in the surface soil is likely related to regional anthropogenic use and not to Site-related activities.

4.2.2 Evaluation of COC Migration Pathways and Affected Media

Based on the surface soil samples collected, Site COCs were not detected near the former RFM building. Therefore, primary transport of the COCs is limited to the migration of the vapors (based on their presence in subsurface soil) and transport by groundwater, as described in **Section 4.1.2** of this QHHEA.

4.2.3 Updated Assessment of Current and Future Land Use

Human exposure under current land use conditions is considered minimal due largely to the high degree of impermeable surface at the Site. The former RFM building was demolished and removed in November/December 2015 but the concrete slab remains in place with no current plans for removal. Based on current Site zoning and a 2004 DCR that stipulates industrial land use, it is reasonable to anticipate the former RFM Site will be used for industrial purposes under a future redevelopment scenario.

4.2.4 Receptors and Exposure Pathways

This QHHEA evaluates potential exposures associated with surface soil under current and reasonably anticipated future land use at the former RFM Site. The exposure pathways considered for evaluation in this QHHEA include the most likely human receptor populations that would come in contact with surface soils. Relevant current and future exposure routes for receptors may include incidental ingestion, dermal exposure, and inhalation of surface soil dust into ambient air. Future exposure routes for receptors may include inhalation of soil vapors into newly constructed buildings; however, this is considered an incomplete exposure pathway because anticipated institutional controls and the Site Management Plan for the Site would require measures to eliminate potential vapor intrusion at any future building constructed on Site. No additional receptors/pathways were identified in this QHHEA.

The relevant surface soil receptors/pathways are summarized in **Table 4-1**.

4.3 SUMMARY AND CONCLUSION OF THE QHHEA

This addendum to the QHHEA presented in the RIR (OBG, 2014a) addresses surface soils collected from disturbed areas in the southern portion of the Site. The primary COCs at the former RFM Site are the VOCs TCA and its breakdown products, as well as 1,4-dioxane. These constituents were used in the former manufacturing processes at the Site, but were not detected in the surface soil samples collected.

The former RFM Site remains an unused, vacant property characterized by a preponderance of impermeable surfaces including asphalt parking lots. In November/December 2015, the unoccupied building, formerly used

for manufacturing of automotive components, was removed, with the slab remaining in place. Human exposure under current land use conditions is considered minimal due largely to the high degree of impermeable surface at the Site and the former RFM building slab remaining in place. Anticipated institutional controls and the Site Management Plan for the Site would require measures to eliminate potential vapor intrusion at any future building constructed on the Site.

Based on current Site zoning and a 2004 DCR that stipulates industrial land use, it is reasonable to anticipate the former RFM Site will continue to be used for industrial purposes, even assuming future redevelopment. The most likely near future exposure scenario assumes that the slab of the former RFM building and the pavement will remain in place. This scenario envisions penetration of paved areas, and thus exposure to soils during excavation activities. The alternate hypothetical scenario assumes that the soils currently under the existing building and paved surfaces are exposed to characterize the potential exposure associated with soils that are currently under the existing building and paved areas. Potential receptors and potentially complete exposure pathways under current and reasonably foreseeable future scenarios remained generally consistent with those identified in the RIR QHHEA (OBG, 2014a).

No Site-related COCs were detected in the surface soil samples above SCOs. Exposure to surface soils under the current scenario is considered *de minimis* at the former RFM Site. A complete future exposure pathway was identified for the reasons outlined in **Section 4.2.4**. Potential receptors and potentially complete exposure pathways under the future scenario include:

- Future adolescent and adult trespassers that may occasionally visit the former RFM Site, potentially exposed to COCs in surface soil through incidental ingestion, dermal contact, and inhalation of fugitive dust;
- Future maintenance workers that perform routine maintenance activities at the former RFM Site, potentially exposed to COCs in surface soil through incidental ingestion, dermal contact, and inhalation of fugitive dust;
- Construction workers that may be associated with on-Site construction-related activities in the future, potentially exposed to COCs in surface soil through incidental ingestion, dermal contact, and inhalation of fugitive dust; and
- Sewer/water line workers that may inspect and service utility lines at the Site in the future, potentially exposed to COCs in surface soil through incidental ingestion, dermal contact, and inhalation of fugitive dust.

Industrial workers that are anticipated to work in a future on-Site building potentially exposed to COCs via inhalation of soil vapors in the interior space of the building is not considered a complete exposure pathway because anticipated institutional controls and the Site Management Plan would require measures to eliminate potential vapor intrusion at any future building constructed on the Site.

5. DISCUSSION

VOCs, inorganics and pesticides were detected in surface soils but did not exceed Commercial SCOs or Protection of Groundwater SCOs. No PCBs were detected in surface soils.

PAHs were detected above Commercial SCOs and Protection of Groundwater SCOs in two samples collected from the parking lot and one sample along the parking lot pavement edge. As noted in **Section 3.2**, two of the surface soil samples exceeding SCOs were collected from areas disturbed by potholing activities during building demolition and soil sample records indicated the presence of asphalt fragments in the samples. Additionally, the one sample exceeding SCOs along the pavement edge was located where snow removal activities commonly deposited snow and pieces of asphalt. Elevated PAHs at these locations would be expected, and they likely represent asphalt rather than soil conditions.

A QHHEA was completed to evaluate potential human exposure to Site-related COCs at the former RFM Site under current and reasonably anticipated future use scenarios. The former RFM Site remains an unused, vacant property characterized by a preponderance of impermeable surfaces including asphalt parking lots. Human exposure under current land use conditions is considered minimal due largely to the high degree of

impermeable surface at the Site and the former RFM building being removed. Potential receptors and potentially complete exposure pathways under current and reasonably foreseeable future scenarios remained generally consistent with those identified in the RIR QHHEA (OBG, 2014a).

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Figures

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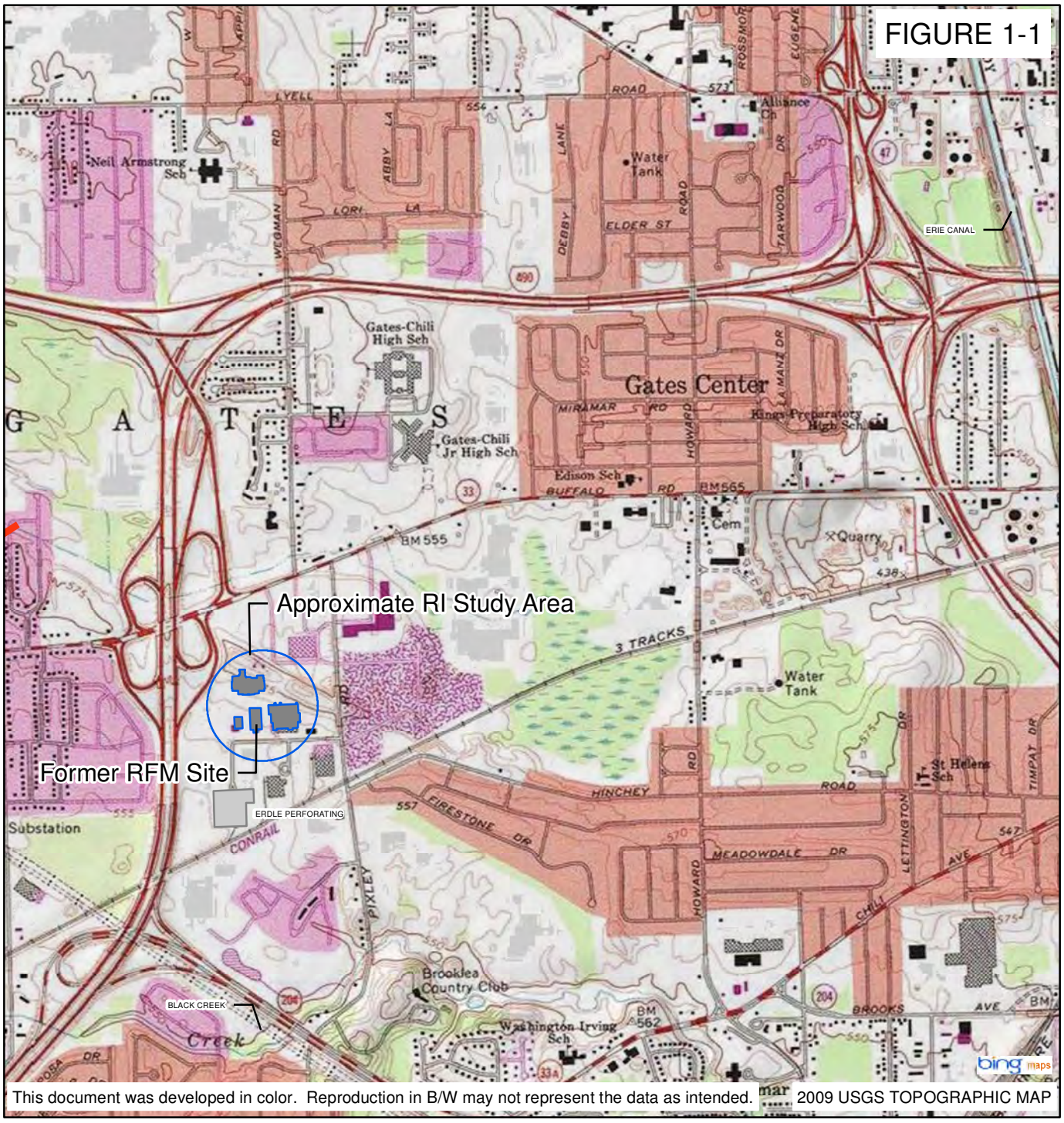
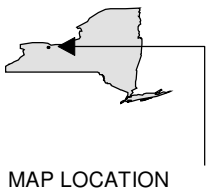
FIGURE 1-1



This document was developed in color. Reproduction in B/W may not represent the data as intended. 2009 USGS TOPOGRAPHIC MAP

ADAPTED FROM: (BING) USGS ROCHESTER WEST QUADRANGLE

FORMER ITT ROCHESTER FORM MACHINE FACILITY
TOWN OF GATES, NEW YORK
SITE #8-28-112



MAP LOCATION

N

SITE LOCATION

0 1,000 2,000 4,000 6,000 8,000

Feet

MAY 2012
3356.35273

1:24,000

O'BRIEN & GERE

N

LEGEND

PROPERTY LINE

FORMER ITT ROCHESTER FORM MACHINE FACILITY
TOWN OF GATES, NEW YORK
SITE #8-28-112

SITE PLAN

0 40 80 160
Feet

3356.62490
FEBRUARY 2016

O'BRIEN & GERE ENGINEERS, INC.

N

LEGEND

SURFACE SOIL LOCATION

AREA OF CONCERN (AOC)

FORMER ITT ROCHESTER FORM
MACHINE FACILITY
TOWN OF GATES, NEW YORK
SITE #8-28-112

SURFACE SOIL LOCATIONS AT THE FORMER RFM SITE

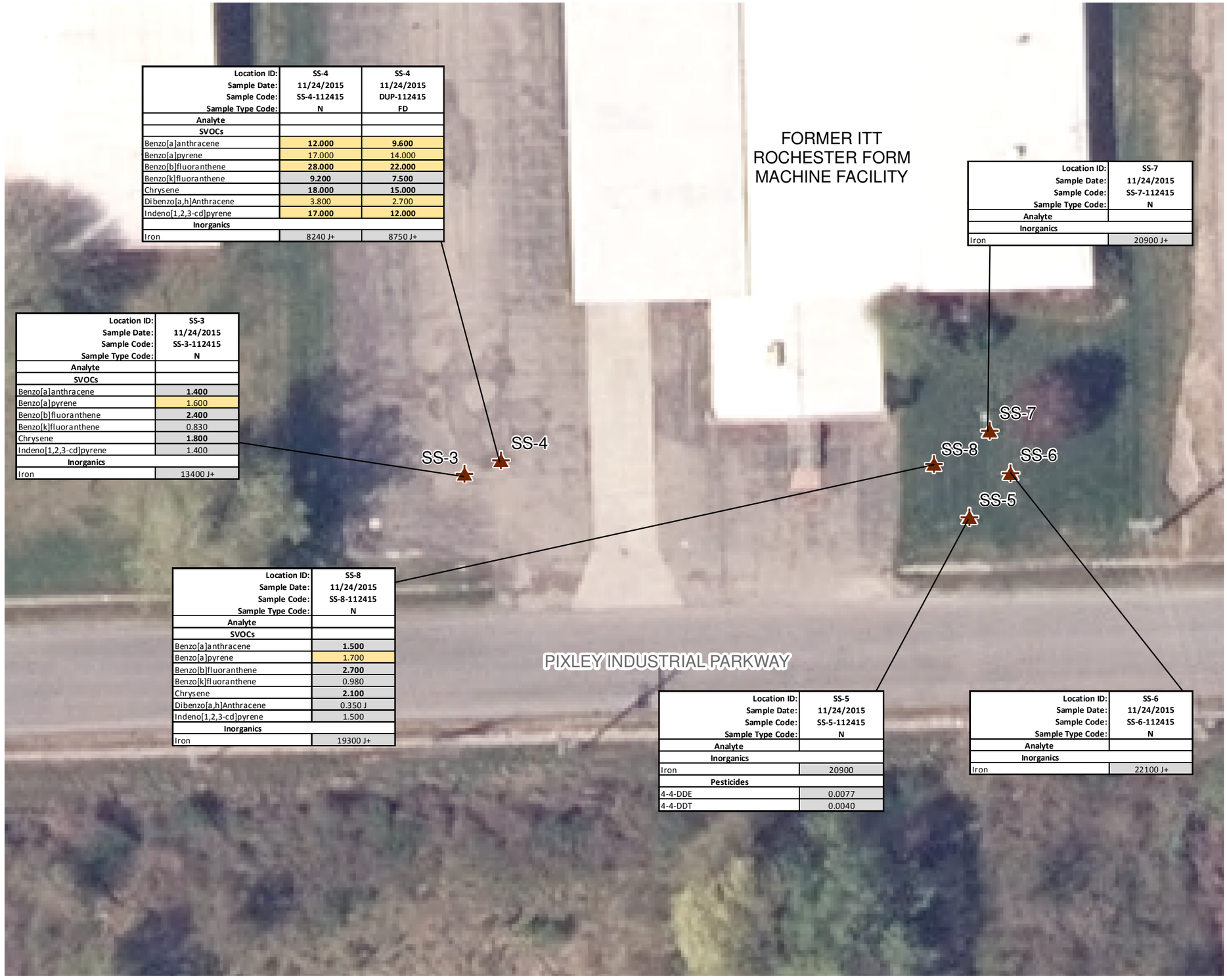
0 15 30 60
Feet

3356.62490
FEBRUARY 2016

O'BRIEN & GERE ENGINEERS, INC.

PLOTDATE: 02/19/16 12:10:23 PM Stantosa

I:\ltt.3356\62490.Rfm-Surface-Soil\Docs\DWG\MXD\SS_Locs_RFM.mxd



Location ID:	SS-4	SS-4
Sample Date:	11/24/2015	11/24/2015
Sample Code:	SS-4-112415	DUP-112415
Sample Type Code:	N	FD
Analyte		
SVOCs		
Benzo[a]anthracene	**12.000**	**9.600**
Benzo[a]pyrene	17.000	14.000
Benzo[b]fluoranthene	**28.000**	**22.000**
Benzo[k]fluoranthene	**9.200**	**7.500**
Chrysene	**18.000**	**15.000**
Dibenzo[a,h]Anthracene	3.800	2.700
Indeno[1,2,3-cd]pyrene	**17.000**	**12.000**
Inorganics		
Iron	8240 J+	8750 J+

Location ID:	SS-3
Sample Date:	11/24/2015
Sample Code:	SS-3-112415
Sample Type Code:	N
Analyte	
SVOCs	
Benzo[a]anthracene	**1.400**
Benzo[a]pyrene	1.600
Benzo[b]fluoranthene	**2.400**
Benzo[k]fluoranthene	0.830
Chrysene	**1.800**
Indeno[1,2,3-cd]pyrene	1.400
Inorganics	
Iron	13400 J+

Location ID:	SS-8
Sample Date:	11/24/2015
Sample Code:	SS-8-112415
Sample Type Code:	N
Analyte	
SVOCs	
Benzo[a]anthracene	**1.500**
Benzo[a]pyrene	1.700
Benzo[b]fluoranthene	**2.700**
Benzo[k]fluoranthene	0.980
Chrysene	**2.100**
Dibenzo[a,h]Anthracene	0.350 J
Indeno[1,2,3-cd]pyrene	1.500
Inorganics	
Iron	19300 J+

Location ID:	SS-7
Sample Date:	11/24/2015
Sample Code:	SS-7-112415
Sample Type Code:	N
Analyte	
Inorganics	
Iron	20900 J+

Location ID:	SS-5
Sample Date:	11/24/2015
Sample Code:	SS-5-112415
Sample Type Code:	N
Analyte	
Inorganics	
Iron	20900
Pesticides	
4-4-DDE	0.0077
4-4-DDT	0.0040

Location ID:	SS-6
Sample Date:	11/24/2015
Sample Code:	SS-6-112415
Sample Type Code:	N
Analyte	
Inorganics	
Iron	22100 J+

N

LEGEND

SURFACE SOIL LOCATION

NOTES:
ALL UNITS IN MILLIGRAMS PER KILOGRAM (mg/kg).
BOLD - EXCEEDS 6 NYCRR PART 375 OR CP-51 PROTECTION OF GROUNDWATER SOIL CLEANUP OBJECTIVES.
- EXCEEDS 6 NYCRR PART 375 UNRESTRICTED SOIL CLEANUP OBJECTIVES OR CP-51 RESIDENTIAL SOIL CLEANUP OBJECTIVES.
- EXCEEDS 6 NYCRR PART 375 OR CP-51 COMMERCIAL SOIL CLEANUP OBJECTIVES.

NC - NO CRITERIA EXISTS.
SAMPLE DEPTH: 0 TO 0.17 FT BGS.
SAMPLE TYPE CODE: N - NORMAL, FD - FIELD DUPLICATE.
SVOC - SEMI-VOLATILE ORGANIC COMPOUND.
U - NOT DETECTED AT THE DETECTION LIMIT SHOWN,
J - ESTIMATED VALUE, J+ - ESTIMATED HIGH VALUE.
REFERENCES:
6 NYCRR PART 375, TABLE 375-6.8(B)
FINAL COMMISSIONER POLICY CP-51, TABLE 1

FORMER ITT ROCHESTER FORM
MACHINE FACILITY
TOWN OF GATES, NEW YORK
SITE #8-28-112

CONCENTRATIONS EXCEEDING SCOS IN SURFACE SOIL AT THE FORMER RFM SITE

0 15 30 60
Feet

3356.62490
MARCH 2016

O'BRIEN & GERE ENGINEERS, INC.

Tables

Table 2-1
Surface Soil Sample Summary
Former ITT Rochester Form Machine Facility
Site #8-28-112
Town of Gates, New York

Location ID	Northing	Easting	Elevation	Sample Code	Sample Date	VOCs plus TICs by USEPA Method 8260C	SVOCs plus TICs by USEPA Method 8270D	1,4-Dioxane by USEPA Method 8270D	TAL metals plus cyanide by USEPA Method 6010C/7471B/9012B	Pesticides by USEPA Method 8081B	PCBs by USEPA Method 8082A
SS-3	1145711.40	1380374.71	561.07	SS-3-112415	11/24/2015	X	X		X	X	X
				SS-3-121415	12/14/2015			X			
SS-4	1145715.38	1380385.75	560.94	SS-4-112415	11/24/2015	X	X		X	X	X
				DUP-112415*		X	X		X	X	X
				SS-4-121415	12/14/2015			X			
				DUP-121415*				X			
SS-5	1145698.28	1380526.94	561.48	SS-5-112415	11/24/2015	X	X		X	X	X
				SS-5-121415	12/14/2015			X			
SS-6	1145711.61	1380539.30	563.23	SS-6-112415	11/24/2015	X	X		X	X	X
				SS-6-121415	12/14/2015			X			
SS-7	1145724.37	1380533.04	563.43	SS-7-112415	11/24/2015	X	X		X	X	X
				SS-7-121415	12/14/2015			X			
SS-8	1145714.32	1380516.28	562.48	SS-8-112415	11/24/2015	X	X		X	X	X
				SS-8-121415	12/14/2015			X			

Notes
* - Duplicate sample
Horizontal Datum- NAD83(2011) - New York State Plane Coordinates, West Zone
PCBs - Polychlorinated biphenyls
Project Units - U.S. Survey Feet
Sample Interval: 0 to 0.17 ft bgs
SVOCs - Semi-volatile organic compounds
TAL - Target analyte list
TICs - Tentatively identifiable compounds
USEPA - United States Environmental Protection Agency
Vertical Datum - NAVD88
VOCs - Volatile organic compounds

Table 3-1
VOC Anaytical Results for Surface Soil Samples at the Former RFM Site
Former ITT Rochester Form Machine Facility
Site #8-28-112
Town of Gates, New York

						Location ID:	SS-3	SS-4	SS-4	SS-5	SS-6	SS-7	SS-8
						Sample Date:	11/24/2015	11/24/2015	11/24/2015	11/24/2015	11/24/2015	11/24/2015	11/24/2015
						Sample Code:	SS-3-112415	SS-4-112415	DUP-112415	SS-5-112415	SS-6-112415	SS-7-112415	SS-8-112415
						Start Depth (ft bgs):	0	0	0	0	0	0	0
						End Depth (ft bgs):	0.17	0.17	0.17	0.17	0.17	0.17	0.17
						Sample Type Code:	N	N	FD	N	N	N	N
Analyte	Part 375 Unrestricted Use SCOs[1]	NY CP-51 Residential Use SCOs[2]	Part 375 Protection of Groundwater SCOs[3]	NY CP-51 Protection of Groundwater SCOs[4]	Part 375 Commercial Use SCOs[5]	NY CP-51 Commercial Use SCOs[6]							
1,1,1-Trichloroethane	0.68	NC	0.68	NC	500	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
1,1,2,2-Tetrachloroethane	NC	35	NC	0.6	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
1,1,2-Trichloroethane	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
1,1-Dichloroethane	0.27	NC	0.27	NC	240	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
1,1-Dichloroethene	0.33	NC	0.33	NC	500	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
1,2,3-Trichlorobenzene	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
1,2,4-Trichlorobenzene	NC	NC	NC	3.4	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
1,2-Dibromo-3-chloropropane	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
1,2-Dibromoethane	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
1,2-Dichlorobenzene	1.1	NC	1.1	NC	500	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
1,2-Dichloroethane	0.02	NC	0.02	NC	30	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
1,2-Dichloropropane	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
1,3-Dichlorobenzene	2.4	NC	2.4	NC	280	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
1,4-Dichlorobenzene	1.8	NC	1.8	NC	130	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
2-Butanone	0.12	100	0.12	0.3	500	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
2-Hexanone	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
4-Methyl-2-Pentanone	NC	NC	NC	1	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Acetone	0.05	NC	0.05	NC	500	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 UJ	0.0060 U
Benzene	0.06	NC	0.06	NC	44	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Bromochloromethane	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Bromodichloromethane	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Bromoform	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Bromomethane	NC	NC	NC	NC	NC	NC	0.0052 UJ	0.0052 UJ	0.0052 U	0.0055 UJ	0.0052 UJ	0.0048 UJ	0.0060 UJ
Carbon disulfide	NC	100	NC	2.7	NC	NC	0.0052 U	0.0052 U	0.0052 UJ	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Carbon Tetrachloride	0.76	NC	0.76	NC	22	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Chlorobenzene	1.1	NC	1.1	NC	500	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Chloroethane	NC	NC	NC	1.9	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Chloroform	0.37	NC	0.37	NC	350	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Chloromethane	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
cis-1,2-Dichloroethene	0.25	NC	0.25	NC	500	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Cis-1,3-Dichloropropene	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Cyclohexane	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Dibromochloromethane	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Dichlorodifluoromethane	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Ethylbenzene	1	NC	1	NC	390	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Isopropylbenzene	NC	100	NC	2.3	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
m,p-xylene	NC	NC	NC	NC	NC	NC	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.0095 U	0.012 U
Methyl Acetate	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Methylcyclohexane	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Methylene Chloride	0.05	NC	0.05	NC	500	NC	0.0052 U	0.00075 J	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
MTBE	0.93	NC	0.93	NC	500	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
o-Xylene	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Styrene	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Tetrachloroethene	1.3	NC	1.3	NC	150	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Toluene	0.7	NC	0.7	NC	500	NC	0.0086	0.015 J	0.0062	0.0061	0.011	0.0074	0.0097
trans-1,2-Dichloroethene	0.19	NC	0.19	NC	500	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Trans-1,3-Dichloropropene	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Trichloroethene	0.47	NC	0.47	NC	200	NC	0.021	0.04 J	0.019	0.018	0.029	0.02	0.039
Trichlorofluoromethane	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U

Table 3-1
VOC Anaytical Results for Surface Soil Samples at the Former RFM Site
Former ITT Rochester Form Machine Facility
Site #8-28-112
Town of Gates, New York

						Location ID:	**SS-3**	**SS-4**	**SS-4**	**SS-5**	**SS-6**	**SS-7**	**SS-8**
						Sample Date:	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**
						Sample Code:	**SS-3-112415**	**SS-4-112415**	**DUP-112415**	**SS-5-112415**	**SS-6-112415**	**SS-7-112415**	**SS-8-112415**
						Start Depth (ft bgs):	**0**	**0**	**0**	**0**	**0**	**0**	**0**
						End Depth (ft bgs):	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**
						Sample Type Code:	**N**	**N**	**FD**	**N**	**N**	**N**	**N**
Analyte	**Part 375 Unrestricted Use SCOs[1]**	**NY CP-51 Residential Use SCOs[2]**	**Part 375 Protection of Groundwater SCOs[3]**	**NY CP-51 Protection of Groundwater SCOs[4]**	**Part 375 Commercial Use SCOs[5]**	**NY CP-51 Commercial Use SCOs[6]**							
Trichlorotrifluoroethane	NC	NC	NC	NC	NC	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Vinyl Chloride	0.02	NC	0.02	NC	13	NC	0.0052 U	0.0052 U	0.0052 U	0.0055 U	0.0052 U	0.0048 U	0.0060 U
Xylene (total)	0.26	NC	1.6	NC	500	NC	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.0095 U	0.012 U

Notes:
All units in milligrams per kilogram (mg/kg)
Bold - Exceeds 6 NYCRR Part 375 or CP-51 Protection of Groundwater Soil Cleanup Objectives
- Exceeds 6 NYCRR Part 375 Unrestricted Soil Cleanup Objectives or CP-51 Residential Soil Cleanup Objectives
- Exceeds 6 NYCRR Part 375 or CP-51 Commercial Soil Cleanup Objectives
Exceeds 6 NYCRR Part 375 or CP-51 Commercial Soil Cleanup Objectives
ft bgs - feet below ground surface
NC - No criteria exists, NA - Not available
Sample Type Code: N - Normal, FD - Field Duplicate
U - Not Detected at the Detection Limit shown, J - Estimated value
VOC - Volatile Organic Compound

[1] 6 NYCRR Part 375, Table 375-6.8(b): Restricted Use Soil Cleanup Objectives, Protection of Public Health, Commercial, December 14, 2006.
[2] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Residential, October 21, 2010.
[3] 6 NYCRR Part 375, Table 375-6.8(b): Restricted Use Soil Cleanup Objectives, Protection of Public Health, Protection of Groundwater, December 14, 2006.
[4] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Protection of Groundwater, October 21, 2010.
[5] 6 NYCRR Part 375, Table 375-6.8(b): Unrestricted Use Soil Cleanup Objectives, Protection of Public Health, December 14, 2006.
[6] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Commercial, October 21, 2010.

Table 3-2
SVOC Analytical Results for Surface Soil Samples at the Former RFM Site
Former ITT Rochester Form Machine Facility
Site #8-28-112
Town of Gates, New York

						Location ID:	SS-3	SS-4	SS-4	SS-5	SS-6	SS-7	SS-8
						Sample Date:	11/24/2015	11/24/2015	11/24/2015	11/24/2015	11/24/2015	11/24/2015	11/24/2015
						Sample Code:	SS-3-112415	SS-4-112415	DUP-112415	SS-5-112415	SS-6-112415	SS-7-112415	SS-8-112415
						Start Depth (ft bgs):	0	0	0	0	0	0	0
						End Depth (ft bgs):	0.17	0.17	0.17	0.17	0.17	0.17	0.17
						Sample Type Code:	N	N	FD	N	N	N	N
Analyte	**Part 375 Unrestricted Use SCOs[1]**	**NY CP-51 Residential Use SCOs[2]**	**Part 375 Protection of Groundwater SCOs[3]**	**NY CP-51 Protection of Groundwater SCOs[4]**	**Part 375 Commercial Use SCOs[5]**	**NY CP-51 Commercial Use SCOs[6]**							
1,1'-Biphenyl	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 U	0.410 U
1,2,4,5-Tetrachlorobenzene	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 U	0.410 U
1,4-Dioxane	0.1	NC	0.1	NC	130	NC	0.073 U	3.500 U	3.500 U	0.080 U	0.079 U	0.086 U	0.084 U
2,3,4,6-Tetrachlorophenol	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
2,4,5-Trichlorophenol	NC	100	NC	0.1	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
2,4,6-Trichlorophenol	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
2,4-Dichlorophenol	NC	100	NC	0.4	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 U	0.410 U
2,4-Dimethylphenol	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 U	0.410 U
2,4-Dinitrophenol	NC	100	NC	0.2	NC	NC	3.700 U	18.000 U	9.000 U	2.000 U	1.900 U	2.000 UJ	2.100 U
2,4-Dinitrotoluene	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
2,6-Dinitrotoluene	NC	1.03	NC	1	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 U	0.410 U
2-Chloronaphthalene	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 U	0.410 U
2-Chlorophenol	NC	100	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
2-Methylnaphthalene	NC	0.41	NC	36.4	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 U	0.410 U
2-Methylphenol	0.33	NC	0.33	NC	500	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 U	0.410 U
2-Nitroaniline	NC	NC	NC	0.4	NC	NC	3.700 U	18.000 U	9.000 U	2.000 U	1.900 U	2.000 UJ	2.100 U
2-Nitrophenol	NC	NC	NC	0.3	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
3- and 4-Methylphenol (total)	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 U	0.410 U
3,3-Dichlorobenzidine	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 U	0.410 U
3-Nitroaniline	NC	NC	NC	0.5	NC	NC	3.700 U	18.000 U	9.000 U	2.000 U	1.900 U	2.000 UJ	2.100 U
4,6-Dinitro-2-methylphenol	NC	NC	NC	NC	NC	NC	3.700 U	18.000 U	9.000 U	2.000 U	1.900 U	2.000 UJ	2.100 U
4-Bromophenyl-phenylether	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
4-Chloro-3-methylphenol	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
4-Chloroaniline	NC	100	NC	0.22	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 U	0.410 U
4-Chlorophenyl-phenylether	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
4-Nitroaniline	NC	NC	NC	NC	NC	NC	3.700 U	18.000 U	9.000 U	2.000 U	1.900 U	2.000 UJ	2.100 U
4-Nitrophenol	NC	NC	NC	0.1	NC	NC	3.700 U	18.000 U	9.000 U	2.000 U	1.900 U	2.000 UJ	2.100 U
Acenaphthene	20	NC	98	NC	500	NC	0.720 U	3.600 U	0.480 J	0.380 U	0.380 U	0.390 U	0.410 U
Acenaphthylene	100	NC	107	NC	500	NC	0.720 U	3.600 U	0.350 J	0.380 U	0.380 U	0.390 U	0.410 U
Acetophenone	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 U	0.410 U
Anthracene	100	NC	1000	NC	500	NC	0.210 J	1.700 J	1.400 J	0.380 U	0.380 U	0.390 UJ	0.190 J
Atrazine	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Benzaldehyde	NC	NC	NC	NC	NC	NC	3.700 U	18.000 U	9.000 U	2.000 U	1.900 U	2.000 UJ	2.100 U
Benzo[a]anthracene	1	NC	1	NC	5.6	NC	**1.400**	**12.000**	**9.600**	0.120 J	0.360 J	0.1 J	**1.500**
Benzo[a]pyrene	1	NC	22	NC	1	NC	1.600	17.000	14.000	0.120 J	0.400	0.13 J	1.700
Benzo[b]fluoranthene	1	NC	1.7	NC	5.6	NC	**2.400**	**28.000**	**22.000**	0.200 J	0.650	0.2 J	**2.700**
Benzo[g,h,i]perylene	100	NC	1000	NC	500	NC	1.300	17.000	11.000	0.110 J	0.340 J	0.11 J	1.400
Benzo[k]fluoranthene	0.8	NC	1.7	NC	56	NC	0.830	**9.200**	**7.500**	0.380 U	0.190 J	0.067 J	0.980
Bis(2-Chloroethoxy)methane	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Bis(2-Chloroethyl)Ether	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Bis(2-Chloroisopropyl)ether	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Bis(2-Ethylhexyl)phthalate	NC	50	NC	435	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Butylbenzylphthalate	NC	100	NC	122	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Caprolactam	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Carbazole	NC	NC	NC	NC	NC	NC	0.200 J	2.900 J	2.000	0.380 U	0.071 J	0.390 UJ	0.220 J
Chrysene	1	NC	1	NC	56	NC	**1.800**	**18.000**	**15.000**	0.150 J	0.520	0.170 J	**2.100**
Dibenzo[a,h]Anthracene	0.33	NC	1000	NC	0.56	NC	0.330 J	3.800	2.700	0.380 U	0.080 J	0.390 UJ	0.350 J
Dibenzofuran	7	NC	210	6.2	350	NC	0.720 U	3.600 U	0.320 J	0.380 U	0.380 U	0.390 U	0.410 U
Diethylphthalate	NC	100	NC	7.1	NC	NC	0.720 U	3.600 U	1.700 U	0.084 J	0.380 U	0.390 U	0.410 U
Dimethylphthalate	NC	100	NC	27	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Di-n-butylphthalate	NC	100	NC	8.1	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Di-n-octylphthalate	NC	100	NC	120	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Fluoranthene	100	NC	1000	NC	500	NC	3.300	37.000	28.000	0.240 J	1.000	0.320 J	4.200

Table 3-2
SVOC Analytical Results for Surface Soil Samples at the Former RFM Site
Former ITT Rochester Form Machine Facility
Site #8-28-112
Town of Gates, New York

						Location ID:	**SS-3**	**SS-4**	**SS-4**	**SS-5**	**SS-6**	**SS-7**	**SS-8**
						Sample Date:	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**
						Sample Code:	**SS-3-112415**	**SS-4-112415**	**DUP-112415**	**SS-5-112415**	**SS-6-112415**	**SS-7-112415**	**SS-8-112415**
						Start Depth (ft bgs):	**0**	**0**	**0**	**0**	**0**	**0**	**0**
						End Depth (ft bgs):	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**
						Sample Type Code:	**N**	**N**	**FD**	**N**	**N**	**N**	**N**
Analyte	**Part 375 Unrestricted Use SCOs[1]**	**NY CP-51 Residential Use SCOs[2]**	**Part 375 Protection of Groundwater SCOs[3]**	**NY CP-51 Protection of Groundwater SCOs[4]**	**Part 375 Commercial Use SCOs[5]**	**NY CP-51 Commercial Use SCOs[6]**							
Fluorene	30	NC	386	NC	500	NC	0.720 U	0.780 J	0.510 J	0.380 U	0.380 U	0.390 UJ	0.071 J
Hexachlorobenzene	0.33	0.41	3.2	1.4	6	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Hexachlorobutadiene	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Hexachlorocyclopentadiene	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 U	0.410 U
Hexachloroethane	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Indeno[1,2,3-cd]pyrene	0.5	NC	8.2	NC	5.6	NC	1.400	**17.000**	**12.000**	0.110 J	0.350 J	0.120 J	1.500
Isophorone	NC	100	NC	4.4	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Naphthalene	12	NC	12	NC	500	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Nitrobenzene	NC	3.7	NC	0.17	NC	69	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
N-Nitroso-Di-N-Propylamine	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
N-Nitrosodiphenylamine	NC	NC	NC	NC	NC	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 UJ	0.410 U
Pentachlorophenol	0.8	NC	0.8	NC	6.7	NC	3.700 U	18.000 U	9.000 U	2.000 U	1.900 U	2.000 UJ	2.100 U
Phenanthrene	100	NC	1000	NC	500	NC	1.300	15.000	11.000	0.095 J	0.500	0.150 J	1.700
Phenol	0.33	NC	0.33	NC	500	NC	0.720 U	3.600 U	1.700 U	0.380 U	0.380 U	0.390 U	0.410 U
Pyrene	100	NC	1000	NC	500	NC	2.700	28.000	23.000	0.230 J	0.870	0.260 J	3.300

Notes:
All units in milligrams per kilogram (mg/kg)
Bold - Exceeds 6 NYCRR Part 375 or CP-51 Protection of Groundwater Soil Cleanup Objectives
- Exceeds 6 NYCRR Part 375 Unrestricted Soil Cleanup Objectives or CP-51 Residential Soil Cleanup Objectives
- Exceeds 6 NYCRR Part 375 or CP-51 Commercial Soil Cleanup Objectives
Exceeds 6 NYCRR Part 375 or CP-51 Commercial Soil Cleanup Objectives
ft bgs - feet below ground surface
NC - No criteria exists, NA - Not available
Sample Type Code: N - Normal, FD - Field Duplicate
SVOC - Semi-volatile Organic Compound
U - Not Detected at the Detection Limit shown, J - Estimated value, UJ - Approximate Non-detect
[1] 6 NYCRR Part 375, Table 375-6.8(b): Restricted Use Soil Cleanup Objectives, Protection of Public Health, Commercial, December 14, 2006.
[2] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Residential, October 21, 2010.
[3] 6 NYCRR Part 375, Table 375-6.8(b): Restricted Use Soil Cleanup Objectives, Protection of Public Health, Protection of Groundwater, December 14, 2006.
[4] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Protection of Groundwater, October 21, 2010.
[5] 6 NYCRR Part 375, Table 375-6.8(b): Unrestricted Use Soil Cleanup Objectives, Protection of Public Health, December 14, 2006.
[6] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Commercial, October 21, 2010.

Table 3-3
Inorganics Analytical Results for Surface Soil Samples at the Former RFM Site
Former ITT Rochester Form Machine Facility
Site #8-28-112
Town of Gates, New York

						Location ID:	**SS-3**	**SS-4**	**SS-4**	**SS-5**	**SS-6**	**SS-7**	**SS-8**
						Sample Date:	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**
						Sample Code:	**SS-3-112415**	**SS-4-112415**	**DUP-112415**	**SS-5-112415**	**SS-6-112415**	**SS-7-112415**	**SS-8-112415**
						Start Depth (ft bgs):	**0**	**0**	**0**	**0**	**0**	**0**	**0**
						End Depth (ft bgs):	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**
						Sample Type Code:	**N**	**N**	**FD**	**N**	**N**	**N**	**N**
Analyte	**Part 375 Unrestricted Use SCOs[1]**	**NY CP-51 Residential Use SCOs[2]**	**Part 375 Protection of Groundwater SCOs[3]**	**NY CP-51 Protection of Groundwater SCOs[4]**	**Part 375 Commercial Use SCOs[5]**	**NY CP-51 Commercial Use SCOs[6]**							
Aluminum	NC	NC	NC	NC	NC	NC	7870	1720	1970	11600	12500	12100	11400
Antimony	NC	NC	NC	NC	NC	NC	0.131 U	6.5 U	6.3 U	0.138 U	0.138 U	0.141 UJ	7.4 U
Arsenic	13	NC	16	NC	16	NC	2.1	1.3	1.2	4.0	4.0	3.9	4.3
Barium	350	NC	820	NC	400	NC	34.1 J+	17.5 J+	16.1 J+	69.5 J+	70.5 J+	64.9 J+	73.8 J+
Beryllium	7.2	NC	47	NC	590	NC	0.3 U	0.3 U	0.3 U	0.550 J+	0.577 J+	0.556 J+	0.563 J+
Cadmium	2.5	NC	7.5	NC	9.3	NC	0.547 U	0.018 U	0.018 U	0.019 U	0.019 U	0.020 U	0.021 U
Calcium	NC	NC	NC	NC	NC	NC	66200	106000	98100	16200	17200	12700	9120
Chromium	NC	NC	NC	NC	NC	NC	10.4 J+	12.0 J+	13.9 J+	15.7	16.9 J+	15.8 J+	17.0 J+
Cobalt	NC	30	NC	NC	NC	NC	5 U	5 U	5 U	8.5	8.1 J+	7.3 J+	7.0 J+
Copper	50	NC	1720	NC	270	NC	7.6 J+	11.5 J+	11.3 J+	10.2	10.1 J+	9.1 J+	11.2 J+
Cyanide (Amenable)	27	NC	40	NC	27	NC	0.11 U	0.11 U	0.0977 U	0.11 U	0.11 U	0.11 U	0.20 J+
Iron	NC	2000	NC	NC	NC	NC	13400 J+	8240 J+	8750 J+	20900	22100 J+	20900 J+	19300 J+
Lead	63	NC	450	NC	1000	NC	12.7 J+	31.8 J	32 J+	9.4 J+	9.5	8.7 J+	13.5 J+
Magnesium	NC	NC	NC	NC	NC	NC	29600 J+	50500 J+	48300 J+	5090 J+	5240 J+	5620 J+	4110 J+
Manganese	1600	NC	2000	NC	10000	NC	277 J+	255 J+	255 J+	547 J+	367 J+	324 J+	337 J+
Mercury	0.18	NC	0.73	NC	2.8	NC	0.036 U	0.036 U	0.035 U	0.038 U	0.038 U	0.039 U	0.048 J+
Nickel	30	NC	130	NC	310	NC	11.0 J+	7.6 J	7.8 J+	17.1 J+	17.2 J+	15.5 J+	15.5 J+
Potassium	NC	NC	NC	NC	NC	NC	1050	731	727	1280	1410	1200	1300
Selenium	3.9	NC	4	NC	1500	NC	0.198 U	0.197 U	0.191 U	0.267 J	0.506 J	0.213 UJ	0.276 J
Silver	2	NC	8.3	NC	1500	NC	1.1 U	0.066 U	0.064 U	1.2 U	0.069 U	0.071 U	0.74 U
Sodium	NC	NC	NC	NC	NC	NC	149	168	164	85.8 J	91.8 J	103 J	89.2 J
Thallium	NC	NC	NC	NC	NC	NC	0.295 U	0.293 U	0.285 U	0.310 U	0.310 U	0.317 U	0.333 U
Vanadium	NC	100	NC	NC	NC	NC	22.9 J+	17.7 J+	17.8 J+	22.7 J+	24.9 J+	23.9 J+	22.6 J+
Zinc	109	NC	2480	NC	10000	NC	44.9	70.8	55.8	42.2	45.9	42.1	55.6

Notes:
All units in milligrams per kilogram (mg/kg)
Bold - Exceeds 6 NYCRR Part 375 or CP-51 Protection of Groundwater Soil Cleanup Objectives
- Exceeds 6 NYCRR Part 375 Unrestricted Soil Cleanup Objectives or CP-51 Residential Soil Cleanup Objectives
- Exceeds 6 NYCRR Part 375 or CP-51 Commercial Soil Cleanup Objectives
Exceeds 6 NYCRR Part 375 or CP-51 Commercial Soil Cleanup Objectives
ft bgs - feet below ground surface
NC - No criteria exists, NA - Not available
Sample Type Code: N - Normal, FD - Field Duplicate
J+ - Estimated high value, J - Estimated value, ND - Not Detected, U - Not Detected at the Detection Limit shown, UJ - Approximate Non-detect

[1] 6 NYCRR Part 375, Table 375-6.8(b): Restricted Use Soil Cleanup Objectives, Protection of Public Health, Commercial, December 14, 2006.

[2] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Residential, October 21, 2010.

[3] 6 NYCRR Part 375, Table 375-6.8(b): Restricted Use Soil Cleanup Objectives, Protection of Public Health, Protection of Groundwater, December 14, 2006.

[4] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Protection of Groundwater, October 21, 2010.

[5] 6 NYCRR Part 375, Table 375-6.8(b): Unrestricted Use Soil Cleanup Objectives, Protection of Public Health, December 14, 2006.

[6] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Commercial, October 21, 2010.

Table 3-4
Pesticides Analytical Results for Surface Soil Samples at the Former RFM Site
Former ITT Rochester Form Machine Facility
Site #8-28-112
Town of Gates, New York

						Location ID:	**SS-3**	**SS-4**	**SS-4**	**SS-5**	**SS-6**	**SS-7**	**SS-8**
						Sample Date:	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**
						Sample Code:	**SS-3-112415**	**SS-4-112415**	**DUP-112415**	**SS-5-112415**	**SS-6-112415**	**SS-7-112415**	**SS-8-112415**
						Start Depth (ft bgs):	**0**	**0**	**0**	**0**	**0**	**0**	**0**
						End Depth (ft bgs):	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**
						Sample Type Code:	**N**	**N**	**FD**	**N**	**N**	**N**	**N**
Analyte	**Part 375 Unrestricted Use SCOs[1]**	**NY CP-51 Residential Use SCOs[2]**	**Part 375 Protection of Groundwater SCOs[3]**	**NY CP-51 Protection of Groundwater SCOs[4]**	**Part 375 Commercial Use SCOs[5]**	**NY CP-51 Commercial Use SCOs[6]**							
4-4-DDD	0.0033	NC	14	NC	92	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
4-4-DDE	0.0033	NC	17	NC	62	NC	0.019 U	0.019 U	0.018 U	0.0077	0.0027	0.0012 J	0.021 U
4-4-DDT	0.0033	NC	136	NC	47	NC	0.019 U	0.019 U	0.018 U	0.0040	0.0022	0.0012 J	0.021 U
a-BHC	0.02	NC	0.02	NC	3.4	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
Aldrin	0.005	NC	0.19	NC	0.68	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
alpha-Chlordane	0.094	NC	2.9	NC	24	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
b-BHC	0.036	NC	0.09	NC	3	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
Chlordane, technical	NC	NC	NC	NC	NC	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
d-BHC	0.04	NC	0.25	NC	500	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
Dieldrin	0.005	NC	0.1	NC	1.4	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
Endosulfan I	2.4	NC	102	NC	200	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
Endosulfan II	2.4	NC	102	NC	200	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
Endosulfan Sulfate	2.4	NC	1000	NC	200	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
Endrin	0.014	NC	0.06	NC	89	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
Endrin Aldehyde	NC	NC	NC	NC	NC	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
Endrin Ketone	NC	NC	NC	NC	NC	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
Heptachlor	0.042	NC	0.38	NC	15	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
Heptachlor Epoxide	NC	0.077	NC	0.02	NC	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
Lindane	0.1	NC	0.1	NC	9.2	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 U	0.021 U
Methoxychlor	NC	100	NC	900	NC	NC	0.019 U	0.019 U	0.018 U	0.0020 U	0.0020 U	0.0020 UJ	0.021 U
Toxaphene	NC	NC	NC	NC	NC	NC	0.190 U	0.190 U	0.180 U	0.020 U	0.020 U	0.020 U	0.210 U

Notes:
All units in milligrams per kilogram (mg/kg)
Bold - Exceeds 6 NYCRR Part 375 or CP-51 Protection of Groundwater Soil Cleanup
- Exceeds 6 NYCRR Part 375 Unrestricted Soil Cleanup Objectives or CP-51 Residential Soil Cleanup Objectives
- Exceeds 6 NYCRR Part 375 or CP-51 Commercial Soil Cleanup Objectives
Exceeds 6 NYCRR Part 375 or CP-51 Commercial Soil Cleanup Objectives
ft bgs - feet below ground surface
NC - No criteria exists, NA - Not available
Sample Type Code: N - Normal, FD - Field Duplicate
J - Estimated value, UJ - Approximate Non-detect
[1] 6 NYCRR Part 375, Table 375-6.8(b): Restricted Use Soil Cleanup Objectives, Protection of Public Health, Commercial, December 14, 2006.
[2] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Residential, October 21, 2010.
[3] 6 NYCRR Part 375, Table 375-6.8(b): Restricted Use Soil Cleanup Objectives, Protection of Public Health, Protection of Groundwater, December 14, 2006.
[4] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Protection of Groundwater, October 21, 2010.
[5] 6 NYCRR Part 375, Table 375-6.8(b): Unrestricted Use Soil Cleanup Objectives, Protection of Public Health, December 14, 2006.
[6] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Commercial, October 21, 2010.

Table 3-5
PCBs Analytical Results for Surface Soil Samples at the Former RFM Site
Former ITT Rochester Form Machine Facility
Site #8-28-112
Town of Gates, New York

						Location ID:	**SS-3**	**SS-4**	**SS-4**	**SS-5**	**SS-6**	**SS-7**	**SS-8**
						Sample Date:	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**	**11/24/2015**
						Sample Code:	**SS-3-112415**	**SS-4-112415**	**DUP-112415**	**SS-5-112415**	**SS-6-112415**	**SS-7-112415**	**SS-8-112415**
						Start Depth (ft bgs):	**0**	**0**	**0**	**0**	**0**	**0**	**0**
						End Depth (ft bgs):	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**	**0.17**
						Sample Type Code:	**N**	**N**	**FD**	**N**	**N**	**N**	**N**
Analyte	**Part 375 Unrestricted Use SCOs[1]**	**NY CP-51 Residential Use SCOs[2]**	**Part 375 Protection of Groundwater SCOs[3]**	**NY CP-51 Protection of Groundwater SCOs[4]**	**Part 375 Commercial Use SCOs[5]**	**NY CP-51 Commercial Use SCOs[6]**							
Aroclor-1016	0.1	NC	3.2	NC	1	NC	0.036 U	0.036 U	0.035 U	0.038 U	0.038 U	0.039 UJ	0.041 U
Aroclor-1221	0.1	NC	3.2	NC	1	NC	0.073 U	0.073 U	0.071 U	0.077 U	0.077 U	0.079 U	0.083 U
Aroclor-1232	0.1	NC	3.2	NC	1	NC	0.036 U	0.036 U	0.035 U	0.038 U	0.038 U	0.039 U	0.041 U
Aroclor-1242	0.1	NC	3.2	NC	1	NC	0.036 U	0.036 U	0.035 U	0.038 U	0.038 U	0.039 U	0.041 U
Aroclor-1248	0.1	NC	3.2	NC	1	NC	0.036 U	0.036 U	0.035 U	0.038 U	0.038 U	0.039 U	0.041 U
Aroclor-1254	0.1	NC	3.2	NC	1	NC	0.036 U	0.036 U	0.035 U	0.038 U	0.038 U	0.039 U	0.041 U
Aroclor-1260	0.1	NC	3.2	NC	1	NC	0.036 U	0.036 U	0.035 U	0.038 U	0.038 U	0.039 U	0.041 U

Notes:
All units in milligrams per kilogram (mg/kg)
Bold - Exceeds 6 NYCRR Part 375 or CP-51 Protection of Groundwater Soil Cleanup
- Exceeds 6 NYCRR Part 375 Unrestricted Soil Cleanup Objectives or CP-51 Residential Soil Cleanup Objectives
- Exceeds 6 NYCRR Part 375 or CP-51 Commercial Soil Cleanup Objectives
Exceeds 6 NYCRR Part 375 or CP-51 Commercial Soil Cleanup Objectives
ft bgs - feet below ground surface
NC - No criteria exists, NA - Not available
PCB - Polychlorinated Biphenyl
Sample Type Code: N - Normal, FD - Field Duplicate
U - Not Detected at the Detection Limit shown,UJ - Approximate Non-detect
[1] 6 NYCRR Part 375, Table 375-6.8(b): Restricted Use Soil Cleanup Objectives, Protection of Public Health, Commercial, December 14, 2006.
[2] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Residential, October 21, 2010.
[3] 6 NYCRR Part 375, Table 375-6.8(b): Restricted Use Soil Cleanup Objectives, Protection of Public Health, Protection of Groundwater, December 14, 2006.
[4] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Protection of Groundwater, October 21, 2010.
[5] 6 NYCRR Part 375, Table 375-6.8(b): Unrestricted Use Soil Cleanup Objectives, Protection of Public Health, December 14, 2006.
[6] Final Commissioner Policy CP-51, Table 1: Supplimental Soil Cleanup Objectives, Commercial, October 21, 2010.

Table 4-1
QHHEA Addendum Surface Soil Exposure Pathway Analysis
Former ITT Rochester Form Machine Facility
Site #8-28-112
Town of Gates, New York

Environmental Media and Exposure Route	Potential Receptors[1]	Human Exposure Assessment
Direct contact with surface soils (0-2 ft bgs) via incidental ingestion, dermal contact, inhalation of ambient dust[2]	▪ Current/future trespasser (adolescent and adult)	▪ The site is primarily covered by blacktop with small areas of vegetation; therefore, current trespassers and maintenance workers would not likely be exposed to surface soils.
	▪ Current/future maintenance worker	▪ Under a hypothetical future scenario, trespasser and maintenance worker exposure to soils by incidental ingestion, dermal contact, and inhalation of soil dust/vapors in ambient air is possible.
	▪ Future construction worker	▪ Future construction workers may be exposed to surface soil through duties which may result in exposure via incidental ingestion, dermal contact, and inhalation of soil dust/vapors in ambient air.
	▪ Future sewer/water line worker	▪ During underground sewer and/or water line inspection, servicing, and maintenance activities, future utility workers could come into contact with surface soil through incidental ingestion, dermal contact, and inhalation of soil dust/vapors in ambient air.

Notes
1 - Site contractors/subcontractors associated with the collection and handling of environmental samples and with the potential treatment of impacted soil and groundwater are not evaluated.

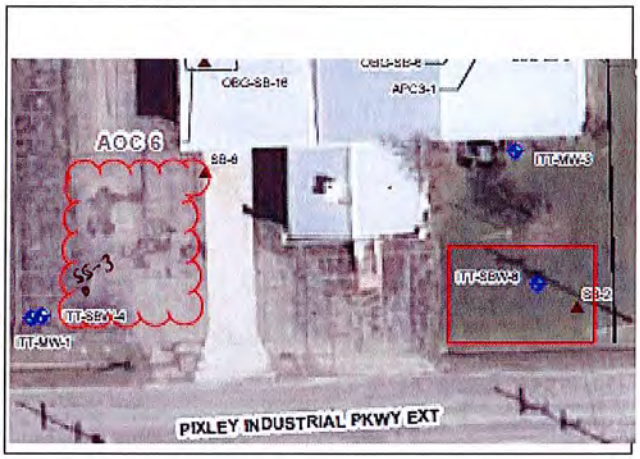
Appendix A

Surface Soil Sample Records

SOIL SAMPLE RECORD

Project: ITT Corporation - Auto FH-019 RFM	Date: 11/24/2015	12/14/15
Project#: 3356/35273	Time: 0925	1444
Sample ID: SS-3-112415	Sampler: A. Young	Asy

Sample Location:



N

11'8" from Monitoring well

Sample Collection Method Disposable Scoop

Sample Description Dark brown (7.5YR 3/3) Fill material, crushed stone/ angular gravel, asphalt fragments, some SILTS, trace CLAY, damp

Sample Headspace (ppm) NA

Sample Analysis VOCs, SVOCs (plus 1,4-dioxane), TAL Inorganics (plus cyanide), PCBs, Pesticides

Weather

	11/24/15	12/14/15 resample
Precipitation:	0	0
Wind:	WSW 1mph	0-2mph
Temperature:	33°	66°

Comments:

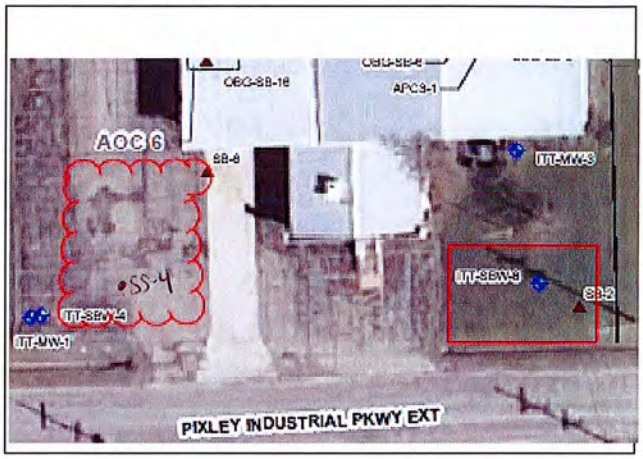
0-2"

O'BRIEN & GERE

SOIL SAMPLE RECORD

Project: ITT Corporation - Auto FH-019 RFM	Date: 11/24/2015	12/14/15
Project#: 3356/35273	Time: 0940	1450
Sample ID: SS-4 - 112415	Sampler: A. Young	Asy

Sample Location:



N

291' 7" from fence line

Sample Collection Method Disposable Scoop

Sample Description Black (7.5YR 2.5/1) Fill, crushed stone, damp

Some SILTS, some fine rounded gravel, trace wood fragments,

trace crushed sub-angular gravel

Sample Headspace (ppm) NA

Sample Analysis VOCs, SVOCs (plus 1,4-dioxane), TAL Inorganics (plus cyanide), PCBs, Pesticides

Weather

	11/24/15	12/14/15 resample
Precipitation:	Ø	Ø
Wind:	WSW 1mph	0-2mph
Temperature:	33°	66°

Comments:

Collected Dup-112415 at this location

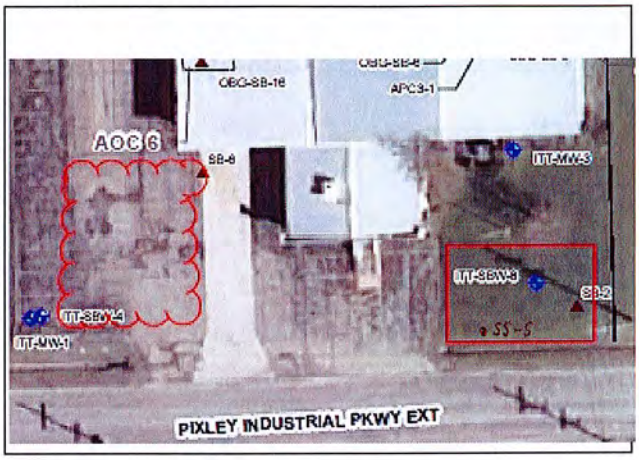
0-2"

O'BRIEN & GERE

SOIL SAMPLE RECORD

Project: ITT Corporation - Auto FH-019 RFM	Date: 11/24/2015	12/14/15
Project#: 3356/35273	Time: 1004	1456
Sample ID: SS-5-112415	Sampler: A. Young	ASY

Sample Location:



1' 9" from fence

21' 8" from edge of asphalt

Sample Collection Method Disposable Scoop

Sample Description Brown (7.5YR 4/4) topsoil with some clumps of reddish brown (5YR 4/4) CLAY medium ~~stiff~~ plasticity, damp, trace silts

Sample Headspace (ppm) NA

Sample Analysis VOCs, SVOCs (plus 1,4-dioxane), TAL Inorganics (plus cyanide), PCBs, Pesticides

Weather

	11/24/15	12/19/15 resample
Precipitation:	Ø	Ø
Wind:	WSW 1 mph	0-2 mph
Temperature:	33°	66°

Comments:

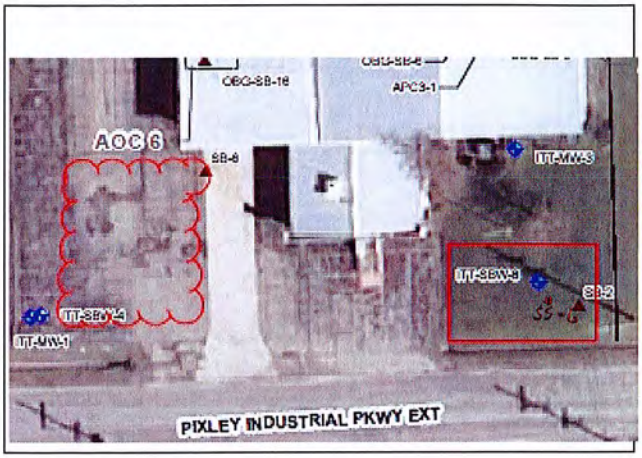
0-2"

O'BRIEN & GERE

SOIL SAMPLE RECORD

Project: ITT Corporation - Auto FH-019 RFM	Date: 11/24/2015	12/14/15
Project#: 3356/35273	Time: 1015	1501
Sample ID: SS-6-112415	Sampler: A. Young	ASy

Sample Location:



6'2" from MW ITT-SBW-8

Sample Collection Method Disposable Scoop

Sample Description Dark brown (7.5YR 3/4) top soil SILTS, trace reddish brown CLAY med. plasticity, stiff/ damp, little fine sub angular gravel

Sample Headspace (ppm) NA

Sample Analysis VOCs, SVOCs (plus 1,4-dioxane), TAL Inorganics (plus cyanide), PCBs, Pesticides

Weather

	11/24/15	12/14/15
Precipitation:	Ø	Ø
Wind:	WSW 1mph	0-2 mph
Temperature:	33°	46°

Comments:

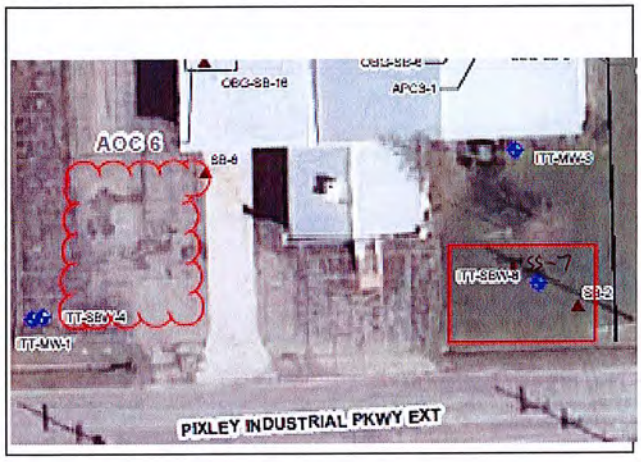
0-2"

O'BRIEN & GERE

SOIL SAMPLE RECORD

Project: ITT Corporation - Auto FH-019 RFM	Date: 11/24/2015	12/14/15
Project#: 3356/35273	Time: 1035	1512
Sample ID: SS-7-112415	Sampler: A. Young	ASy

Sample Location:



12' 9" from MW
24' 5.5" from fence

Sample Collection Method Disposable Scoop

Sample Description Dark brown (7.5YR 3/3) (same as SS-5') topsoil with some clumps of reddish brown (5YR 4/4) CLAY, medium plasticity/stiff, damp, trace silts, damp

Sample Headspace (ppm) NA

Sample Analysis VOCs, SVOCs (plus 1,4-dioxane), TAL Inorganics (plus cyanide), PCBs, Pesticides

Weather

	11/24/15	12/14/15
Precipitation:	∅	∅
Wind:	WSW 1mph	0-2mph
Temperature:	33°	66°

Comments:

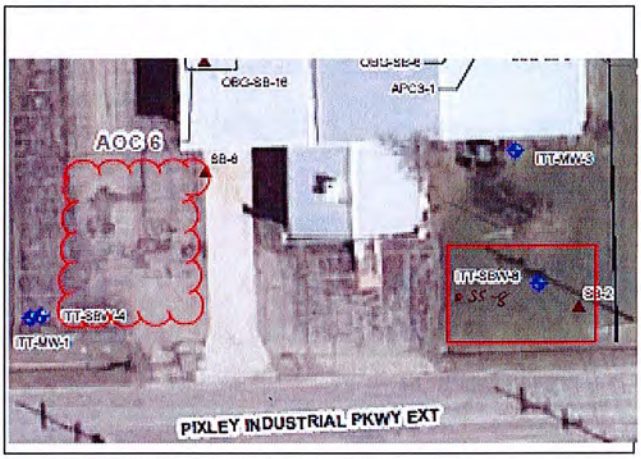
SS-7-112415 - MS/MSD collected 0-2"

O'BRIEN & GERE

SOIL SAMPLE RECORD

Project: ITT Corporation - Auto FH-019 RFM	Date: 11/24/2015	12/14/15
Project#: 3356/35273	Time: 1108	1524
Sample ID: SS-8-112415	Sampler: A. Young	AY

Sample Location:



11' 5" from asphalt edge

Sample Collection Method Disposable Scoop

Sample Description Very dark brown (7.5YR\ 2.5/3) topsoil

trace fine ~~SAND~~, trace roots, damp

Sample Headspace (ppm) NA

Sample Analysis VOCs, SVOCs (plus 1,4-dioxane), TAL Inorganics (plus cyanide), PCBs, Pesticides

Weather

	11/24/15	12/14/15
Precipitation:	Ø	Ø
Wind:	WSW 1mph	0-2 mph
Temperature:	33°	46°

Comments:

0-2"

O'BRIEN & GERE

Appendix C

Data Usability Summary Reports

Data Usability Summary Report

Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

Auto FH-019RFM
ALS Environmental SDG#R1510849
January 13, 2016
Sampling date: 12/14/2015

Prepared by:
Jodi Zimmerman
Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the reissued analytical data package for O'Brien and Gere Engineers, Inc., project named Auto FH-019RFM, ALS Environmental, SDG#R1510849 submitted to Vali-Data of WNY, LLC on January 7, 2016. This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocols and USEPA National Functional Guidelines. The laboratory performed the analyses using USEPA method Semi-Volatile Organics (8270D) and in accordance with wet chemistry methods.

SEMIVOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES
The data are acceptable for use.

Samples SS-4-121415 and DUP-121415 were diluted due to matrix interference.

DATA COMPLETENESS
All criteria were met.

NARRATIVE AND DATA REPORTING FORMS
All criteria were met.
Data was not reported to 3 significant figures. This does not affect the usability of the data.

CHAIN OF CUSTODY AND TRAFFIC REPORTS
All criteria were met.

HOLDING TIMES
All holding times for the sample were met.

INTERNAL STANDARD (IS)
All criteria were met.

SURROGATE SPIKE RECOVERIES
All criteria were met.

METHOD BLANK
All criteria were met.

FIELD DUPLICATE SAMPLE PRECISION
All criteria were met.

LABORATORY CONTROL SAMPLES
All criteria were met.

MS/MSD
All criteria were met.

COMPOUND QUANTITATION
All criteria were met.

INITIAL CALIBRATION
All criteria were met.

CONTINUING CALIBRATION
All criteria were met.

GC/MS PERFORMANCE CHECK
All criteria were met.

GENERAL CHEMISTRY

The following items/criteria were reviewed for this analytical suite:

- %Solids

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES
The data are acceptable for use.

%SOLIDS
All criteria were met.

Data Usability Summary Report

Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

Auto FH-019RFM
ALS Environmental SDG#R1510222
January 12, 2016
Reissued; February 1, 2016
Sampling date: 11/24/2015

Prepared by:
Jodi Zimmerman
Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the reissued analytical data package for O'Brien and Gere Engineers, Inc., project named Auto FH-019RFM, ALS Environmental, SDG#R1510222 submitted to Vali-Data of WNY, LLC on January 7, 2016 (reissue submitted February 1, 2016). This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocols and USEPA National Functional Guidelines. The laboratory performed the analyses using USEPA method Volatile Organics (8260C), Semi-Volatile Organics (8270D), Pesticides (8081B), PCB (8082A), Inorganics (6010C), Mercury (7471B) and in accordance with wet chemistry methods.

VOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

-Data Completeness
-Narrative and Data Reporting Forms
-Chain of Custody and Traffic Reports
-Holding Times
-Internal Standard (IS) Area Performance
-Surrogate Spike Recoveries
-Method Blank
-Field Duplicate Sample Precision
-Laboratory Control Samples
-MS/MSD
-Compound Quantitation
-Initial Calibration
-Continuing Calibration
-GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use except where qualified below in Surrogate Spike Recoveries, Method Blank, MS/MSD, Field Duplicate Sample Precision and Continuing Calibration.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

Data was not reported to 3 significant figures. This does not affect the usability of the data.

CHAIN OF CUSTODY AND TRAFFIC REPORTS
All criteria were met.

HOLDING TIMES
All holding times were met.

INTERNAL STANDARD (IS)
All criteria were met.

SURROGATE SPIKE RECOVERIES
All criteria were met except the %Rec of 4-Bromofluorobenzene was outside ASP QC limits, high in RQ1514915-03. Detected, associated target analytes in RQ1514915-03 should be qualified as estimated.

METHOD BLANK
All criteria were met except 1,2,4-Trichlorobenzene was detected above the MDL, below the reporting limit and is qualified as estimated in RQ1514994-07. Associated samples in which this target analyte was detected above the MDL and below the reporting limit should be reported with the reporting limit and 'undetected'. Associated samples in which this target analyte was detected above the reporting limit should be qualified as estimated high.

FIELD DUPLICATE SAMPLE PRECISION
All criteria were met except Dichloromethane was detected in SS-4-112415 above the MDL, below the reporting limit but was not detected in DUP-112415.

LABORATORY CONTROL SAMPLES
All criteria were met.

MS/MSD
All criteria were met except the %Rec of Acetone was outside QC limits, high in SS-7-112415MS/MSD and should be qualified as estimated if detected in SS-7-112415MS/MSD and SS-7-112415. The RPD of Acetone was outside QC limits, in SS-7-112415MS/MSD and should be qualified as estimated in SS-7-112415MS/MSD and SS-7-112415.

COMPOUND QUANTITATION
All criteria were met.

INITIAL CALIBRATION
All criteria were met.
Alternate forms of regression were performed on all target analytes whose %RSD >15.0% in the initial calibration performed on instrument R-MS-10 and %RSD>20.0% in the initial calibration performed on instrument R-MS-14, with acceptable results.

CONTINUING CALIBRATION
All criteria were met except the %D of Bromomethane was outside ASP outer QC limits in continuing calibrations performed on Lot #474126 and #474311. This target analyte should be qualified as estimated in the associated samples, blanks and spikes.

GC/MS PERFORMANCE CHECK
All criteria were met.

SEMIVOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Sample Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES
The data are acceptable for use but are qualified below in Method Blank, Field Duplicate Sample Precision, Laboratory Control Samples and MS/MSD.

DATA COMPLETENESS
All criteria were met.

NARRATIVE AND DATA REPORTING FORMS
All criteria were met.
Data was not reported to 3 significant figures. This does not affect the usability of the data.

CHAIN OF CUSTODY AND TRAFFIC REPORTS
All criteria were met.

HOLDING TIMES
All holding times for the sample were met.

INTERNAL STANDARD (IS)
All criteria were met.

SURROGATE SPIKE RECOVERIES
All criteria were met.

METHOD BLANK
All criteria were met except Bis(2-ethylhexyl)phthalate and Di-n-butyl phthalate and 5 TIC's were detected above the MDL, below the reporting limit and are qualified as estimated in RQ1515033-01. Associated samples in which these target analytes were detected above the MDL and below the reporting limit should be reported with the reporting limit and 'undetected'. Associated samples in which these target analytes were detected above the reporting limit should be qualified as estimated high.

FIELD DUPLICATE SAMPLE PRECISION
All criteria were met except Acenaphthene, Acenaphthylene, Bis(2-ethylhexyl) Phthalate and Dibenzofuran were detected in SS-4-112415 above the MDL, below the reporting limit but were not detected in DUP-112415.

LABORATORY CONTROL SAMPLES
All criteria were met except the %Rec of 4,6-Dinitro-2-methylphenol and Benzaldehyde was outside QC limits, high in RQ1515033-02,-03. These target analytes should be qualified as estimated in the samples if they were detected.
The %Rec of Caprolactum, Indeno(1,2,3-cd)pyrene and N-Nitrosodiphenylamine were outside QC limits, high in RQ1515033-02. These target analytes were within limits in the associated laboratory control sample duplicate, so no further action is required.

MS/MSD
All criteria were met except the RPD between the SS-7-112415MS and SS-7-112415MSD of most of the target analytes monitored was outside QC limits. These target analytes should be qualified as estimated in SS-7-112415MS/MSD and SS-7-112415.

COMPOUND QUANTITATION
All criteria were met.

INITIAL CALIBRATION
All criteria were met.
Quadratic regression was performed on Hexachlorocyclopentadiene, with acceptable results.

CONTINUING CALIBRATION
All criteria were met.

GC/MS PERFORMANCE CHECK
All criteria were met.

PESTICIDE

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES
The data are acceptable for use but are qualified below in MS/MSD, Compound Quantitation and Continuing Calibration.

The concentrations of some of the target analytes on Form 10, 'Pesticide Identification Summary', were recorded incorrectly. The reissued report reflects the correct concentrations.

DATA COMPLETENESS
All criteria were met.

NARRATIVE AND DATA REPORTING FORMS
All criteria were met.
Data was not reported to 3 significant figures. This does not affect the usability of the data.

CHAIN OF CUSTODY AND TRAFFIC REPORTS
All criteria were met.

HOLDING TIMES
All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES
All criteria were met except the %Rec of DCBP was outside laboratory QC limits but within ASP QC limits in SS-4-112415 and DUP-112415, so no further action is required.

METHOD BLANK
All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION
All criteria were met.

LABORATORY CONTROL SAMPLES
All criteria were met except the %Rec of Endrin aldehyde was outside QC limits, low in RQ1514796-03. This target analyte was within limits in the associated laboratory control sample, so no further action is required.

MS/MSD
All criteria were met except the %RPD between the columns was outside QC limits for Methoxychlor in SS-7-112415MS/MSD. This target analyte should be qualified as estimated in SS-7-112415MS/MSD.

COMPOUND QUANTITATION
All criteria were met except the %RPD between the columns was outside QC limits for 4,4'-DDE in SS-7-112415. This target analyte should be qualified as estimated in SS-7-112415.

INITIAL CALIBRATION
All criteria were met.

CONTINUING CALIBRATION
All criteria were met except the %D of Methoxychlor was outside QC limits off column 1 in CCV04 and CCV06. Methoxychlor should be qualified as estimated in the associated samples, blanks and spikes in which the results were reported off column 1.

PCB

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times

- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES
The data are acceptable for use but are qualified below in MS/MSD.

DATA COMPLETENESS
All criteria were met.

NARRATIVE AND DATA REPORTING FORMS
All criteria were met.
Data was not reported to 3 significant figures. This does not affect the usability of the data.

CHAIN OF CUSTODY AND TRAFFIC REPORTS
All criteria were met.

HOLDING TIMES
All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES
All criteria were met.

METHOD BLANK
All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION
All criteria were met.

LABORATORY CONTROL SAMPLES
All criteria were met.

MS/MSD
All criteria were met except the RPD between SS-7-112415MS and SS-7-112415MSD was outside QC limits for Aroclor 1016 and should be qualified as estimated.

COMPOUND QUANTITATION
All criteria were met.

INITIAL CALIBRATION
All criteria were met.

CONTINUING CALIBRATION
All criteria were met.

METALS

The following items/criteria were reviewed for this analytical suite:

- -Data Completeness
- -Narrative and Data Reporting Forms
- -Chain of Custody and Traffic Reports
- -Holding Times
- -Blanks
- -Laboratory Control Sample
- -MS/MSD
- -Duplicate
- -Field Duplicate
- -Serial Dilution
- -Compound Quantitation
- -Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES
The data are acceptable for use but are qualified below in Blanks and MS/MSD.

DATA COMPLETENESS
All criteria were met.

NARRATIVE AND DATA REPORTING FORMS
All criteria were met except the MDL's were reported in ug/L. MDL's reported to mg/kg are attached.
Data was not reported to 3 significant figures. This does not affect the usability of the data.

CHAIN OF CUSTODY AND TRAFFIC REPORTS
All criteria were met.

HOLDING TIMES
All holding times were met.

BLANKS
All criteria were met except Ba, Cd, Co, Cr, Cu, Fe, Mg, Mn, Pb, Sb and K were detected above the MDL, below the reporting limit in the method blank. Ba, Co, Cu, Mg, Hg, Ni, Sb and V were detected above the MDL, below the reporting limit in the ICB. Ba, Cu, Fe, Mg, Hg and Sb were detected above the MDL, below the reporting limit in the CCB1 and CCB2. Ba, Be, Co, Cu, Mg, Mn, Hg, Ni and Sb were detected above the MDL, below the reporting limit in the CCB3. Ba, Be, Co, Cu, Mn, Hg, Ni, Sb and V were detected above the MDL, below the reporting limit in the CCB4. Ag, Ba, Be, Cd, Co, Cu, Fe, Mg, Mn, Ni, Pb and Sb were detected above the MDL, below the reporting limit in the CCB5. Ba, Be, Cu, Mg, Mn, Sb and V were detected above the MDL, below the reporting limit in the CCB6. Associated samples in which these target analytes were detected above the MDL and below the reporting limit should be reported with the reporting limit and 'undetected'. Associated samples in which these target analytes were detected above the reporting limit should be qualified as estimated high.

LABORATORY CONTROL SAMPLE
All criteria were met.

MS/MSD
All criteria were met except the %Rec of Sb and Se was outside QC limits, low in SS-7-112415S and should be qualified as estimated in SS-7-112415S and SS-7-112415.

DUPLICATE
All criteria were met except Sb was detected above the MDL, below the reporting limit in SS-7-112415D but was undetected in SS-7-112415.

FIELD DUPLICATE
All criteria were met.

SERIAL DILUTION
All criteria were met.

COMPOUND QUANTITATION
All criteria were met.

CALIBRATION
All criteria were met.

GENERAL CHEMISTRY

The following items/criteria were reviewed for this analytical suite:

- %Solids
- Total Cn

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES
The data are acceptable for use.

%SOLIDS
All criteria were met.

TOTAL Cn
All criteria were met except Cn was detected above the MDL, below the reporting limit and is qualified as estimated in R1510222-MB. Associated samples in which Cn was detected above the MDL and below the reporting limit should be reported with the reporting limit and 'undetected'. Associated samples in which Cn was detected above the reporting limit should be qualified as estimated high.