Final
Construction Completion Report
J & L Steel Site
4669 Route 3, Star Lake, New York

NYSDEC Site Number: 645029

Prepared for:

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, NY 12233-7014

Prepared by:

PARSONS
301 Plainfield Road
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Syracuse, NY 13212
315-451-9560

DECEMBER 2019

CERTIFICATIONS

I certify that the data submitted to the Department with this Construction Completion Report demonstrates that the remediation requirements set forth in the Remedial Design and in all applicable statutes and regulations have been or were achieved in accordance with the time frames, if any, established for the remedy.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that a Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by the Department.

I certify that all documents generated in support of this report have been submitted in accordance with the DER's electronic submission protocols and have been accepted by the Department.

I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Thomas Drachenberg, of 301 Plainfield Road Suite 350, Syracuse, NY am certifying as Owner's Designated Site Representative for the site.

086020	12/6/19	Thomas D
NYS Professional Engineer #	Date	Signature

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LIST OF ACRONYMS

CAMP	Community Air Monitoring Plan
CHASP	Community Health and Safety Plan
DER	Division of Environmental Remediation
DOT	Department of Transportation
Ft	feet
GBR	ground penetrating radar
HASP	Health and Safety Plan
HMR	Hazardous Materials Regulations
IRM	Interim Remedial Measure
mg/m^3	microgram per cubic meter
mg/Kg	milligrams per kilogram
NYCRR	New York State Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
PCB	polychlorinated biphenyl
PDI	pre-design Investigation
RD	Remedial Design
RFI	Request for Information
SC	site characterization
SCO	soil cleanup objectives
TREC	TREC Environmental Inc.
TSCA	Toxic Substance Control Act
VOCs	volatile organic compounds

CONSTRUCTION COMPLETION REPORT

1.0 INTRODUCTION

Pursuant to discussions with the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER) regarding the Former J&L Steel site, an Interim Remedial Measure (IRM) removal action was completed to address polychlorinated biphenyl (PCB) impacted soils. This report documents the completion of the IRM. All identified locations in exceedance of the 6 New York State Codes, Rules and Regulations (NYCRR) Part 375 Soil Cleanup Objective (SCO) of 1 milligram per kilogram (mg/Kg) for commercial land use have been addressed.

1.1 SITE BACKGROUND AND PRE-DESIGN INVESTIGATION ACTIVITIES

The former J&L Steel site is a 38-acre parcel located at the intersection of State Route 3 and County Road 50 in the Town of Clifton, St. Lawrence County, New York. The site includes several large abandoned buildings in various conditions, as well as numerous piles of mining and demolition debris. The buildings are surrounded by parking lots, access roads and unused rail spurs. The remainder of the site is partially wooded with the Little River flowing east to west through the site. A 2.5-mile long abandoned and flooded strip mine borders the northern portion of the site. The site was previously utilized as a mining and ore processing facility. The Defense Plant Corporation built the facility at the beginning of World War II. In 1946, J&L Steel purchased the property from the War Assets Administration and continued operations until approximately 1978, when the plant was permanently closed.

A site characterization (SC) investigation (Parsons, 2016) identified several PCB "hot spots" where PCB soil concentrations exceeded the SCO for commercial land use of 1 mg/kg. The PCB hot spots were further delineated during an initial pre-design investigation (PDI) effort completed in September 2016 (Parsons 2016) and a supplemental PDI conducted in May 2017(Parsons 2017). Delineated hot spots and associated concentrations from the PDI efforts are shown in Figure 1.

1.2 GOVERNING DOCUMENTS

The IRM Work Plan (Parsons, 2018) (Appendix A) presented the plans and specifications required to complete the J & L Steel Site PCB removal. The Pre-Design Investigation (Parsons 2016) presented results pertaining to PDI sampling activities for PCBs.

1.3 ROLES AND RESPONSIBILITIES

NYSDEC

The NYSDEC was the lead regulatory agency for the site. The NYSDEC reviewed plans, drawings, analytical reports, schedules and field change notifications.

TREC ENVIRONMENTAL, INC.

TREC Environmental Inc. (TREC) was the prime contractor for implementation of the remedial action and managed the schedule and execution.

TREC Environmental, INC Subcontractors

Subcontractors to TREC who supported remedial construction activities and their roles are listed below:

- Thew Associates PLLC - Performed site surveys
- Riccelli Enterprises – Provided trucking services
- Page ETC Inc. – Provided trucking services for TSCA Soils and construction water
- US Bulk Transport Inc. – Provided trucking services for TSCA Soils
- Rain For Rent – Provided frac tanks and 4" DriPrime Pump
- Environmental Products & Services (EPS) of Vermont – Provided trucking of construction water
- Sun Environmental -- Provided trucking of construction water
- Eurofins Spectrum – Provided Laboratory Testing
- Paradigm Environmental Services Inc. – Provided Laboratory Testing
- Test America- NORM Sampling

PARSONS

Parsons was the remediation engineer for the J& L Steel Site remedial action. Parsons reviewed and provided comments on TREC's submittals, provided fulltime on-site oversight of the remedial action, documented remedial activities, reviewed and signed waste manifests/bills of lading on behalf of NYSDEC for shipments of waste materials, coordinated and documented project meetings, and implemented the Community Air Monitoring Plan (CAMP).

2.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

Remedial activities were conducted in accordance with the NYSDEC-approved IRM Work Plan (Parsons May 2018). This section documents the excavation and handling of PCB-impacted soil from the J&L Steel site. Site work was completed in accordance with Toxic Substances Control Act (TSCA) 40 CFR 761.61(a) regulations (EPA Toxic Substance Control Act, 2011) as well as NYSDEC Department of Environmental Remediation Technical Guidance for Site Investigation and Remediation (DER-10, 2010). Specific site details from the IRM Design Report (2018) are summarized below.

2.1 IRM DOCUMENT SUBMITTALS AND APPROVALS

Upon acceptance of the IRM Work Plan by NYSDEC, a Notice of Self-Implementation of Interim Remedial Measure (Appendix B) was submitted to the USEPA on May 18, 2019 for review and approval under the TSCA40 CFR 761.61(a) self-performance subsection (USEPA 2011). NYSDEC also submitted a Notification of Start of PCB Interim Remedial Measure (IRM) field work to USEPA via a memo to USEPA dated October 4, 2018 (Appendix B). USEPA provided approval of the self-performance IRM in a memo received by NYSDEC on January 2, 2019 (Appendix B). A Soil Waste Profile was developed for Area A by US Ecology with a NORM/TENORM Waste Addendum (Appendix C - Submittal 01)

2.2 SITE SPECIFIC HEALTH & SAFETY

A Site Safety and Health Plan prepared by TREC Environmental (October 1, 2018) was submitted for remedial and invasive work performed at the Site. This plan is included in Appendix C - Submittal 02.

A Community Air Monitoring Plan (CAMP) was included as Appendix B of the IRM Work Plan (Parsons, 2018). The CAMP was implemented to protect the downwind community from potential airborne contaminant releases directly resulting from remedial activities. Air monitoring for volatile organic compounds (VOCs) and particulates took place at an upwind location and a downwind location. Action limits for VOCs and particulates were 5 parts per million (ppm) and 150 microgram per cubic meter (mg/m^3), respectively. No exceedances of action items were recorded or observed (i.e., no alarms triggered). Available CAMP results are provided in Appendix C – Submittal 03.

2.3 WASTE PROFILE DEVELOPMENT

PDI waste characterization results (Parsons 2016) were provided to the subcontractor to solicit disposal rates during the bid process. After award of the remedial construction, both the non-hazardous and hazardous waste disposal facilities requested additional waste characterization sampling. Results of the additional analytical sampling for waste characterization can be found in Appendix C – Submittal 04.

Upon completion of the additional requested sampling and submittal of data results, soil disposal profiles were developed for both the non-hazardous and TSCA hazardous soils. Waste disposal profiles are included in Appendix C – Submittal 01.

Two unanticipated conditions were encountered during the remedial activities at Excavation Area A-1 that required additional waste management activities. During remedial construction activities, two loads of TSCA designated material contained free liquid, resulting in a modification to the hazardous waste profile. Additional excavations detailed in Section 2.5 resulted in unanticipated management of construction water in Area A due to several rain events and discharge of water from the former mine pit into the excavation area. Waste characterization samples of the construction water were collected, and results of laboratory analysis of these samples is included in Appendix C – Submittal 04. Construction water waste characterization results were used to generate an aqueous waste characterization profile for its disposal (Appendix C – Submittal 01).

In addition, during excavation activities at Area A-1, three transformer/capacitors were uncovered. Free product was not discovered within or adjacent to the transformers. These transformers/capacitors were drummed and labelled for subsequent characterization and disposal. Several subcontractors were solicited for the disposal of this drum; however, the drum was inaccessible due to winter weather conditions at the time of the subcontractor award. On 5/10/19, Parsons and the waste management contractor mobilized to the site to remove the drum. Upon arrival, the drum could not be located. The area adjacent to where the drum had been located appeared to be recently cleared/graded and several adjacent buildings had been demolished. Parsons contacted the demolition contractor and the NYSDEC Regional Spill Team that is also working onsite to inquire about the drum. All parties stated that they did not remove any drums from the site. Parsons thoroughly searched the area where the drum was previously located, as well as the remainder of the site, but was unable to locate the drum during several subsequent site visits.

2.4 SITE PREPARATION

Site mobilization and kick-off meeting was held on October 24, 2018. Temporary facilities, such as trailers and a lay down area, were located on the asphalt pavement area between buildings 10 and 12. The contractor provided all temporary facilities necessary for them to complete remedial activities.

On October 17, 2018, Dig Safely New York was contacted to request a utility mark out, in accordance with *16 NYCRR Part 753 – Protection of Underground Facilities* (Appendix C – Submittal 05). Additionally, prior to commencing excavation at the site, the excavation areas were surveyed using ground penetrating radar (GPR) to identify the presence of any existing site utilities (Appendix C – Submittal 05). Any utilities encountered during remedial activities were considered live until proven otherwise.

The contractor retained a surveyor licensed in New York State and surveyed the limits and grade of excavation areas prior to the start of remedial activities. Following a utility survey and prior to mobilization to each location, exclusion controls were installed around each excavation. Work zones were established within the site boundaries according to the Contractor's Site-Specific Health and Safety Plan (HASP). Trees/vegetation or any other surface feature that limited access to the excavation areas were removed.

Site access was limited to two gated entrances to the work area on Route 3. The J & L Steel Site (primary) entrance was used during the excavation of Areas B-F and the Benson Mines entrance (west) was used during excavation in Area A. Both entrances were closed and locked during off hours. Parsons maintained records of personnel present at the site

on the daily sign-in sheets. All personnel entering the site were required to receive site specific training or were escorted.

2.5 EXCAVATION

Impacted soil was removed from six areas encompassing a total of approximately 20,400 square feet (ft) (~0.45 acres). Excavation areas have unique designations from A-F. As discussed in the PDI report, the limits of the removal hot spots were determined based on bounding of sample locations where soils up to 1 ft in depth resulted in PCB concentrations below the 6 NYCCR Part 375 Commercial SCO of 1 mg/kg. Impacted soils were removed to a depth of 1 ft., based on NYSDEC DER-10 Section 4.1(f)2ii regulations for commercial site clean-ups. Since the boundaries of the excavation areas were determined based on previous sampling locations where PCB concentrations were less than the Part 375 Commercial SCO, and DER-10 requires remediation to a 1 ft depth for commercial sites, confirmatory sampling was not required following remedial activities with exception of Excavation Area A-1, which exceeds TSCA PCB low occupancy SCO of 50 mg/kg.

Excavation Area A and D through F were excavated per the IRM design specifications. At Excavation Area B, material from the adjacent building demolition being completed by St. Lawrence County was placed within the excavation area and on the adjacent slope that constituted the north/northeastern edge of Excavation Area B. The demolition contractor agreed to relocate demolition debris within the excavation boundary but left a significant amount of demolition material on the adjacent slope to the north/northeast of the excavation area. As excavation progressed toward the northeastern edge of excavation area, demolition material on the slope was undermined and began to slough into the excavation area. Several attempts were made to stabilize this material and progress the excavation, but demolition debris continued to slough into the excavation. In consultation with NYSDEC, the excavation stopped approximately 7.02 ft from the design limits of excavation due to the continued impacts from the demolition debris.

Non-Hazardous soil from Areas B, C, D, E and F was temporarily stockpiled adjacent to Area D before being loaded onto Riccelli trucks and removed from site. The Post-Excavation Survey is found in Appendix D.

Excavation Area A contained a concentrated excavation area that was delineated as Excavation Area A-1. Soil in Excavation Area A-1 contained materials above the TSCA low occupancy criteria of 50 mg/kg which required segregation, and separate disposal. In addition, post excavation sampling was required in accordance with TSCA regulations outlined in section 761.61 paragraph B(6)(ii). Other materials in Excavation Area A were removed and stockpiled as described for Excavation Areas C through F.

As discussed in Section 2.3, three suspected electrical transformers/capacitors and stained soils were encountered during the initial 1-foot removal in Area A-1. After this initial 1-foot removal was complete, confirmatory samples were collected from the sidewalls and the bottom of the excavation. Confirmatory samples were collected per the sampling plan included as Attachment F in the IRM Work Plan (Appendix A). Results of these confirmatory samples indicated that soils remained above the 6 NYCCR Part 375 Commercial SCO of 1 mg/kg and the TSCA low occupancy criteria of 50 mg/kg, requiring additional excavation. Results of confirmatory samples are included in Appendix C – Submittal 06.

During these additional A-1 excavations, several rain events resulted in flooding of the excavation from surface run -off and from water discharging from the former mine through Building 31. To mitigate infiltration, several earthen berms were constructed around Excavation Area A along with silt fencing to minimize erosion. The berms were constructed using material from the designated borrow area for excavation backfill. Standing water in excavation Area A was also pumped out of the excavation and temporarily stored in tanks. As discussed in Section 2.3, construction water waste characterization samples were collected and used to develop a construction water disposal profile was developed (Appendix C – Submittal 01).

Once the water mitigation efforts were completed and water was pumped from Excavation Area A-1, excavation of Area A-1 continued to remove an additional 2 ft of materials. Confirmatory samples were collected again and submitted

for total PCB analysis. Results from the confirmatory samples while below the TSCA low occupancy criteria of 50 mg/kg were still above the 6 NYCCR Part 375 Commercial SCO of 1 mg/kg (Appendix C – Submittal 06). Based on these results, an additional 1 foot of material was removed from excavation area A-1. Prior to this additional excavation, water that had accumulated within Excavation Area A-1 was again pumped into temporary storage tanks. Confirmatory samples were again collected after the removal of the additional 1 foot of soils and submitted for laboratory analysis. Results from this removal indicated that sidewall and excavation bottom samples were below the 6 NYCCR Part 375 Commercial SCO of 1 mg/kg (Appendix C – Submittal 06).

An estimated total of approximately 750 cubic yards of material was to be excavated from the site. However, due to additional removals in Area A1, the removal volume approached 850 cubic yards; 174 of which were characterized as TSCA soils and disposed of accordingly. A post excavation survey was not completed due to snow cover over the excavation A area. It was anticipated that the survey would be completed in the spring when weather conditions improved, but as previously noted in Section 2.3, when Parsons returned to the site on 5/10/19, the Excavation A area had been recently cleared/graded and several adjacent buildings had been demolished. The edges of the excavation areas were no longer discernable, however results of the confirmatory samples and photo documentation included in the daily field reports between 10/25/19 and 10/29/19 (Appendix E) confirm that the Area A excavation was completed to the proposed extents.

Upon reviewing post-excavation survey data, it was determined that Area C was not excavated in its entirety. Parsons, TREC, and Thew returned to the site in August 2019 to complete excavation of Area C. Demolition material, originating from on-site demolition, had subsequently been placed on top of the Area C removal area. The demolition material consisted of black soil, rebar, and large pieces of concrete. Demolition material was removed to the original Area C removal elevation and stockpiled adjacent to the excavation. A large piece of concrete (approximately 20 ft long, 10 ft wide, and 3 ft deep) was located within the excavation adjacent to the northwest design limit. It appeared that this piece of concrete was part of the retaining wall from the adjacent Building 45 that defined the east/southeast limit of excavation. In consultation with NYSDEC, the excavation stopped adjacent to this concrete. After demolition material was removed down to the original Area C elevation, impacted soils were removed to a depth of 1 ft. Impacted soil was stockpiled on polyethylene sheeting adjacent to the excavation and covered with polyethylene sheeting while awaiting transportation and disposal. Prior to backfill, survey confirmed that the top 1 ft of impacted material had been removed.

2.6 DECONTAMINATION

Temporary decontamination pads were constructed on site for decontamination of equipment that came in contact with PCB-contaminated material. The decontamination pads were bermed and lined with high density polyethylene sheeting sloped to a low-point sump for collection of decontamination water. Equipment surfaces in contact with PCB-contaminated materials (e.g. excavator bucket, tracks) were decontaminated after excavation of each area in accordance with the requirements of the Community Health and Safety Plan (CHASP). All decontamination water generated was collected in tanks and removed from site for disposal. Soil removed during decontamination was temporarily stockpiled and collected for disposal. Following completion of the final equipment decontamination, equipment surfaces which were in contact with PCB-contaminated materials were wipe-tested to verify that PCBs were below 10 mg per 100 cm^2 on equipment surfaces. Wipe samples were collected using a hexane-soaked gauze pad provided by an approved analytical laboratory following USEPA standard wipe test methodology. The wipe sample were submitted to an analytical laboratory for analysis for PCBs in accordance with USEPA SW-846 Method 8082. Wipe analytical results can be found in Appendix C – Submittal 07.

2.7 DISPOSAL

All excavated material was disposed of at an offsite licensed disposal facility in accordance with the TSCA 40 CFR regulations for PCB-impacted material. Materials were transported off-site in containers meeting the requirements of the

Department of Transportation (DOT) Hazardous Materials Regulations (HMR) at 49 CFR parts 171 through 180. Axle scales were used to record the weight of each load of soil leaving the site.

During mobilization it was determined that excavated soil was to be stockpiled onsite directly atop Area D. Excavated material from Excavation Area A-1 was stockpiled separately for disposal at a TSCA compliant facility for PCB wastes exceeding 50 mg/kg. Excavated material from the August 2019 excavation of the remainder of Area C was stockpiled directly adjacent to Area C.

Development Authority of the North Country facility, Rodman Landfill (NYS Route 177, Rodman, NY) was used for the disposal of non-hazardous soils. A total of 1,121.73 tons of non-hazardous material was removed from the site between 11/14/2018 and 12/14/2018. An additional 107.77 tons of non-hazardous material was removed in August 2019. Tabulated waste summaries are included in Appendix C – Submittal 08. Riccelli Enterprises was the DOT approved hauler and the material was disposed of at the Rodman Landfill. Waste manifests for non-hazardous soil disposal at the Rodman Landfill are included in Appendix C – Submittal 09.

Wayne Disposal, Inc. US Ecology was used for disposal of soils exceeding the TSCA low occupancy criteria. A total of 140,240 tons of hazardous waste was removed from the site between 12/3/2018-12/4/2018 (Appendix C – Submittal 08). Page E.T.C. and U.S. Bulk Transporter Inc. were the DOT approved haulers and the material was disposed of at Wayne Disposal. Waste manifests for hazardous soil disposal at the U.S. Ecology Landfill are also included in Appendix C – Submittal 09.

Additionally, construction water generated during dewatering of Excavation Area A-1 and decontamination of equipment temporarily stored onsite was transferred to tanker trucks for offsite disposal. The wastewater facility used in this case was Industrial Oil Tank Services Corporation (120 Dry Road, Oriskany, NY 13424). A total of 47,356 gallons of water was removed from site between 11/29/2018- 12/14/2018 (Appendix C – Submittal 08). Sun Environmental Corp., Page E.T.C. and Environmental Services of Vermont provided the hauling services to Industrial Oil Tank Services. Waste manifests for water disposal at are also included in Appendix C – Submittal 09.

2.8 BACKFILL

As stated in the IRM Work Plan (Parsons, 2018), a borrow area for backfill materials was identified across Route 3 from the site, as shown on Figure 2. Characterization samples were collected from this area in the fall of 2017 and analyzed for NYCRR Part 375 parameters. Analytical results from the characterization samples are provided in Table 1 in the IRM Work Plan (Parsons 2018). The source was approved by NYSDEC and used as site backfill. Restoration of the borrow source area was completed following completion of backfill activities. During the August 2019 excavation of Area C, borrow pit material was again used as backfill. The area was graded to pre-excavation conditions using the overburden demolition material that had been placed in the area.

3.0 REPORTING

A daily field report was prepared by Parsons (Appendix E). This reporting contains daily hours worked, description of Parsons and TREC site activities, and a short-term schedule. These reports included photos that shows the progression of major work elements throughout construction.

4.0 REFERENCES

Parsons.2018. Interim Remedial Measure Work Plan. J&L Steel. Town of Clifton, St. Lawrence County, New York. NYSDEC Site #645029. Prepared for New York State Department of Environmental Conservation by Parsons, May 2018.

Parsons. 2016. Pre-Design Investigation Report. J&L Steel. Town of Clifton, St. Lawrence County, New York. NYSDEC Site #645029. Prepared for New York State Department of Environmental Conservation by Parsons, December 2016.

Parsons. 2017. Pre-Design Investigation Report. J&L Steel. Town of Clifton, St. Lawrence County, New York. NYSDEC Site #645029. Prepared for New York State Department of Environmental Conservation by Parsons, August 2017

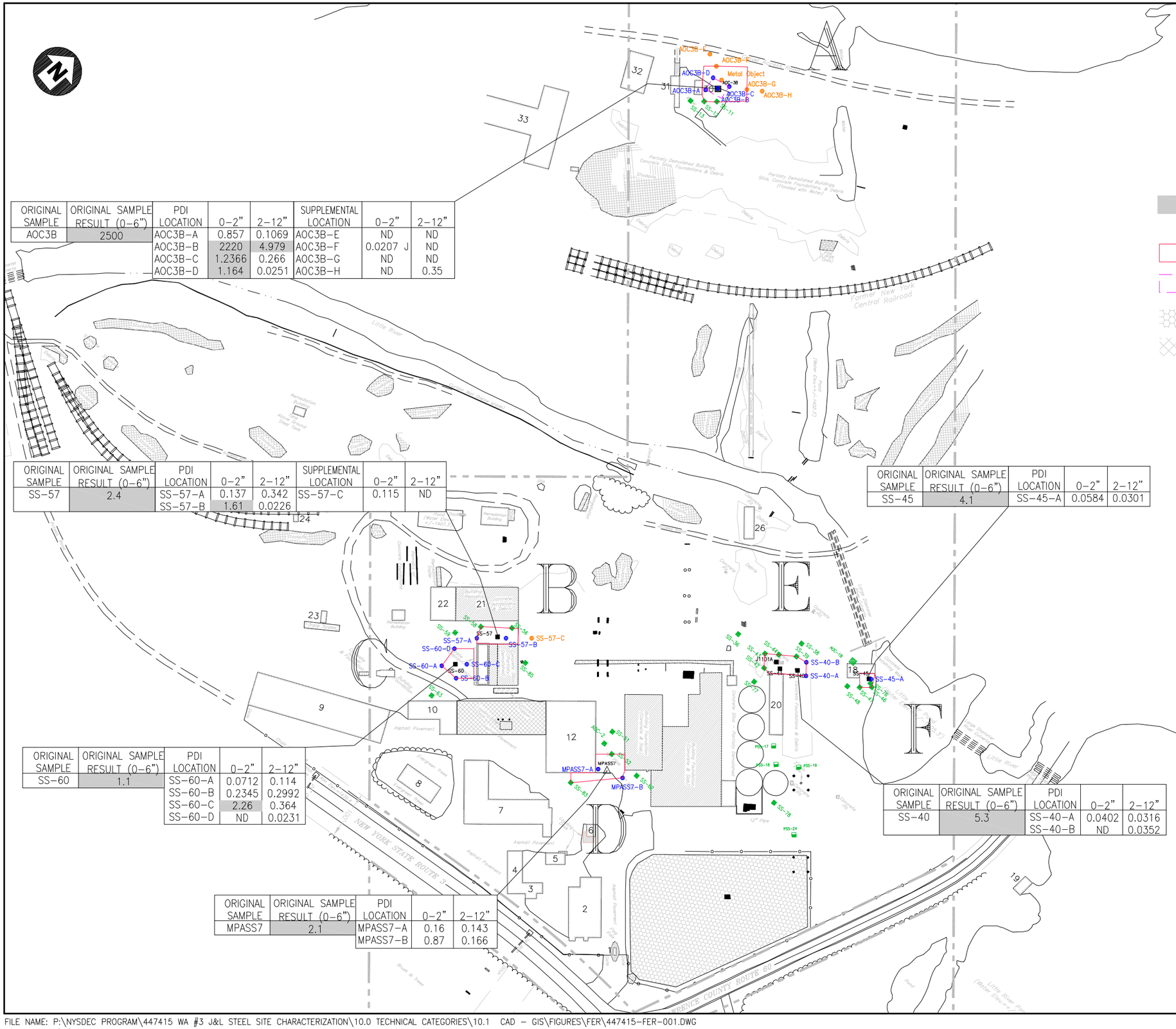
NYSDEC. 2010. DER-10/ Technical Guidance for Site Investigation and Remediation. NYSDEC, May 2010.

NYSDEC. 6 NYCRR Part 375 Environmental Remediation Programs, December 2006.

NYSDEC. 6 NYCRR Part 753 Environmental Remediation Programs, 2018.

EPA Toxic Substance Control Act (TSCA) 40 CFR 761.61. PCB Remediation Waste. 2011.

FIGURES



ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT (0–6")	PDI LOCATION	0–2"	2–12"	SUPPLEMENTAL LOCATION	0–2"	2–12"
AOC3B	2500	AOC3B-A	0.857	0.1069	AOC3B-E	ND	ND
		AOC3B-B	2220	4.979	AOC3B-F	0.0207 J	ND
		AOC3B-C	1.2366	0.266	AOC3B-G	ND	ND
		AOC3B-D	1.164	0.0251	AOC3B-H	ND	0.35

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT (0–6")	PDI LOCATION	0–2"	2–12"	SUPPLEMENTAL LOCATION	0–2"	2–12"
SS-57	2.4	SS-57-A	0.137	0.342	SS-57-C	0.115	ND
		SS-57-B	1.61	0.0226			

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT (0–6")	PDI LOCATION	0–2"	2–12"
SS-45	4.1	SS-45-A	0.0584	0.0301

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT (0–6")	PDI LOCATION	0–2"	2–12"
SS-60	1.1	SS-60-A	0.0712	0.114
		SS-60-B	0.2345	0.2992
		SS-60-C	2.26	0.364
		SS-60-D	ND	0.0231

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT (0–6")	PDI LOCATION	0–2"	2–12"
SS-40	5.3	SS-40-A	0.0402	0.0316
		SS-40-B	ND	0.0352

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT (0–6")	PDI LOCATION	0–2"	2–12"
MPASS7	2.1	MPASS7-A	0.16	0.143
		MPASS7-B	0.87	0.166

LEGEND:

- PREVIOUS SAMPLE LOCATIONS WHERE TOTAL PCB CONCENTRATIONS ARE BELOW THE 6NYCRR PART 375 COMMERCIAL SCOs.
- PDI SAMPLE LOCATIONS
- SUPPLEMENTAL PDI SAMPLE LOCATIONS
- EXCEEDS 6 NYCRR COMMERCIAL SOIL CLEANUP OBJECTIVE OF 1 mg/kg
- EXCAVATION AREA
- TSCA EXCAVATION
- STOCKPILE AREA
- SUPPORT/EQUIPMENT LAYDOWN AREA

NOTES:

1. ALL CONCENTRATIONS SHOWN IN mg/kg
2. ND NOT DETECTED
3. J LABORATORY ESTIMATED VALUE
4. ANALYTICAL DATA COMPARED TO 6NYCRR COMMERCIAL SOIL CLEANUP OBJECTIVES.

200 100 0 200 400

SCALE: 1"=200'

FIGURE 1

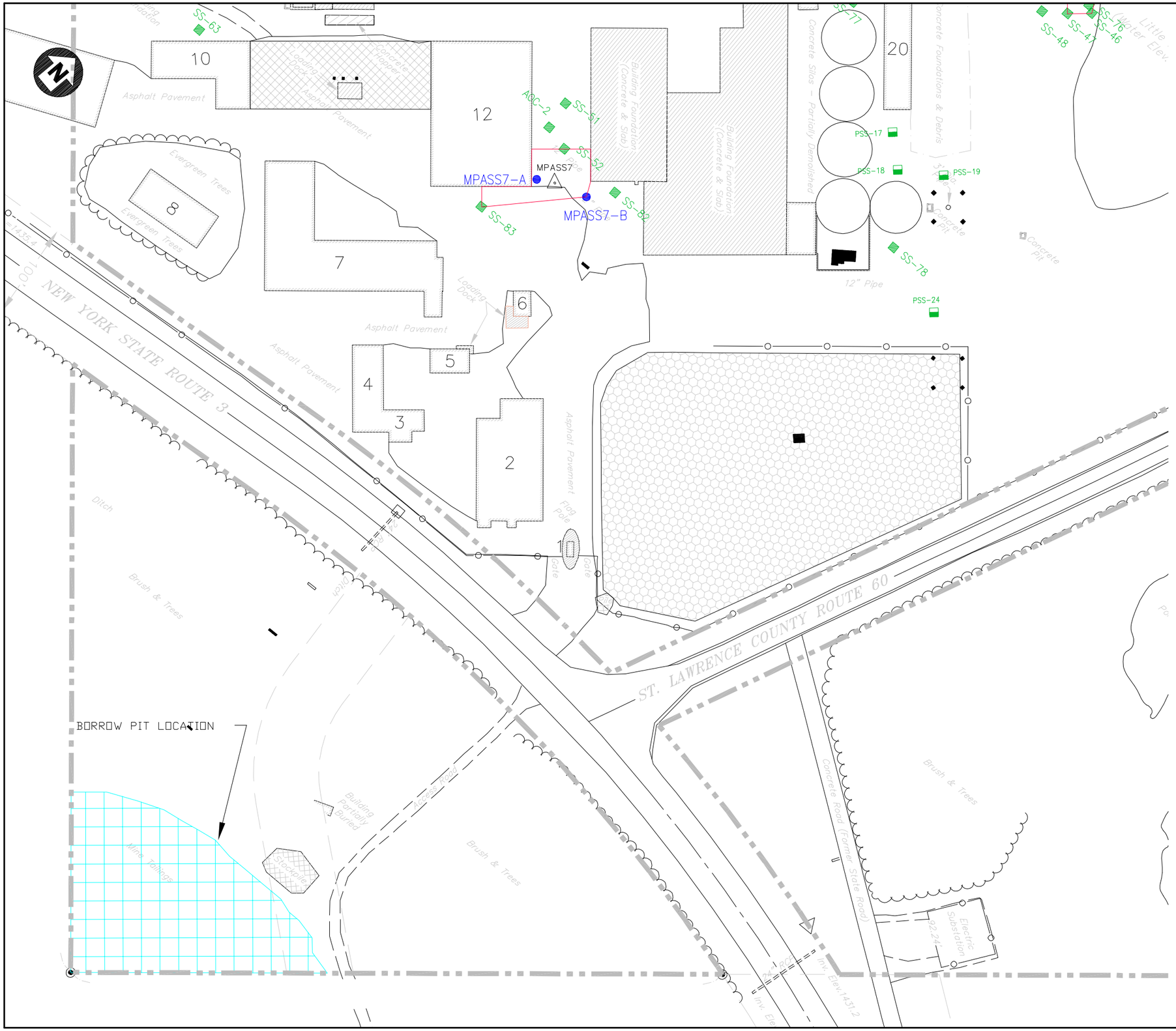
NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

Former J&L Steel IRM

DELINEATED PCB HOT SPOTS

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

FILE NAME: P:\NYSDEC PROGRAM\447415 WA #3 J&L STEEL SITE CHARACTERIZATION\10.0 TECHNICAL CATEGORIES\10.1 CAD – GIS\FIGURES\FER\447415-FER-001.DWG
PLOT DATE 4/7/2010 PLOTTED BY PUSCO III



LEGEND:

- PROPERTY LINE
- PREVIOUS SAMPLE LOCATIONS
- PDI SAMPLE LOCATIONS
- SUPPLEMENTAL PDI SAMPLE LOCATIONS
- EXCAVATION AREA
- STOCKPILE AREA
- SUPPORT/EQUIPMENT LAYDOWN AREA

100 50 0 100 200

SCALE: 1"=100'

FIGURE 2

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Former J&L Steel IRM

BACKFILL BORROW AREA

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

FILE NAME: P:\NYSDEC PROGRAM\447415 WA #3 J&L STEEL SITE CHARACTERIZATION\10.0 TECHNICAL CATEGORIES\10.1 CAD - GIS\FIGURES\FER\447415-FER-001.DWG
PLOT DATE 4/7/2010 PLOTTED BY RUSSO, JILL

APPENDIX A

IRM DOCUMENT

INTERIM REMEDIAL MEASURE WORK PLAN
J & L STEEL
TOWN OF CLIFTON
ST LAWRENCE COUNTY, NEW YORK

Prepared For:

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

New York State Department of Environmental Conservation
Division of Environmental Remediation
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Prepared By:

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May 2018

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LIST OF ACRONYMS

CAMP	Community Air Monitoring Program
CCR	Construction Completion Report
CHASP	Construction Health and Safety Plan
DER	Division of Environmental Remediation
DER-10	Division of Environmental Remediation Technical Guidance for Site Investigation and Remediation
DOT	Department of Transportation
ft	foot/feet
GPR	ground penetrating radar
HMR	Hazardous Materials Regulations
IRM	Interim Remedial Measure
mcg/m^3	Micrograms per cubic meter
mg/Kg	milligrams per kilogram
NYCRR	New York State Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCB	polychlorinated biphenyl
PDI	pre-design investigation
ppm	parts per million
SC	site characterization
SCO	Soil Cleanup Objective
TSCA	Toxic Substances Control Act
USEPA	United State Environmental Protection Agency

CERTIFICATION STATEMENT

I Thomas Drachenberg certify that I am currently a NYS registered professional engineer as in defined in 6 NYCRR Part 375 and that this Interim Remedial Measure Work Plan 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).

Thomas Drachenberg, P.E.

License No. 086020

05/18/18 DATE

Interim Remedial Measure Work Plan
J & L Steel
Town of Clifton
St Lawrence County, New York

1.0 Introduction

Pursuant to discussions with the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER) regarding the Former J&L Steel site, NYSDEC is proposing an Interim Remedial Measure (IRM) removal action to address polychlorinated biphenyl (PCB) impacted soils. This letter presents the proposed IRM design to address the PCB impacts identified during the site characterization and subsequent pre-design investigations. All sample locations in exceedance of the 6 New York State Codes, Rules and Regulations (NYCRR) Part 375 Soil Cleanup Objective (SCO) of 1 milligram per kilogram (mg/kg) for commercial land use will be addressed.

1.1 SITE BACKGROUND AND PRE-DESIGN INVESTIGATION ACTIVITIES

The former J&L Steel site is a 38-acre parcel located at the intersection of State Route 3 and County Road 50 in the Town of Clifton, St. Lawrence County, New York. The site includes several large abandoned buildings in various conditions, as well as numerous piles of mining and demolition debris. The buildings are surrounded by parking lots, access roads and unused rail spurs. The remainder of the site is partially wooded with the Little River flowing east to west through the site. A 2.5-mile long abandoned and flooded strip mine borders the northern portion of the site. The site was previously utilized as a mining and ore processing facility. The Defense Plant Corporation built the facility at the beginning of World War II. In 1946, J&L Steel purchased the property from the War Assets Administration and continued operations until approximately 1978 when the plant was permanently closed.

A site characterization (SC) investigation (Parsons, 2016) identified several PCB “hot spots” where PCB soil concentrations exceeded the SCO for commercial land use of 1 mg/kg. The PCB hot spots were further delineated during an initial pre-design investigation (PDI) effort completed in September 2016 and a supplemental PDI conducted in May 2017. Delineated hot spots and associated concentrations from the PDI efforts are shown on Design Drawing C-001 in Attachment A and the PDI data summary report is included as Attachment B.

2.0 J & L PCB Impacted Soil Removal

This section describes the scope of work for the excavation and handling of PCB-impacted soil from the J&L Steel site. Site work will be completed in accordance with Toxic Substances Control Act (TSCA) 40 CFR 761.61(a) regulations and requirements as well as NYSDEC Department of Environmental Remediation Technical Guidance for Site Investigation and Remediation (DER-10).

2.1 PRE-MOBILIZATION ACTIVITIES

At least 30 days prior to the implementation of remedial activities, the contractor shall submit to the USEPA Regional Administrator, NYSDEC project manager, and the St. Lawrence County Planning Office a brief remedial work plan for the site including schedule, disposal technology and remedial approach as specified in 40 CFR 761.61(a) (a)(3)(D). USEPA has 30 days after receipt of the site clean-up plan to approve the plan, or ask for additional information. After USEPA approves the clean-up plan, modifications to the approved plans must be made in writing no less than 14 days prior to implementing the changes.

A Construction Health and Safety Plan (CHASP) will be submitted to NYSDEC prior to the start of remedial activities. Specific information required for the CHASP is provided in Specification 01100 provided in Attachment C. In addition, air monitoring will be conducted during soil removal activities in accordance with the New York State Department of Health (NYSDOH) generic community air monitoring program (CAMP). Monitoring will consist of upwind and downwind stations which will monitor the air for volatile organic compounds (5 parts per million (ppm) site limit) and dust/particulates (150 micrograms per cubic meter (mcg/$m^{3)}$ sustained limit). If these air monitoring criteria are exceeded, site activities will be suspended and dust or volatile organic compound suppression measures will be taken until conditions improve. The CHASP should also provide worker's breathing zone air monitoring details.

2.2 SITE PREPARATION

It is anticipated that temporary facilities, such as trailers, utilities, and a lay down area will be located on the asphalt pavement area between buildings 10 and 12. The contractor will provide all temporary facilities necessary for them to complete remedial activities.

The ground surface on the J&L property is covered in weathered asphalt pavement/gravel material. While access is largely overgrown and has not been maintained, it is not expected to require significant clearing to prepare an area for the temporary facilities and lay down area. Measures to prevent erosion in excavation areas and the migration of contaminants offsite will also be implemented and maintained through the duration of the project, as described in Specification 01110 in Attachment C.

A minimum of 48 hours prior to beginning work at the site, Dig Safely New York will be contacted to request a utility mark out, in accordance with *16 NYCRR Part 753 – Protection of Underground Facilities*. Additionally, prior to commencing excavation at the site, the excavation areas will be surveyed using ground penetrating radar (GPR) to identify the presence of any existing site utilities. Any utilities encountered during remedial activities will be considered live until proven otherwise.

2.3 EXCAVATION

The contractor will retain a surveyor licensed in New York State to survey the limits and grade of excavation areas prior to the start of remedial activities. The survey will be conducted in accordance with the design. Impacted soil will be removed from six areas encompassing a total of approximately 20,400 square feet (ft) (~0.45 acres). Excavation areas have unique designations from A-F. As discussed in the PDI report, the limits of the removal hot spots were determined based on bounding of sample locations where soils up to 1 ft in depth resulted in PCB concentrations below the 6 NYCCR Part 375 Commercial SCO of 1 mg/kg. Impacted soils will be removed to a depth of 1 ft., based on NYSDEC DER-10 Section 4.1(f)2ii regulations for commercial site clean-ups. Since the boundaries of the excavation areas were determined based on previous sampling locations where PCB concentrations were less than the Part 375 Commercial SCO, and DER-10 requires remediation to a 1 ft depth

for commercial sites, confirmatory sampling will not be required following remedial activities with exception of Excavation Area A-1 (sample AOC 3B-B), which exceeds TSCA SCOs.

A concentrated excavation area has been delineated at Excavation Area A-1 which will require segregation, and separate disposal of materials from this excavation area. In addition, post excavation sampling will be required in accordance with TSCA regulations outlined in section 761.61 paragraph B(6)(ii). Excavation sequencing in this area will be as follows:

- Excavate limits of Excavation Area A-1 and segregate material for hazardous disposal.
- Collect confirmatory samples from the excavation sidewalls and bottom at locations shown on Drawing C-002a in accordance with the requirements of 40 CFR 761.280-298 and the project Sampling Plan provided as Attachment D.
- In the event that PCB concentrations in the confirmatory sample results exceed the cleanup objective of 1 mg/kg, contingent removals in this area will be conducted and additional confirmatory samples will be collected until PCB concentrations in the sidewalls and bottom of the excavation below the cleanup objective are achieved.
- It is not anticipated that dewatering of excavation areas, dewatering of excavated soils, or solidification of excavated material will be required.

Excavation areas abut existing buildings. Soils adjacent to buildings will be removed up to the building and footer (if encountered). Although not anticipated, any removals required deeper than the bottom of the footer will be sloped 2:1 (horizontal to vertical) away from the footer until the required depth noted above is achieved. Remaining limits of excavation will be sloped 1:1 to existing grade. Excavation details are provided on Design Drawing C-003 of Attachment A. An estimated total of approximately 750 cubic yards of material will be excavated from the site. A post excavation survey will be completed prior to backfilling of all excavation areas.

The contractor will evaluate existing site characterization and pre-design information to determine whether excavated materials from Excavation Areas B through F will be direct loaded into trucks for offsite disposal or stockpiled at a central location for further characterization and disposal. If material is to be stockpiled onsite, a temporary stockpile area constructed of berms lined with an impermeable HDPE liner, as shown in Design Drawing C-003. Excavated material from Excavation Area A-1 will be stockpiled separately and disposed of at a TSCA compliant facility for PCB wastes exceeding 50 mg/kg.

Temporary decontamination pads will be constructed on site for decontamination of equipment that comes in contact with PCB-contaminated material during the IRM. The location of the decontamination pads will be determined in the field. The decontamination pads will be bermed and lined with high density polyethylene sheeting sloped to a low-point sump for collection of decontamination water. Equipment surfaces in contact with PCB-contaminated materials (e.g. excavator bucket, tracks) will be decontaminated after excavation of each area in accordance with the requirements of the CHASP. All decontamination water generated, and soil removed during decontamination will be collected for characterization and disposal. Following completion of the IRM, equipment surfaces which were in contact with PCB-contaminated materials will be wipe-tested to verify that PCBs are not present at, or above, 10 mg per 100 cm2 on equipment surfaces. Wipe samples will be collected using a hexane-soaked gauze pad provided by an approved analytical laboratory following USEPA standard wipe test methodology. The wipe sample will be submitted to an approved analytical laboratory for analysis for PCBs in accordance with USEPA SW-846 Method 8082.

2.4 DISPOSAL

The contractor will be responsible for the disposal of excavated material at an offsite licensed disposal facility in accordance with the TSCA 40 CFR regulations for PCB-impacted material. Requirements for disposal at the selected facility (e.g., waste characterization sampling) will be the responsibility of the contractor. The following regulations govern the disposal of PCB product waste for this project:

- PCB product waste may be disposed of in an incinerator under 761.70
- May be disposed of in a chemical waste landfill approved under 761.75
- May be disposed of in a hazardous waste landfill permitted by EPA under section 3004 of RCRA, or by a State authorized under section 3006 of RCRA
- May be disposed of under an alternative disposal approval under 761.60 (e)
- May be disposed of in accordance with the thermal decontamination provisions of 761.79(c)(6)
- May be disposed of in accordance with a TSCA PCB coordinated approval issue under 761.77

Materials will be transported off-site in containers meeting the requirements of the Department of Transportation (DOT) Hazardous Materials Regulations (HMR) at 49 CFR parts 171 through 180.

It is the contractor's responsibility to designate and segregate material with PCB concentration ≥ 50 mg/kg and disposed of separately. Bulk PCB remediation wastes with a concentration greater than 50 mg/kg will be disposed of in a hazardous materials landfill permitted by the EPA under section 3004 of RCRA or by a state authorized under section 3006 of RCRA.

If material containing <50 mg/kg of PCBs is segregated and characterized in a manner acceptable to the waste disposal facility, material may be disposed of in accordance with TSCA 761.61 (a)(5)(v)(A), namely:

- A facility permitted, licensed, or registered by a State to manage municipal solid waste.
- A facility permitted, licensed, or registered by a State to manage nonmunicipal non-hazardous waste.
- A hazardous waste landfill permitted by EPA under section 3004 of RCRA, or by a State authorized under section 3006 of RCRA.
- A PCB disposal facility approved under this part.

Additionally, the contractor will be responsible for the containerization, characterization, and disposal of waste water generated during decontamination of equipment

The contractor will also be responsible for manifesting each load of excavated material and waste water leaving the site. The material will be transported using trucks which will exit the J&L site through an existing gate on the southeastern portion of the site to Route 3. The contractor will be responsible for weighing each load leaving the site using axle scales, a temporary onsite truck scale or a local truck scale, or equivalent.

2.5 BACKFILL

Following excavation, clean backfill will be placed and compacted to pre-existing grade. A minimum of three passes with a vibratory compactor will be required for compaction. Compaction testing will not be required.

A potential borrow area was identified across Route 3 from the site, as shown on Design Drawing C-003. Characterization samples were collected from this area in the fall of 2017 and analyzed for NYCRR Part 375 parameters. Analytical results from the characterization samples are provided in Table 1. Pending approval by NYSDEC on the acceptability of this material for use, it is anticipated that the borrow source material will be used for backfill purposes. Restoration of the borrow source area will be completed following completion of backfill activities.

3.0 Project Closeout and Reporting

Following backfill, project closeout documentation will be provided to the NYSDEC and USEPA to document the finished conditions of the property and remedial activities completed by the contractor. The following is required to be documented and provided to the EPA within 60 days of completion of cleanup activity:

- Record, in accordance with state law, a notation on the deed to the property or on some other instrument which is normally examined during a title search, that will in perpetuity notify any potential buyer of the property:
    - That the land has contained (and may still contain to an extent) PCB remediation waste and is restricted to use as a low occupancy area
    - Of the existence of a fence or cap and the requirement to maintain the fence or cap
- The applicable cleanup levels left at the site, inside the fence, and/or under the cap
- Submit a certification, signed by the owner, that he/she has recorded the notation specified in paragraph (a)(8)(i)(A) of section 761.61.

A final Construction Completion Report (CCR) submitted to DER for approval will be prepared, stamped, certified and signed by an individual licensed or otherwise authorized in accordance with article 145 of the Education Law to practice the profession of engineering using the appropriate certification. Guidance and requirements regarding the CCR can be found in section 5.8 of the NYSDEC Program Policy DER 10 Technical Guidance for Site Investigation and Remediation.

4.0 Schedule

It is anticipated that mobilization activities will begin on or about July 16,2018, following receipt of NYSDEC approval of the IRM Work Plan. Following mobilization implementation of the IRM is expected to take approximately three weeks.

5.0 References:

New York State Department of Environmental Conservation. “DER-10 / Technical Guidance for Site Investigation and Remediation” NYSDEC Web. 03 May 2010

U.S. Environmental Protection Agency. “Toxic Substances Control Act (TSCA) – Section 761.61” EPA. Environmental Protection Agency, Web. 06 May 2014.

Parsons. “Site Characterization Report for the Former J&L Steel Site.” Prepared for New York State Department of Environmental Conservation. August 2016.

Tables

TABLE 1
NYSDEC - J & L Steel
Borrow Area Characterization Sample Results

NYSDEC-J&L Steel Site 2017 Site Investigation Validated Soil Data SDG: SC41940		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	JL-SP-01 JL-SP-01 SC41490-01 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-02 JL-SP-02 SC41490-02 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-03 JL-SP-03 SC41490-03 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-04 JL-SP-04 SC41490-04 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-05 JL-SP-05 SC41490-05 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-06 JL-SP-06 SC41490-06 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-07 JL-SP-07 SC41490-07 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-08 JL-SP-08 SC41490-09 PHOENIX SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-09 JL-SP-09 SC41490-10 PHOENIX SC41490 SOIL 11/13/2017 1/17/2018
CAS NO.	COMPOUND		UNITS:										
	VOLATILES												
71-55-6	1,1,1-Trichloroethane	500	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
75-34-3	1,1-Dichloroethane	240	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
75-35-4	1,1-Dichloroethene	500	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
95-63-6	1,2,4-Trimethylbenzene	190	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
95-50-1	1,2-Dichlorobenzene	500	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
107-06-2	1,2-Dichloroethane	30	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
108-67-8	1,3,5-Trimethylbenzene	190	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
541-73-1	1,3-Dichlorobenzene	280	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
106-46-7	1,4-Dichlorobenzene	130	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
123-91-1	1,4-Dioxane	130	mg/kg	0.0877 UJ	0.0986 UJ	0.0954 UJ	1.95 U	2.13 U	0.0939 UJ	0.0873 UJ			
67-64-1	Acetone	500	mg/kg	0.0439 U	0.0493 U	0.0477 U	0.976 U	1.07 U	0.0469 U	0.0508			
71-43-2	Benzene	44	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
56-23-5	Carbon Tetrachloride	22	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
108-90-7	Chlorobenzene	500	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
67-66-3	Chloroform	350	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
156-59-2	Cis-1,2-Dichloroethene	500	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
100-41-4	Ethylbenzene	390	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
78-93-3	Methyl Ethyl Ketone (2-Butanone)	500	mg/kg	0.00877 U	0.00986 U	0.00954 U	0.195 U	0.213 U	0.00939 U	0.00873 U			
75-09-2	Methylene Chloride	500	mg/kg	0.00877 U	0.00986 U	0.00954 U	0.195 U	0.213 UJ	0.00939 U	0.00873 U			
104-51-8	N-Butylbenzene	500	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.097 J	0.00469 U	0.00436 U			
103-65-1	N-Propylbenzene	500	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
135-98-8	Sec-Butylbenzene	500	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
98-06-6	T-Butylbenzene	500	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
1634-04-4	Tert-Butyl Methyl Ether	500	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
127-18-4	Tetrachloroethylene (PCE)	150	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
108-88-3	Toluene	500	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
156-60-5	Trans-1,2-Dichloroethene	500	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
79-01-6	Trichloroethylene (TCE)	200	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
75-01-4	Vinyl Chloride	13	mg/kg	0.00439 U	0.00493 U	0.00477 U	0.0976 U	0.107 U	0.00469 U	0.00436 U			
1330-20-7	Xylenes, Total	500	mg/kg	0.0132 U	0.0148 U	0.0143 U	0.293 U	0.32 U	0.0141 U	0.0131 U			

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NYSDEC - J & L Steel
Borrow Area Characterization Sample Results

NYSDEC-J&L Steel Site 2017 Site Investigation Validated Soil Data SDG: SC41940		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	JL-SP-01 JL-SP-01 SC41490-01 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-02 JL-SP-02 SC41490-02 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-03 JL-SP-03 SC41490-03 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-04 JL-SP-04 SC41490-04 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-05 JL-SP-05 SC41490-05 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-06 JL-SP-06 SC41490-06 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-07 JL-SP-07 SC41490-07 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-08 JL-SP-08 SC41490-09 PHOENIX SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-09 JL-SP-09 SC41490-10 PHOENIX SC41490 SOIL 11/13/2017 1/17/2018
CAS NO.	COMPOUND		UNITS:									
	SEMIVOLATILES											
15831-10-4	3- And 4- Methylphenol (Total)	500	mg/kg								0.355 U	0.362 U
95-48-7	2-Methylphenol (O-Cresol)	500	mg/kg								0.355 U	0.362 U
83-32-9	Acenaphthene	500	mg/kg								0.0718 U	0.0731 U
208-96-8	Acenaphthylene	500	mg/kg								0.0718 U	0.0731 U
120-12-7	Anthracene	500	mg/kg								0.0718 U	0.0731 U
56-55-3	Benzo(A)Anthracene	5.6	mg/kg								0.0718 U	0.0731 U
50-32-8	Benzo(A)Pyrene	1	mg/kg								0.0718 U	0.0731 U
205-99-2	Benzo(B)Fluoranthene	5.6	mg/kg								0.0718 U	0.0731 U
191-24-2	Benzo(G,H,I)Perylene	500	mg/kg								0.0718 U	0.0731 U
207-08-9	Benzo(K)Fluoranthene	56	mg/kg								0.0718 UJ	0.0731 UJ
218-01-9	Chrysene	56	mg/kg								0.0718 U	0.0731 U
53-70-3	Dibenz(A,H)Anthracene	0.56	mg/kg								0.0718 U	0.0731 U
132-64-9	Dibenzofuran	350	mg/kg								0.18 U	0.183 U
206-44-0	Fluoranthene	500	mg/kg								0.0718 U	0.0731 U
86-73-7	Fluorene	500	mg/kg								0.0718 U	0.0731 U
118-74-1	Hexachlorobenzene	6	mg/kg								0.18 U	0.183 U
193-39-5	Indeno(1,2,3-C,D)Pyrene	5.6	mg/kg								0.0718 U	0.0731 U
91-20-3	Naphthalene	500	mg/kg								0.0718 U	0.0731 U
87-86-5	Pentachlorophenol	6.7	mg/kg								0.355 U	0.362 U
85-01-8	Phenanthrene	500	mg/kg								0.0718 U	0.0731 U
108-95-2	Phenol	500	mg/kg								0.355 U	0.362 U
129-00-0	Pyrene	500	mg/kg								0.0718 U	0.0731 U
	PESTICIDES											
75-99-0	Dalapon	NS	mg/kg								0.09 U	0.092 U
309-00-2	Aldrin	0.68	mg/kg								0.0036 U	0.0037 U
319-84-6	Alpha Bhc	3.4	mg/kg								0.0072 U	0.0073 U
959-98-8	Alpha Endosulfan	200	mg/kg								0.0072 U	0.0073 U
5103-71-9	cis-Chlordane	24	mg/kg								0.0036 U	0.0037 U
319-85-7	Beta Bhc	3	mg/kg								0.0072 U	0.0073 U
33213-65-9	Beta Endosulfan	200	mg/kg								0.0072 U	0.0073 U
57-74-9	Chlordane	24	mg/kg								0.036 U	0.037 U
319-86-8	Delta BHC	500	mg/kg								0.0072 U	0.0073 U
60-57-1	Dieldrin	1.4	mg/kg								0.0036 U	0.0037 U
1031-07-8	Endosulfan Sulfate	200	mg/kg								0.0072 U	0.0073 U
72-20-8	Endrin	89	mg/kg								0.0072 U	0.0073 U
7421-93-4	Endrin Aldehyde	NS	mg/kg								0.0072 U	0.0073 U
53494-70-5	Endrin Ketone	NS	mg/kg								0.0072 U	0.0073 U
58-89-9	Gamma Bhc (Lindane)	9.2	mg/kg								0.0014 U	0.0015 U
57-74-9	Chlordane (Technical)	24	mg/kg								0.0036 U	0.0037 U
76-44-8	Heptachlor	15	mg/kg								0.0072 U	0.0073 U
1024-57-3	Heptachlor Epoxide	NS	mg/kg								0.0072 U	0.0073 U
72-43-5	Methoxychlor	NS	mg/kg								0.036 U	0.037 U
72-54-8	P,P'-DDD	92	mg/kg								0.0022 U	0.0022 U
72-55-9	P,P'-DDE	62	mg/kg								0.0022 U	0.0022 U
50-29-3	P,P'-DDT	47	mg/kg								0.0022 U	0.0022 U
8001-35-2	Toxaphene	NS	mg/kg								0.14 U	0.15 U

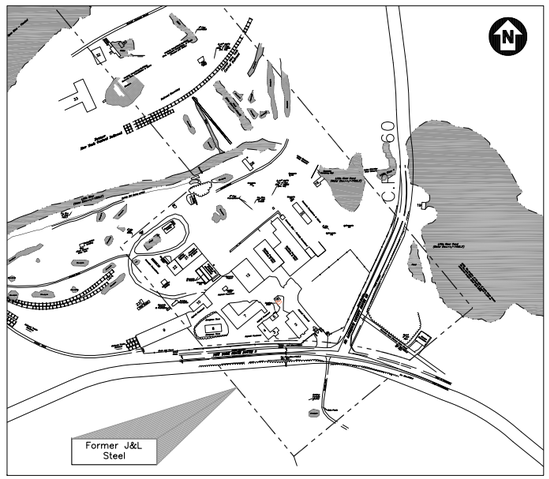
TABLE 1
NYSDEC - J & L Steel
Borrow Area Characterization Sample Results

NYSDEC-J&L Steel Site 2017 Site Investigation Validated Soil Data SDG: SC41940		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	JL-SP-01 JL-SP-01 SC41490-01 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-02 JL-SP-02 SC41490-02 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-03 JL-SP-03 SC41490-03 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-04 JL-SP-04 SC41490-04 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-05 JL-SP-05 SC41490-05 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-06 JL-SP-06 SC41490-06 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-07 JL-SP-07 SC41490-07 SPECTRUM SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-08 JL-SP-08 SC41490-09 PHOENIX SC41490 SOIL 11/13/2017 1/17/2018	JL-SP-09 JL-SP-09 SC41490-10 PHOENIX SC41490 SOIL 11/13/2017 1/17/2018
CAS NO.	COMPOUND		UNITS:									
	PCBs											
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg								0.0215 U	0.0215 U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg								0.0215 U	0.0215 U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg								0.0215 U	0.0215 U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg								0.0215 U	0.0215 U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg								0.0215 U	0.0215 U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg								0.0215 U	0.0215 U
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg								0.0215 U	0.0215 U
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg								0.0215 U	0.0215 U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg								0.0215 U	0.0215 U
	HERBICIDES											
94-82-6	2,4-(Dichlorophenoxy)butyric acid	NS	mg/kg								1.8 UJ	1.8 UJ
93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-	NS	mg/kg								0.09 U	0.092 U
120-36-5	Dichloroprop	NS	mg/kg								0.18 U	0.18 U
1918-00-9	Dicamba	NS	mg/kg								0.09 U	0.092 U
88-85-7	Dinoseb	NS	mg/kg								0.18 U	0.18 U
93-72-1	Silvex (2,4,5-TP)	500	mg/kg								0.09 U	0.092 U
94-75-7	2,4-D	NS	mg/kg								0.18 U	0.18 U
	INORGANICS											
7440-38-2	Arsenic	16	mg/kg								9.35	7.16 J
7440-39-3	Barium	400	mg/kg								705	577
7440-41-7	Beryllium	590	mg/kg								0.49 J	0.473 J
7440-43-9	Cadmium	9.3	mg/kg								0.138 U	0.14 U
16065-83-1	Chromium Iii	1500	mg/kg								1.04 U	1.04 U
18540-29-9	Chromium, Hexavalent	400	mg/kg								0.43 UJ	0.44 UJ
7440-47-3	Chromium, Total	1500	mg/kg								1.25 J	2.27 J
7440-48-4	Cobalt	NS	mg/kg								10.8 J	8.19
7439-92-1	Lead	1000	mg/kg								7.51 J	5.59 J
7439-96-5	Manganese	10000	mg/kg								632 J	422
7439-97-6	Mercury	2.8	mg/kg								0.0182 J	0.0138 J
7440-02-0	Nickel	310	mg/kg								14.7	8.4
7782-49-2	Selenium	1500	mg/kg								2.43 J	1.86 J
7440-22-4	Silver	1500	mg/kg								1.31 J	0.892 J
7440-66-6	Zinc	10000	mg/kg								52.1	35.7
57-12-5	Cyanide	27	mg/kg								0.366 U	0.347 U
	OTHER											
ORP	Oxidation-Reduction Potential	NS	Eh units								645	642
PH	pH	NS	ph units								4.13	4.61
SOLID	Solids, Percent	NS	%	91.3	92.4	91.2	89.5	90.4	86.7	93	92	91

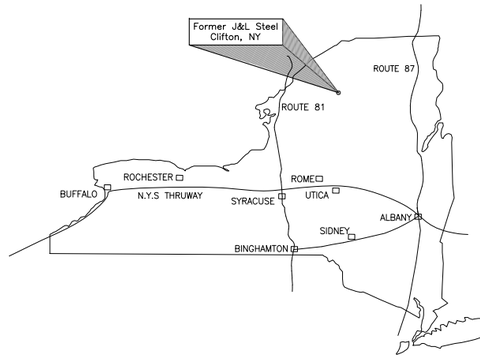
Attachment A

Design Drawings

FORMER J & L STEEL SITE
PCB IRM EXCAVATION
CLIFTON, NEW YORK



SITE LOCATION MAP
NOT TO SCALE



N.Y. STATE MAP
NOT TO SCALE

DRAWING INDEX

G–001	TITLE SHEET AND DRAWING INDEX
C–001	TOTAL PCBs IN SOIL SAMPLE RESULTS
C–002	EXCAVATION AREAS
C–002a	EXCAVATION AREA A–1 COMPOSITE SAMPLING AREA
C–003	DETAILS AND BORROW PIT AREA

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
A	ISSUED FOR REVIEW (IN PROGRESS)	01/29/18	JR	–	–

DRAWN BY: JR	DATE: 01/29/18	SEAL
CHECKED BY: MV	DATE: –	
APPROVED BY: –	DATE: –	
PROJECT MGR.: –	DATE: –	

PARSONS
COMMERCIAL TECHNOLOGY GROUP

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451–9560

JOB: 447415
WBS: 02000

PROJECT TITLE
FORMER J&L STEEL SITE
IRM WORK PLAN

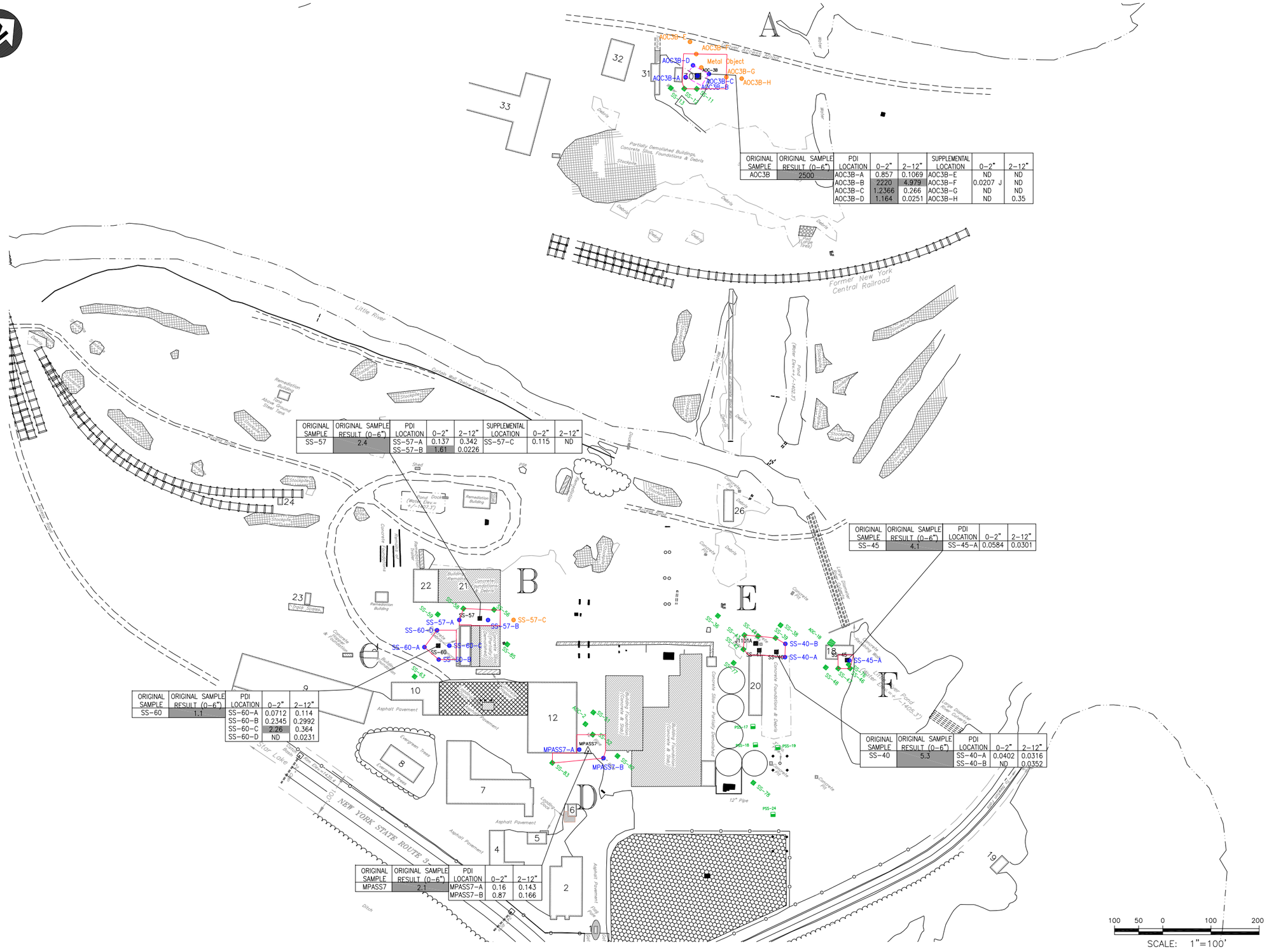
J&L PCB SOIL REMOVAL
CLIFTON, NEW YORK

DRAWING TITLE
TITLE SHEET
AND DRAWING INDEX

SCALE: NOT TO SCALE (IF PRINTED ON 22x34 SHEET)

DRAWING NO.: 447415–G–001
REV.: A

FILE NAME: P:\NYSDEC PROGRAM\447415 WA #3 J&L STEEL SITE CHARACTERIZATION\10.0 TECHNICAL CATEGORIES\10.1 CAD – GIS\FIGURES\IRM WORK PLAN\447415–IRM–G–001.DWG
PLOT DATE: 5/10/2018 9:10 AM PLOTTED BY: RUSSO, JILL


A
B
C
D
E
F
Little River
Former New York Central Railroad
NEW YORK STATE ROUTE 3
Guide Rail (Below Grade)
Metal Object
Partially Demolished Buildings, Concrete Slabs, Foundations & Debris
Stockpile
Debris
Ditch
Pole
Shed
Remediation Building
Evergreen Trees
Asphalt Pavement
Concrete Slab
Concrete Foundations & Debris
Large Diameter Water Culvert
Pond (Water Elev.= +/-1405.37)
Pond (Water Elev.= +/-1402.57)
Former Pond Area
Trees
Trees, Shrubs
Utility Pole
Fire Hydrant
Gate Valve
Manhole
Catch Basin
Inlet
Guide Rail
Fence
Overhead Utilities
Underground Utilities
Building Demolition
Concrete Foundations & Debris
Concrete Slab - Former Building
Former Building
Former Building Demolished
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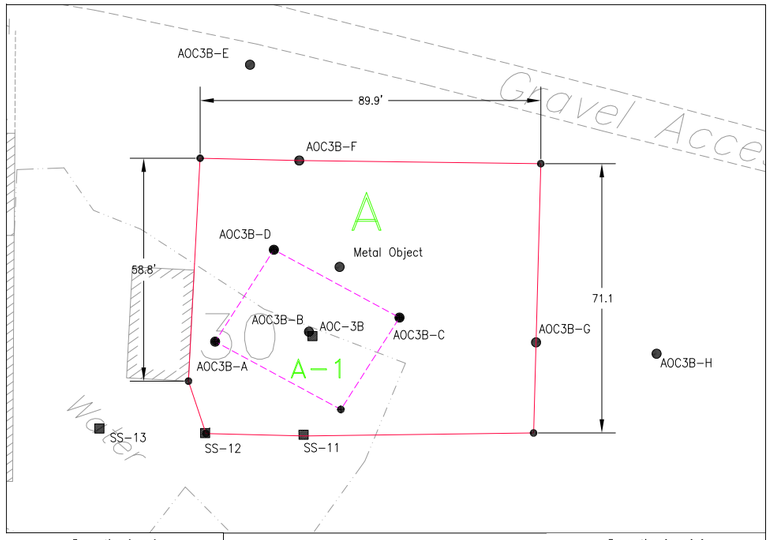
Former Building Demolished (Concrete Slab - Former Building Demolished (Concrete Slab - Former Building Demolished (Concrete Slab - Former Building Demolished (Concrete Slab - Former Building Demolished (Concrete Slab - Former Building Demolished (Concrete Slab - Former Building Demolished (Concrete Slab - Former Building Demolished (Concrete Slab - Former Building Demolished)

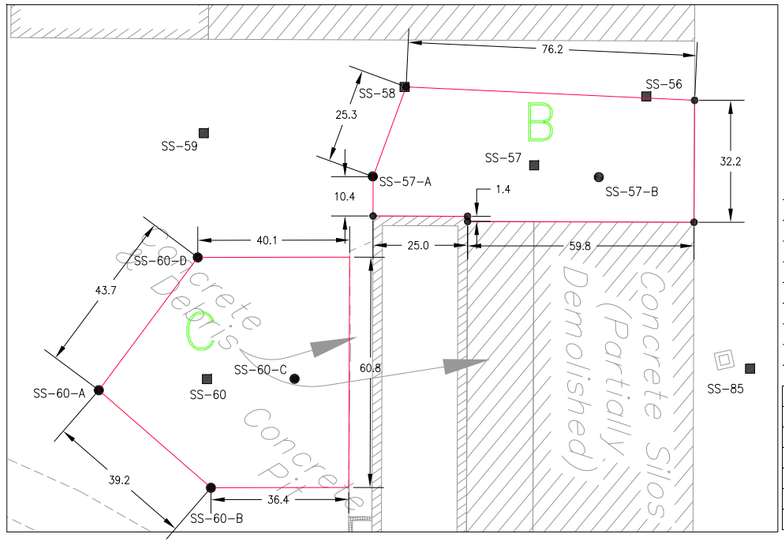


Excavation Area A		
Point	Easting	Northing
A1	361450.59	1945361.99
A2	361520.57	1945418.49
A3	361564.63	1945362.69
A4	361498.31	1945307.18
A5	361485.91	1945314.85

EXCAVATION AREA A

NOT TO SCALE

Excavation Area A-1		
Point	Easting	Northing
TSCA-1	361481.02	1945355.92
TSCA 2	361517.95	1945363.41
TSCA-3	361521.60	1945334.87
TSCA-4	361484.65	1945327.37



Excavation Area B		
Point	Easting	Northing
B1	361837.41	1944185.21
B2	361898.15	1944231.27
B3	361918.66	1944206.45
B4	361872.60	1944168.32
B5	361871.74	1944169.36
B6	361852.52	1944153.45
B7	361845.91	1944161.43

Excavation Area C		
Point	Easting	Northing
C1	361823.99	1944115.43
C2	361859.39	1944145.07
C3	361893.49	1944094.32
C4	361865.61	1944070.97
C5	361826.40	1944071.78

EXCAVATION AREAS B & C

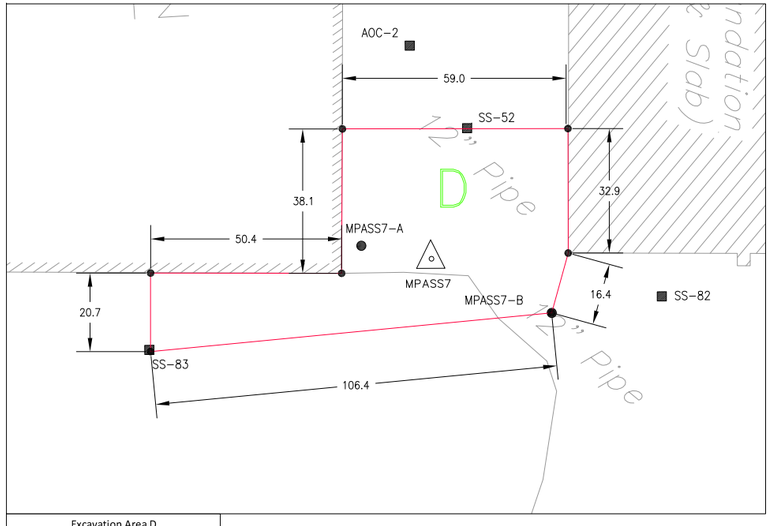
NOT TO SCALE

LEGEND:

- PREVIOUS SAMPLE LOCATIONS WHERE TOTAL PCB CONCENTRATIONS ARE BELOW THE 6NYCRR PART 375 COMMERCIAL SCOs.
- PDI SAMPLE LOCATIONS
- SUPPLEMENTAL PDI SAMPLE LOCATIONS
- EXCEEDS 6 NYCRR COMMERCIAL SOIL CLEANUP OBJECTIVE OF 1 mg/kg
- EXCAVATION AREA
- TSCA EXCAVATION
- STOCKPILE AREA
- SUPPORT/EQUIPMENT LAYDOWN AREA

NOTES:

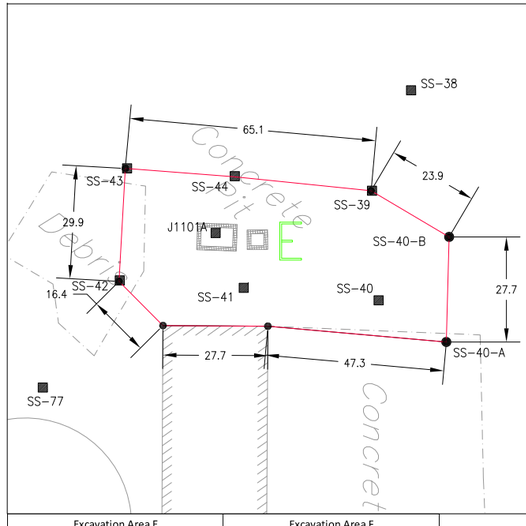
1. ALL CONCENTRATIONS SHOWN IN mg/kg
2. ND NOT DETECTED
3. J LABORATORY ESTIMATED VALUE
4. ANALYTICAL DATA COMPARED TO 6NYCRR COMMERCIAL SOIL CLEANUP OBJECTIVES.
5. ALL UNITS AND DIMENSIONS IN FEET UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL CONTACT DIGSAFE FOR LOCATION OF UNDERGROUND UTILITIES BEFORE BEGINNING EARTHWORK ACTIVITIES.

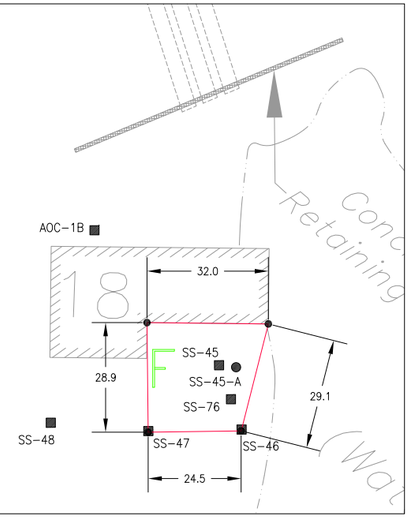


Excavation Area D		
Point	Easting	Northing
D1	362185.70	1944134.75
D2	362231.36	1944172.96
D3	362252.45	1944147.77
D4	362259.23	1944132.85
D5	362184.08	1944059.02
D6	362171.19	1944073.12
D7	362209.95	1944105.36

EXCAVATION AREA D

NOT TO SCALE





Excavation Area E			Excavation Area F		
Point	Easting	Northing	Point	Easting	Northing
E1	362319.93	1944515.85	F1	362495.53	1944609.33
E2	362373.53	1944552.86	F2	362520.36	1944629.58
E3	362397.15	1944556.71	F3	362532.93	1944603.29
E4	362414.34	1944534.94	F4	362514.30	1944587.31
E5	362354.13	1944490.36			
E6	362337.76	1944491.89			

EXCAVATION AREAS E & F

NOT TO SCALE

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
A	ISSUED FOR REVIEW (IN PROGRESS)	10/25/17	JR	–	–

DRAWN BY	JR	DATE 10/25/17
CHECKED BY	MS	DATE –
APPROVED BY	–	DATE –
PROJECT MGR.	–	DATE –

SEAL

PARSONS
COMMERCIAL TECHNOLOGY GROUP
OFFICE 301 PLAINFIELD ROAD SYRACUSE, NY 13212 (315) 451-9560

JOB 447415

WBS 02000

PROJECT TITLE

FORMER J&L STEEL SITE
IRM WORK PLAN

J&L PCB SOIL REMOVAL
CLIFTON, NEW YORK

DRAWING TITLE

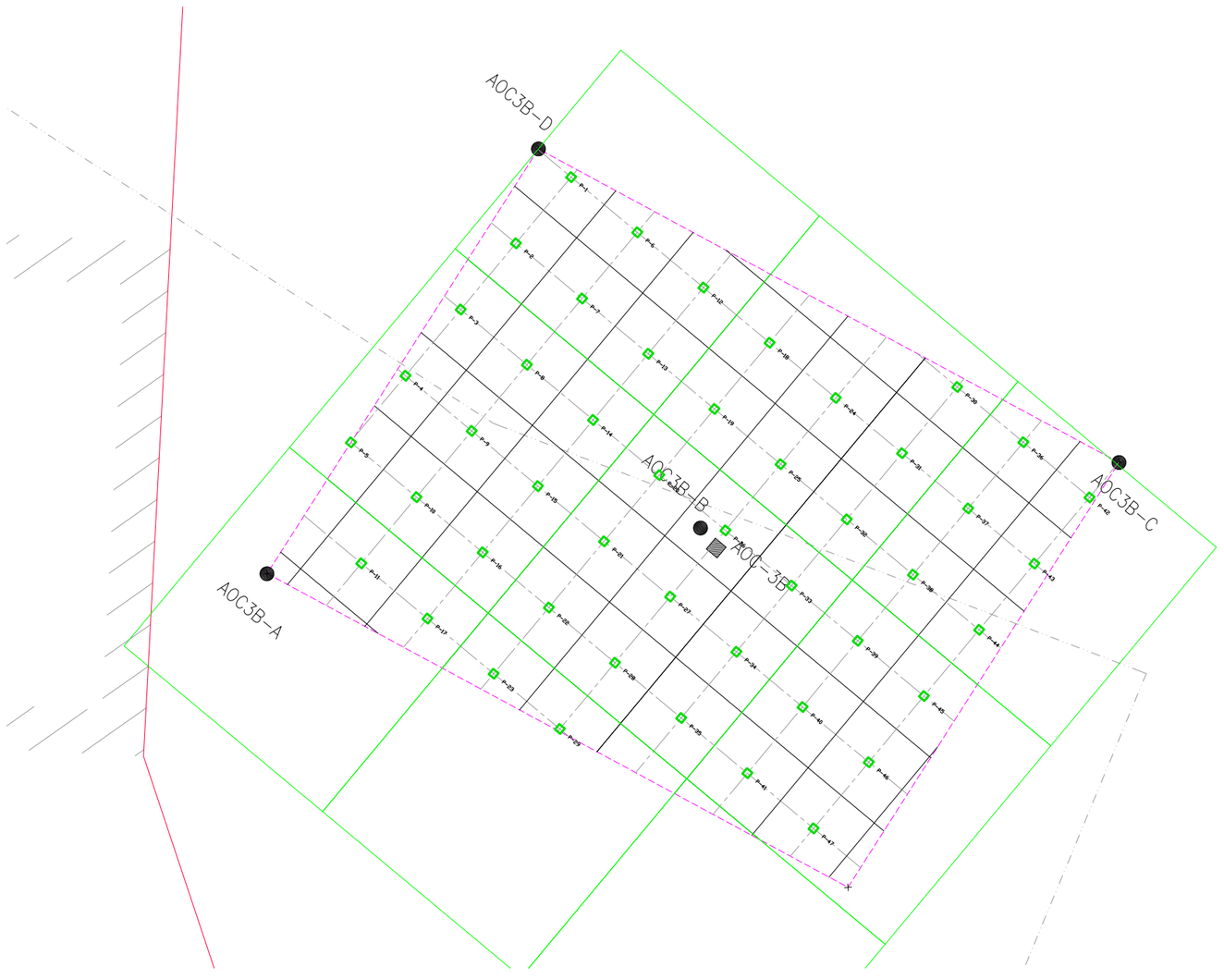
EXCAVATION AREAS

SCALE NOT TO SCALE (IF PRINTED ON 22x34 SHEET)

DRAWING NO. 447415-C-002

REV. A

FILE NAME: P:\NYSDEC PROGRAM\447415 WA #3 J&L STEEL SITE CHARACTERIZATION\10.0 TECHNICAL CATEGORIES\10.1 CAD - GIS\FIGURES\IRM WORK PLAN\447415-IRM-003.DWG
PLOT DATE: 3/30/2018 2:09 PM PLOTTED BY: RUSSO, JILL



EXCAVATION AREA A–1
NOT TO SCALE

LEGEND:

- PREVIOUS SAMPLE LOCATIONS WHERE TOTAL PCB CONCENTRATIONS ARE BELOW THE 6NYCRR PART 375 COMMERCIAL SCOs.
- PDI SAMPLE LOCATIONS
- SUPPLEMENTAL PDI SAMPLE LOCATIONS
- EXCEEDS 6 NYCRR COMMERCIAL SOIL CLEANUP OBJECTIVE OF 1 mg/kg
- EXCAVATION AREA
- TSCA EXCAVATION
- STOCKPILE AREA
- SUPPORT/EQUIPMENT LAYDOWN AREA
- SAMPLE LOCATION
- COMPOSITE AREAS

Sample Point	Easting	Northing
P-1	361483.48	1945355.88
P-2	361483.48	1945350.96
P-3	361483.48	1945346.04
P-4	361483.48	1945341.12
P-5	361483.53	1945336.19
P-6	361488.40	1945355.88
P-7	361488.40	1945350.96
P-8	361488.40	1945346.04
P-9	361488.40	1945341.12
P-10	361488.40	1945336.19
P-11	361488.40	1945331.27
P-12	361493.32	1945355.88
P-13	361493.32	1945350.96
P-14	361493.32	1945346.04
P-15	361493.32	1945341.12
P-16	361493.32	1945336.19
P-17	361493.32	1945331.27
P-18	361498.25	1945355.88
P-19	361498.25	1945350.96
P-20	361498.25	1945346.04
P-21	361498.25	1945341.12
P-22	361498.25	1945336.19
P-23	361498.25	1945331.27
P-24	361503.17	1945355.88
P-25	361503.17	1945350.96
P-26	361503.17	1945346.04
P-27	361503.17	1945341.12
P-28	361503.17	1945336.19
P-29	361503.17	1945331.27
P-30	361508.09	1945360.80
P-31	361508.09	1945355.88
P-32	361508.09	1945350.96
P-33	361508.09	1945346.04
P-34	361508.09	1945341.12
P-35	361508.09	1945336.19
P-36	361513.01	1945360.80
P-37	361513.01	1945355.88
P-38	361513.01	1945350.96
P-39	361513.01	1945346.04
P-40	361513.01	1945341.12
P-41	361513.01	1945336.19
P-42	361517.93	1945360.80
P-43	361517.93	1945355.88
P-44	361517.93	1945350.96
P-45	361517.93	1945346.04
P-46	361517.93	1945341.12
P-47	361517.93	1945336.19

Excavation Area A		
Point	Easting	Northing
A1	361450.59	1945361.99
A2	361520.57	1945418.49
A3	361564.63	1945362.69
A4	361498.31	1945307.18
A5	361485.91	1945314.85

Excavation Area A-1		
Point	Easting	Northing
TSCA-1	361481.02	1945355.92
TSCA 2	361517.95	1945363.41
TSCA-3	361521.60	1945334.87
TSCA-4	361484.65	1945327.37

NOTES:

1. ALL UNITS AND DIMENSIONS IN FEET UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL CONTACT DIGSAFE FOR LOCATION OF UNDERGROUND UTILITIES BEFORE BEGINNING EARTHWORK ACTIVITIES.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
A	ISSUED FOR REVIEW (IN PROGRESS)	05/09/18	JR	–	–

DRAWN BY	JR	DATE	05/09/18
CHECKED BY	LT	DATE	–
APPROVED BY	–	DATE	–
PROJECT MGR.	–	DATE	–

SEAL

PARSONS
COMMERCIAL TECHNOLOGY GROUP
OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 447415
WBS 02000

PROJECT TITLE
FORMER J&L STEEL SITE
IRM WORK PLAN

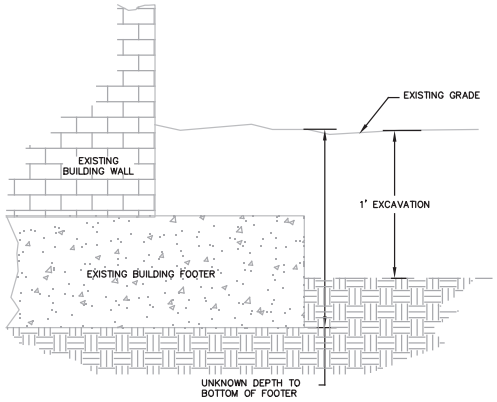
J&L PCB SOIL REMOVAL
CLIFTON, NEW YORK

DRAWING TITLE
EXCAVATION AREA A–1
COMPOSITE SAMPLING AREA

SCALE NOT TO SCALE
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. 447415–C–002a
REV. A

FILE NAME: P:\NYSDEC PROGRAM\447415 WA #3 J&L STEEL SITE CHARACTERIZATION\10.0 TECHNICAL CATEGORIES\10.1 CAD – GIS\FIGURES\IRM WORK PLAN\447415–IRM–003.DWG
PLOT DATE: 5/9/2018 2:53 PM PLOTTED BY: RUSSO, JILL

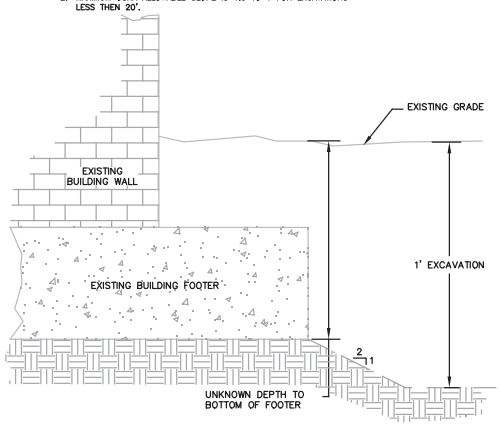


EXCAVATION DETAIL–ADJACENT TO BUILDING

NOT TO SCALE

NOTES:

1. IF CONFIRMATORY SAMPLING REQUIRES DEEPER EXCAVATION, 2:1 SIDE SLOPE WILL BE MAINTAINED FROM BOTTOM OF BUILDING FOOTER UNTIL REQUIRED DEPTH IS ACHIEVED.
2. MAXIMUM OSHA ALLOWABLE SLOPE IS 1:5 TO 1 FOR EXCAVATIONS LESS THEN 20'.

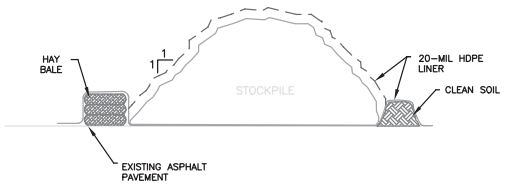


EXCAVATION DETAIL

NOT TO SCALE

NOTES:

1. IF CONFIRMATORY SAMPLING REQUIRES DEEPER EXCAVATION, 2:1 SIDE SLOPE WILL BE MAINTAINED FROM BOTTOM OF BUILDING FOOTER UNTIL REQUIRED DEPTH IS ACHIEVED.
2. MAXIMUM OSHA ALLOWABLE SLOPE IS 1:5 TO 1 FOR EXCAVATIONS LESS THEN 20'.

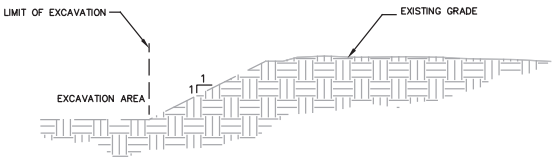


NOTE:

1. CONTRACTOR MAY PROPOSE ALTERNATIVE LINER MATERIALS AND PERIMETER BERM CONSTRUCTION.
2. DISPOSE OF USED LINER WITH PCB CONTAMINATED SEDIMENT AND SOIL.
3. OPERATE STOCKPILE AREA TO PREVENT DAMAGE TO LINER.
4. PROVIDE 20–MIL HDPE COVER. KEEP STOCKPILED MATERIAL COVERED AT ALL TIMES EXCEPT WHEN ACTIVELY PLACING OR REMOVING MATERIAL FROM STOCKPILE.
5. COLLECT AND DISPOSE OF WATER CONTACTING/DRAINING FROM STOCKPILE MATERIAL.
6. MAXIMUM SLOPE FOR STOCKPILE IS 1:1.

STOCKPILE DETAIL

NOT TO SCALE



EXCAVATION LIMIT DETAIL (TYP)

NOT TO SCALE

BORROW PIT LOCATION

1"=300'

NOTES:

1. DEPLOY EROSION CONTROL POINTS PRIOR TO INITIATING EARTHWORK ACTIVITIES.
2. ALL EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
A	ISSUED FOR REVIEW (IN PROGRESS)	10/25/17	JR	–	–

		SEAL
DRAWN BY: JR	DATE: 10/25/17	
REVIEWED BY: MS	DATE: –	
APPROVED BY: –	DATE: –	
PROJECT MGR: –	DATE: –	

PARSONS
COMMERCIAL TECHNOLOGY GROUP
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451–9560

JOB: 447415
REV: 02000

PROJECT TITLE:
FORMER J&L STEEL SITE
IRM WORK PLAN

J&L PCB SOIL REMOVAL
CLIFTON, NEW YORK

DRAWING TITLE:
DETAILS AND
BORROW PIT AREA

SCALE: NOT TO SCALE
(IF PRINTED ON 22x34 SHEET)

DRAWING NO.: 447415–C–003
REV: A

Attachment B

J&L PDI Data Summary Report

PARSONS

301 Plainfield Road, Suite 350 | Syracuse, New York 13212
P: 315.451.9560 | F: 315.451.9570 | www.parsons.com

August 30, 2017

Mr. William Wu
NYSDEC
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7014

RE: Former J&L Steel Site – Clifton, NY (Site # 645029)
Pre-Design Investigation and Supplemental Activities

Dear Mr. Wu:

This letter presents results pertaining to pre-design investigation (PDI) and supplemental sampling activities for polychlorinated biphenyls (PCBs) for an anticipated Interim Remedial Measure (IRM) at the former J&L Steel Site in Clifton, NY. Initial PDI sampling activities were conducted in accordance with the scope of work for the pre-design investigation sampling submitted on September 21, 2016 and approved by New York State Department of Environmental Conservation (NYSDEC). Initial PDI sampling was conducted on October 26, 2016. Supplemental PDI sampling activities to further delineate PCB contamination were conducted on May 11, 2017 in accordance with the supplemental scope of work for the PDI sampling submitted on April 27, 2017 and approved by NYSDEC.

PDI SAMPLE COLLECTION

As shown on Figure 1, surface soil samples were collected from 15 locations during the initial PDI to delineate the horizontal extent of PCBs in surface soils (top 1 foot) in the vicinity of historical soil samples in which total PCBs were observed in exceedance of 6 NYCRR Part 375 Commercial Soil Cleanup Objectives (SCOs). Surface soil samples were collected via hand auger from 0 to 2 inches and from 2 to 12 inches, and analyzed for total PCBs. In total, 32 soil samples were collected and analyzed as part of the initial PDI.

Nineteen (19) locations were originally proposed to be sampled as part of pre-design investigation activities. One proposed location, in the vicinity of MPASS7 (adjacent to Building 12), was not collected due to its location on a paved surface. Samples were also not collected around location J1101A. The exceedance of the 6 NYCRR Commercial SCO at J1101A was based on an exceedance of soils located at the bottom of a concrete pit where a suspected drum containing PCB oils was observed during the Site Characterization study. During mobilization for the PDI sampling event, it was observed that the actual location of the concrete pit in question was located north of Building 20 (between SS-41 and SS-44). Since PCBs in the area of the concrete pit had already been delineated during the Site Characterization study, no further samples were collected from around the J1101A exceedance.

In addition, the PDI scope included an assessment of the concrete at the bottom of the pit where the J1101A sample was collected during the Site Characterization study. Based on

field observations, there was no reasonably safe access into the pit. Hand augers and extensions were used to confirm the presence of concrete in various locations around the edge at the base of the pit, but due to excessive leaf litter the complete integrity of the concrete (e.g., the presence of cracks) was not confirmed.

INITIAL PDI ANALYTICAL RESULTS

As discussed above, composite soil samples were collected from each sample interval and analyzed for total PCBS using the USEPA SW-846 8082A analytical method. A detected compound summary for PDI samples is included as Table 1. Sample results are also presented on Figure 1 and are described below.

Samples were collected from north, east, and west of sample location AOC-3B to delineate the previously observed exceedance. A sample was also collected at the original AOC-3B location in order to confirm the highest total PCB result previously observed at this location. Total PCB concentrations were found in exceedance of 6 NYCRR Commercial SCOs at the re-occupied AOC-3B location and north and west of the original AOC-3B location [AOC-3B-B (0-2in; 2-12in.); AOC-3B-C (0-2in.); and AOC-3B-D (0-2in.)]. The maximum total PCB concentrations was observed at AOC-3B-B at a depth of 0-2 inches.

Four locations were sampled in the vicinity of historical location SS-60. Total PCB concentrations were found in exceedance of 6 NYCRR Commercial SCO at one location (SS-060-C for 0-2 inches bgs). SS-060-C is situated directly adjacent to a partially demolished concrete silo, east of the original sample location.

Two locations were sampled in the vicinity of historical location SS-57. Total PCB concentrations were found in exceedance of 6 NYCRR Commercial SCO (SS-057-B from 0 to 2 inches bgs). SS-057-B is found adjacent to the northern corner of a partially demolished concrete silo, east of the original sample location.

Samples were also collected in the vicinity of SS-40, SS-45, and MPASS7 in order to further delineate PCB concentrations. No additional total PCB concentrations in exceedance of 6 NYCRR Commercial SCO were observed in any of these locations.

SUPPLEMENTAL SAMPLE COLLECTION

Based on the results of the initial PDI delineations, the total PCB exceedances of the 6 NYCRR Part 375 Commercial SCOs were not fully bound surrounding original locations AOC-3B, SS-60, or SS-57. A supplemental investigation was conducted to further delineate the horizontal extent of PCBs in surface soils (top 1 foot) at locations where soil samples during the initial PDI had total PCBs in exceedance of 6 NYCRR Part 375 Commercial SCOs. Composite surface soil samples were collected via hand auger from each sample interval, and analyzed for total PCBs in the same manner as the initial PDI. In total, 10 soil samples were

collected and analyzed as part of the supplemental PDI sampling. A detected compound summary for supplemental samples is included as Table 2. Sample results are also presented on Figure 1 and are described below.

Based on the results from the initial PDI for locations AOC-3B-C and AOC-3B-D, four supplemental locations were sampled to further delineate total PCB exceedances of the commercial SCO. Two locations were sampled to the north of the exceeding PDI sample location AOC-3B-C, and two locations were sampled further west of the exceeding PDI sample location AOC-3B-D.

Due to the location of initial PDI sample SS-060-C, directly adjacent to a partially demolished concrete silo, additional step out samples toward the east were not feasible, and therefore none were collected during the supplemental effort.

Based on the results from the initial PDI for location SS-57-B, one supplemental step out location was sampled further to the east of the original location, to further delineate total PCB exceedances of the commercial SCO.

During the supplemental effort, a large metal object (see photograph at right) was observed at the site. The location of this object, in the vicinity of the historical sample location AOC-3B, was recorded and is shown on Figure 1 for reference.

SUPPLEMENTAL ANALYTICAL RESULTS

No additional total PCB concentrations in exceedance of the Commercial SCO of 1 ppm were observed at any supplemental sample locations. The horizontal extent of PCBs in site soils has been delineated.

ANALYTICAL PROGRAM

Samples were extracted and analyzed by Spectrum, a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) certified laboratory that has a Contract Laboratory Program (CLP) category certification to perform Level IV analyses. For quality assurance/quality control (QA/QC) purposes, one field duplicate and one matrix spike/matrix spike duplicate sample set were collected and analyzed during both the initial PDI and supplemental sampling effort. Level IV data validation was conducted by a third party not associated with the laboratory that performed the analyses. A data usability summary report was developed corresponding to analytical laboratory data for the initial PDI

samples, and is included as Attachment A. A data usability summary report corresponding to analytical laboratory data for supplemental samples is included as Attachment B.

Please contact me at (315) 552-9742 with any questions or comments you may have pertaining to these results.

Sincerely,

Matthew Vetter

TABLES

Table 1
Soil Analytical Results

NYSDEC-J&L Steel Site 2016 Site Investigation Validated Soil Data Detected Compound Summary		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	AOC3BA AOC3BA-0-2 SC27773-13 SPECTRUM SC27773 SOIL 10/26/2016 15:00 11/29/2016	AOC3BA AOC3BA-2-12 SC27773-14 SPECTRUM SC27773 SOIL 10/26/2016 15:05 11/29/2016	AOC3BB AOC3BB-0-2 SC27773-15 SPECTRUM SC27773 SOIL 10/26/2016 15:10 11/29/2016	AOC3BB AOC3BB-2-12 SC27773-16 SPECTRUM SC27773 SOIL 10/26/2016 15:15 11/29/2016	AOC3BC AOC3BC-0-2 SC27773-17 SPECTRUM SC27773 SOIL 10/26/2016 15:20 11/29/2016	AOC3BC AOC3BC-2-12 SC27773-18 SPECTRUM SC27773 SOIL 10/26/2016 15:25 11/29/2016	AOC3BD AOC3BD-0-2 SC27773-19 SPECTRUM SC27773 SOIL 10/26/2016 15:30 11/29/2016	AOC3BD AOC3BD-2-12 SC27773-20 SPECTRUM SC27773 SOIL 10/26/2016 15:35 11/29/2016
CAS NO.	COMPOUND		UNITS:								
	PESTICIDES										
12672-29-6	PCB-1248 (Aroclor 1248)		mg/kg	0.73	0.0729	2220	4.87	1.19	0.226	1.04	ND
11097-69-1	PCB-1254 (Aroclor 1254)		mg/kg	ND	ND	ND	ND	ND	ND	ND	0.0251 J
11096-82-5	PCB-1260 (Aroclor 1260)		mg/kg	0.127	0.034	ND	0.109	0.0466 J	ND	0.124	ND
	Total PCBs	**1**	**mg/kg**	**0.857**	**0.1069**	**2220**	**4.979**	**1.2366**	**0.226**	**1.164**	**0.0251**
	OTHER										
SOLID	Solids, Percent		%	66.1	70.2	67.2	72.7	70.1	78.2	66.6	74.6

Table 1
Soil Analytical Results

NYSDEC-J&L Steel Site 2016 Site Investigation Validated Soil Data Detected Compound Summary		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MPASS7A MPASS7A-0-2 SC27773-01 SPECTRUM SC27773 SOIL 10/26/2016 12:00 11/29/2016	MPASS7A MPASS7A-2-12 SC27773-02 SPECTRUM SC27773 SOIL 10/26/2016 12:05 11/29/2016	MPASS7B MPASS7B-0-2 SC27773-03 SPECTRUM SC27773 SOIL 10/26/2016 12:15 11/29/2016	MPASS7B MPASS7B-2-12 SC27773-04 SPECTRUM SC27773 SOIL 10/26/2016 12:20 11/29/2016	SS060A SS060A-0-2 SC27776-01 SPECTRUM SC27776 SOIL 10/26/2016 9:45 11/29/2016	SS060A SS060A-2-12 SC27776-02 SPECTRUM SC27776 SOIL 10/26/2016 9:50 11/29/2016	SS060B SS060B-0-2 SC27776-03 SPECTRUM SC27776 SOIL 10/26/2016 10:50 11/29/2016	SS060B SS060B-2-12 SC27776-04 SPECTRUM SC27776 SOIL 10/26/2016 10:10 11/29/2016
CAS NO.	COMPOUND		UNITS:								
	PESTICIDES										
12672-29-6	PCB-1248 (Aroclor 1248)		mg/kg	ND	ND	ND	ND	ND	ND	ND	0.126
11097-69-1	PCB-1254 (Aroclor 1254)		mg/kg	0.16	0.143	0.87	0.166	0.0712	0.114	0.186	0.106
11096-82-5	PCB-1260 (Aroclor 1260)		mg/kg	ND	ND	ND	ND	ND	ND	0.0485	0.0672
	Total PCBs	**1**	**mg/kg**	**0.16**	**0.143**	**0.87**	**0.166**	**0.0712**	**0.114**	**0.2345**	**0.2992**
	OTHER										
SOLID	Solids, Percent		%	89.3	90.8	92.1	91.1	89.8	87.4	92.4	90.7

Table 1
Soil Analytical Results

NYSDEC-J&L Steel Site 2016 Site Investigation Validated Soil Data Detected Compound Summary		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	SS060C SS060C-0-2 SC27776-05 SPECTRUM SC27776 SOIL 10/26/2016 10:15 11/29/2016	SS060C SS060C-2-12 SC27776-06 SPECTRUM SC27776 SOIL 10/26/2016 10:20 11/29/2016	SS060D SS060D-0-2 SC27776-07 SPECTRUM SC27776 SOIL 10/26/2016 10:40 11/29/2016	SS060D SS060D-2-12 SC27776-08 SPECTRUM SC27776 SOIL 10/26/2016 10:50 11/29/2016	SS40A SS40A-0-2 SC27773-05 SPECTRUM SC27773 SOIL 10/26/2016 13:00 11/29/2016	SS40A SS40A-2-12 SC27773-06 SPECTRUM SC27773 SOIL 10/26/2016 13:05 11/29/2016	Dup of SS40A-2-12 SS40A-FD SS40A-2-12-FD SC27773-07 SPECTRUM SC27773 SOIL 10/26/2016 12:02 11/29/2016	SS40B SS40B-0-2 SC27773-08 SPECTRUM SC27773 SOIL 10/26/2016 13:10 11/29/2016
CAS NO.	COMPOUND		UNITS:								
	PESTICIDES										
12672-29-6	PCB-1248 (Aroclor 1248)		mg/kg	ND	ND	ND	ND	ND	0.0316 J	ND	ND
11097-69-1	PCB-1254 (Aroclor 1254)		mg/kg	2.26	0.364	ND	0.0231 J	0.0402	ND	ND	ND
11096-82-5	PCB-1260 (Aroclor 1260)		mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
	Total PCBs	**1**	**mg/kg**	**2.26**	**0.364**	**ND**	**0.0231**	**0.0402**	**0.0316**	**ND**	**ND**
	OTHER										
SOLID	Solids, Percent		%	89.4	91	89.4	94.9	87.8	88.5	87	89.1

Table 1
Soil Analytical Results

NYSDEC-J&L Steel Site 2016 Site Investigation Validated Soil Data Detected Compound Summary		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	SS40B SS40B-2-12 SC27773-09 SPECTRUM SC27773 SOIL 10/26/2016 13:15 11/29/2016	SS45A SS45A-0-2 SC27773-11 SPECTRUM SC27773 SOIL 10/26/2016 13:35 11/29/2016	SS45A SS45A-2-12 SC27773-12 SPECTRUM SC27773 SOIL 10/26/2016 13:40 11/29/2016	SS57A SS57A-0-2 SC27776-09 SPECTRUM SC27776 SOIL 10/26/2016 11:05 11/29/2016	SS57A SS57A-2-12 SC27776-10 SPECTRUM SC27776 SOIL 10/26/2016 11:10 11/29/2016	Dup of SS57A-2-12 SS57A SS57A-2-12-FD SC27776-11 SPECTRUM SC27776 SOIL 10/26/2016 12:01 11/29/2016	SS57B SS57B-0-2 SC27776-12 SPECTRUM SC27776 SOIL 10/26/2016 11:20 11/29/2016	SS57B SS57B-2-12 SC27776-13 SPECTRUM SC27776 SOIL 10/26/2016 11:25 11/29/2016
CAS NO.	COMPOUND		UNITS:								
	PESTICIDES										
12672-29-6	PCB-1248 (Aroclor 1248)		mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
11097-69-1	PCB-1254 (Aroclor 1254)		mg/kg	0.0352	0.0584	0.0301 J	0.137	0.124 J	0.342 J	1.61	0.0226
11096-82-5	PCB-1260 (Aroclor 1260)		mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
	Total PCBs	**1**	**mg/kg**	**0.0352**	**0.0584**	**0.0301**	**0.137**	**0.124**	**0.342**	**1.61**	**0.0226**
	OTHER										
SOLID	Solids, Percent		%	92.7	50.1	75.1	93.6	85.9	93.8	83.8	92.7

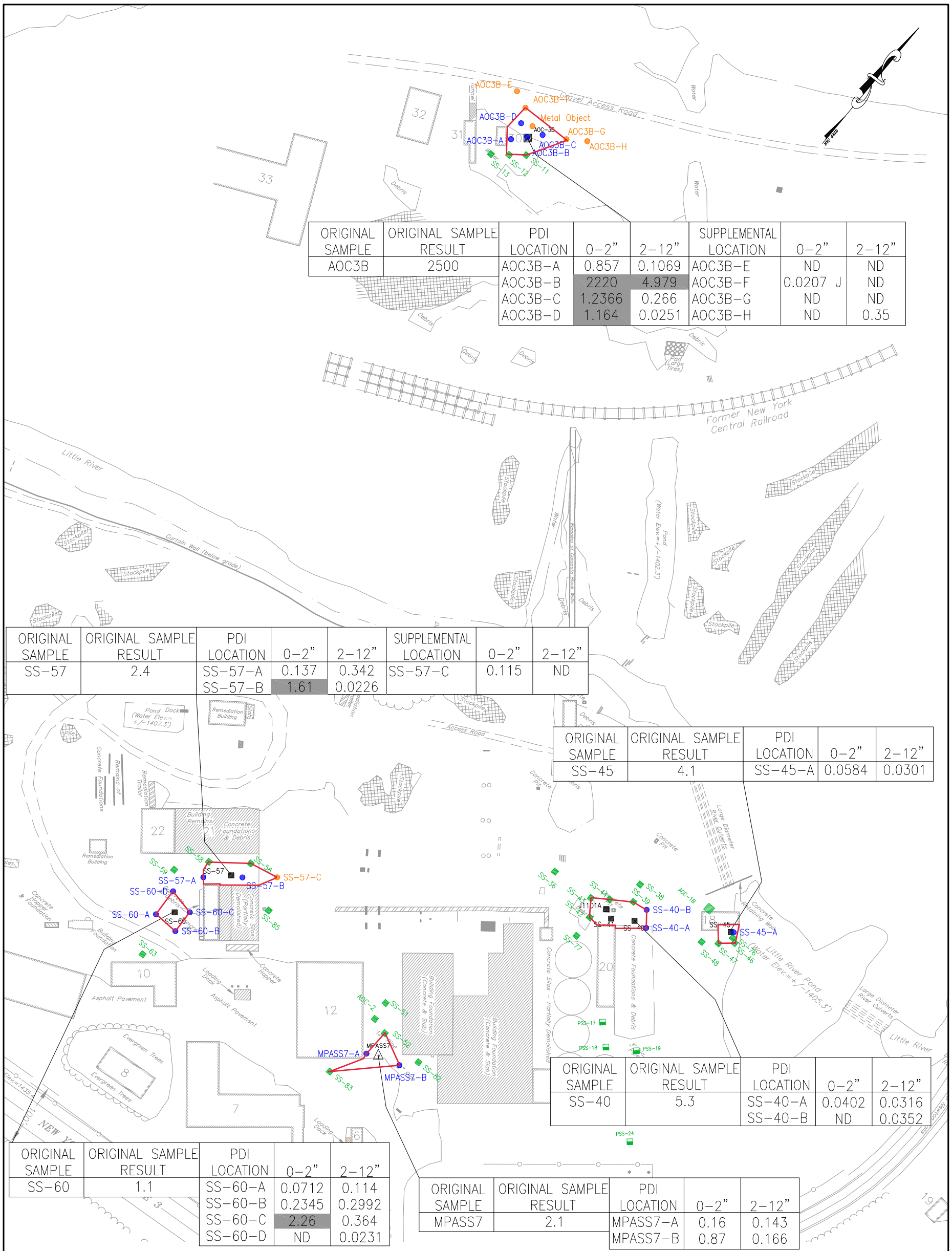
Table 2
Validated Surface Soil Detected Compound Summary
Supplemental PDI

NYSDEC-J&L Steel Site 2017 Site Investigation Validated Soil Data SDG: SC34687 Detected Compound Summary		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Depth: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	AOC-3B-E AOC-3B-E-0-2 0-2 in SC34687-03 SPECTRUM SC34687 SOIL 5/11/2017 13:50 6/15/2017	AOC-3B-E AOC-3B-E-2-12 2-12 in SC34687-04 SPECTRUM SC34687 SOIL 5/11/2017 13:55 6/15/2017	AOC-3B-F AOC-3B-F-0-2 0-2 in SC34687-05 SPECTRUM SC34687 SOIL 5/11/2017 14:00 6/15/2017	AOC-3B-F AOC-3B-F-2-12 2-12 in SC34687-06 SPECTRUM SC34687 SOIL 5/11/2017 14:05 6/15/2017	Dup of AOC-3B-F-2-12 AOC-3B-F AOC-3B-F-2-12DUP 2-12 in SC34687-07 SPECTRUM SC34687 SOIL 5/11/2017 12:01 6/15/2017
CAS NO.	COMPOUND		UNITS:					
	PCBs							
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND	ND	0.0207 J	ND	ND
	OTHER							
SOLID	Solids, Percent	NS	%	93.5	92.1	87.1	85.1	86.3

Table 2
Validated Surface Soil Detected Compound Summary
Supplemental PDI

NYSDEC-J&L Steel Site 2017 Site Investigation Validated Soil Data SDG: SC34687 Detected Compound Summary		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Depth: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	AOC-3B-G AOC-3B-G-0-2 0-2 in SC34687-08 SPECTRUM SC34687 SOIL 5/11/2017 14:30 6/15/2017	AOC-3B-G AOC-3B-G-2-12 2-12 in SC34687-09 SPECTRUM SC34687 SOIL 5/11/2017 14:35 6/15/2017	AOC-3B-H AOC-3B-H-0-2 0-2 in SC34687-10 SPECTRUM SC34687 SOIL 5/11/2017 14:40 6/15/2017	AOC-3B-H AOC-3B-H-2-12 2-12 in SC34687-11 SPECTRUM SC34687 SOIL 5/11/2017 14:45 6/15/2017	SS-57-C SS-57-C-0-2 0-2 in SC34687-01 SPECTRUM SC34687 SOIL 5/11/2017 11:30 6/15/2017	SS-57-C SS-57-C-2-12 2-12 in SC34687-02 SPECTRUM SC34687 SOIL 5/11/2017 11:35 6/15/2017
CAS NO.	COMPOUND		UNITS:						
	PCBs								
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND	ND	ND	0.35	0.115	ND
	OTHER								
SOLID	Solids, Percent	NS	%	89.1	88.2	79.3	92.6	88.5	89

FIGURE



ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT	PDI LOCATION	0–2"	2–12"	SUPPLEMENTAL LOCATION	0–2"	2–12"
AOC3B	2500	AOC3B–A	0.857	0.1069	AOC3B–E	ND	ND
		AOC3B–B	2220	4.979	AOC3B–F	0.0207 J	ND
		AOC3B–C	1.2366	0.266	AOC3B–G	ND	ND
		AOC3B–D	1.164	0.0251	AOC3B–H	ND	0.35

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT	PDI LOCATION	0–2"	2–12"	SUPPLEMENTAL LOCATION	0–2"	2–12"
SS–57	2.4	SS–57–A	0.137	0.342	SS–57–C	0.115	ND
		SS–57–B	1.61	0.0226			

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT	PDI LOCATION	0–2"	2–12"
SS–45	4.1	SS–45–A	0.0584	0.0301

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT	PDI LOCATION	0–2"	2–12"
SS–40	5.3	SS–40–A	0.0402	0.0316
		SS–40–B	ND	0.0352

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT	PDI LOCATION	0–2"	2–12"
SS–60	1.1	SS–60–A	0.0712	0.114
		SS–60–B	0.2345	0.2992
		SS–60–C	2.26	0.364
		SS–60–D	ND	0.0231

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT	PDI LOCATION	0–2"	2–12"
MPASS7	2.1	MPASS7–A	0.16	0.143
		MPASS7–B	0.87	0.166

LEGEND:

- PREVIOUS SAMPLE LOCATIONS WHERE TOTAL PCB CONCENTRATIONS ARE BELOW THE 6NYCRR PART 375 COMMERCIAL SCOs.
- PDI SAMPLE LOCATIONS
- SUPPLEMENTAL PDI SAMPLE LOCATIONS
- EXCEEDS 6 NYCRR COMMERCIAL SOIL CLEANUP OBJECTIVE OF 1 mg/kg

NOTES:

1. ALL CONCENTRATIONS SHOWN IN mg/kg
2. ND NOT DETECTED
3. J LABORATORY ESTIMATED VALUE
4. ANALYTICAL DATA COMPARED TO 6NYCRR COMMERCIAL SOIL CLEANUP OBJECTIVES.

150 0 150 300

SCALE: 1"=150'

FIGURE 1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

JONES & LAUGHLIN/BENSON MINE

TOTAL PCBs IN SOIL SAMPLE RESULTS

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 * 315–451–9560

FILE NAME: P:\NYSDEC PROGRAM\447415 WA #3 J&L STEEL SITE CHARACTERIZATION\10.0 TECHNICAL CATEGORIES\10.1 CAD – GIS\FIGURES\2017\447415–SK002–2017.DWG
PLOT DATE: 8/14/2017 4:27 PM PLOTTED BY: RUSSO, JILL

ATTACHMENT A

DATA USABILITY SUMMARY REPORT

FORMER J&L STEEL SITE

Prepared For:

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SECTION 1

DATA USABILITY SUMMARY

Soil samples were collected from the Former J&L Steel site in Clifton, New York on October 26, 2016. Analytical results from these samples were validated and reviewed by Parsons for usability with respect to the following requirements:

- Work Plan,
- NYSDEC Analytical Services Protocol (ASP), and
- USEPA Region II Standard Operating Procedures (SOPs) for organic and inorganic data review.

The analytical laboratory for this project was Eurofins - Spectrum Analytical (Spectrum). This laboratory is certified to perform project analyses through the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP).

1.1 LABORATORY DATA PACKAGES

The laboratory data package turnaround time, defined as the time from sample receipt by the laboratory to receipt of the analytical data packages by Parsons, was 20 days for the project samples.

The data packages received from Spectrum were paginated, complete, and overall were of good quality. Comments on specific quality control (QC) and other requirements are discussed in detail in the attached data validation report which is summarized by sample media in Section 2.

1.2 SAMPLING AND CHAIN-OF-CUSTODY

The samples were collected, properly preserved, shipped under a chain-of-custody (COC) record, and received at Spectrum within two days of sampling. All samples were received intact and in good condition at the laboratory overall.

1.3 LABORATORY ANALYTICAL METHODS

The soil samples that were collected from the site were analyzed for polychlorinated biphenyls (PCBs). Summaries of issues concerning these laboratory analyses are presented in Subsection 1.3.1. The data qualifications resulting from the data validation review and statements on the laboratory analytical precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) are discussed for each analytical method by media in Section 2. The laboratory data were reviewed and may be qualified with the following validation flags:

"U" - not detected at the value given,

"UJ" - estimated and not detected at the value given,

"J" - estimated at the value given,

"J+" - estimated biased high at the value given,

"J-" - estimated biased low at the value given,

"N" - presumptive evidence at the value given, and

"R" - unusable value.

The validated laboratory data were tabulated and are presented in Attachment A.

1.3.1 PCB Organic Analysis

The project samples were analyzed for PCBs using the USEPA SW-846 8082A analytical method. Certain reported results for these samples were qualified as estimated based upon laboratory duplicate precision, sample result identification, and field duplicate precision. The reported analytical results for these samples were considered 100% complete (i.e., usable) for the project data. PARCCS requirements were met.

SECTION 2

DATA VALIDATION REPORT

2.1 SOIL

Data review has been completed for data packages generated by Spectrum containing soil samples collected from the site. Analytical results from these samples were contained within sample delivery groups (SDGs) R0993 and R0994. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. The validated laboratory data are presented in Attachment A.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. This data validation and usability report is presented by analysis type.

2.1.1 PCBs

The following items were reviewed for compliancy in the PCB analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- MS/MSD precision and accuracy
- Laboratory duplicate precision
- LCS recoveries
- Laboratory method blank and equipment blank contamination
- Initial calibrations
- Verification calibrations
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of surrogate recoveries, laboratory duplicate precision, sample result identification, and field duplicate precision as discussed below.

Surrogate Recoveries

All sample surrogate recoveries were considered acceptable and within QC limits with the exception of the high recoveries for the surrogate decachlorobiphenyl (QC limit 60-140%R) on both primary and secondary columns in sample AOC3BD-0-2 (250%R, 230%R). Validation qualification of this sample was not required.

Laboratory Duplicate Precision

All laboratory duplicate precision results were considered acceptable with precision results for all compounds less than 40%RPD with the exception of the laboratory duplicate precision on both primary and secondary columns for PCB-1254 (43%RPD, 45%RPD) associated with sample SS060D-2-12. Therefore, the result for this compound was considered estimated and qualified "J" for the affected sample.

Sample Result Identification

All positive PCB sample results were within retention time windows and verified present using secondary column confirmation. The percent difference (%D) between the PCB results on the quantitation and confirmation columns were less than 40% with the exception of PCB-1254 in sample SS45A-2-12 (41.2%D); and PCB-1260 in sample AOC3BC-0-2 (50%D). The results for these compounds were considered estimated and qualified "J" for the affected samples.

Field Duplicate Precision

All field duplicate precision results were considered acceptable with the exception of the precision for PCB-1254 (94%RPD) associated with sample SS57A-2-12 and its field duplicate SS57A-2-12-FD; and the field duplicate results for PCB-1248 associated with sample SS40A-2-12 (31.6 µg/kg) and its field duplicate SS40A-2-12-FD (nondetect). Therefore, these results were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for the affected field duplicate pair samples.

Usability

All PCB results for the soil samples were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, comparability, and sensitivity. The PCB soil data presented by Spectrum were 100% complete with all data considered usable and valid. The validated data are tabulated and presented in Attachment A.

ATTACHMENT A

VALIDATED LABORATORY DATA

NYSDEC-J&L Steel Site 2016 Site Investigation Validated Soil Data SDGs: R0993 & R0994		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	AOC3BA AOC3BA-0-2 SC27773-13 SPECTRUM SC27773 SOIL 10/26/2016 15:00 11/29/2016	AOC3BA AOC3BA-2-12 SC27773-14 SPECTRUM SC27773 SOIL 10/26/2016 15:05 11/29/2016	AOC3BB AOC3BB-0-2 SC27773-15 SPECTRUM SC27773 SOIL 10/26/2016 15:10 11/29/2016	AOC3BB AOC3BB-2-12 SC27773-16 SPECTRUM SC27773 SOIL 10/26/2016 15:15 11/29/2016	AOC3BC AOC3BC-0-2 SC27773-17 SPECTRUM SC27773 SOIL 10/26/2016 15:20 11/29/2016	AOC3BC AOC3BC-2-12 SC27773-18 SPECTRUM SC27773 SOIL 10/26/2016 15:25 11/29/2016	AOC3BD AOC3BD-0-2 SC27773-19 SPECTRUM SC27773 SOIL 10/26/2016 15:30 11/29/2016	AOC3BD AOC3BD-2-12 SC27773-20 SPECTRUM SC27773 SOIL 10/26/2016 15:35 11/29/2016
CAS NO.	COMPOUND	UNITS:								
	PESTICIDES									
12674-11-2	PCB-1016 (Aroclor 1016)	ug/kg	29.2 U	27.5 U	29400 U	26.7 U	28.3 U	24.9 U	29 U	26.4 U
11104-28-2	PCB-1221 (Aroclor 1221)	ug/kg	29.2 U	27.5 U	29400 U	26.7 U	28.3 U	24.9 U	29 U	26.4 U
11141-16-5	PCB-1232 (Aroclor 1232)	ug/kg	29.2 U	27.5 U	29400 U	26.7 U	28.3 U	24.9 U	29 U	26.4 U
53469-21-9	PCB-1242 (Aroclor 1242)	ug/kg	29.2 U	27.5 U	29400 U	26.7 U	28.3 U	24.9 U	29 U	26.4 U
12672-29-6	PCB-1248 (Aroclor 1248)	ug/kg	730	72.9	2220000	4870	1190	226	1040	26.4 U
11097-69-1	PCB-1254 (Aroclor 1254)	ug/kg	29.2 U	27.5 U	29400 U	26.7 U	28.3 U	24.9 U	29 U	25.1 J
11096-82-5	PCB-1260 (Aroclor 1260)	ug/kg	127	34	29400 U	109	46.6 J	24.9 U	124	26.4 U
11100-14-4	PCB-1268 (Aroclor 1268)	ug/kg	29.2 U	27.5 U	29400 U	26.7 U	28.3 U	24.9 U	29 U	26.4 U
	OTHER									
SOLID	Solids, Percent	%	66.1	70.2	67.2	72.7	70.1	78.2	66.6	74.6

NYSDEC-J&L Steel Site 2016 Site Investigation Validated Soil Data SDGs: R0993 & R0994		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MPASS7A MPASS7A-0-2 SC27773-01 SPECTRUM SC27773 SOIL 10/26/2016 12:00 11/29/2016	MPASS7A MPASS7A-2-12 SC27773-02 SPECTRUM SC27773 SOIL 10/26/2016 12:05 11/29/2016	MPASS7B MPASS7B-0-2 SC27773-03 SPECTRUM SC27773 SOIL 10/26/2016 12:15 11/29/2016	MPASS7B MPASS7B-2-12 SC27773-04 SPECTRUM SC27773 SOIL 10/26/2016 12:20 11/29/2016	SS060A SS060A-0-2 SC27776-01 SPECTRUM SC27776 SOIL 10/26/2016 9:45 11/29/2016	SS060A SS060A-2-12 SC27776-02 SPECTRUM SC27776 SOIL 10/26/2016 9:50 11/29/2016	SS060B SS060B-0-2 SC27776-03 SPECTRUM SC27776 SOIL 10/26/2016 10:50 11/29/2016	SS060B SS060B-2-12 SC27776-04 SPECTRUM SC27776 SOIL 10/26/2016 10:10 11/29/2016
CAS NO.	COMPOUND	UNITS:								
	PESTICIDES									
12674-11-2	PCB-1016 (Aroclor 1016)	ug/kg	21.6 U	21.3 U	21.5 U	21.3 U	22.2 U	21.9 U	21.6 U	22 U
11104-28-2	PCB-1221 (Aroclor 1221)	ug/kg	21.6 U	21.3 U	21.5 U	21.3 U	22.2 U	21.9 U	21.6 U	22 U
11141-16-5	PCB-1232 (Aroclor 1232)	ug/kg	21.6 U	21.3 U	21.5 U	21.3 U	22.2 U	21.9 U	21.6 U	22 U
53469-21-9	PCB-1242 (Aroclor 1242)	ug/kg	21.6 U	21.3 U	21.5 U	21.3 U	22.2 U	21.9 U	21.6 U	22 U
12672-29-6	PCB-1248 (Aroclor 1248)	ug/kg	21.6 U	21.3 U	21.5 U	21.3 U	22.2 U	21.9 U	21.6 U	126
11097-69-1	PCB-1254 (Aroclor 1254)	ug/kg	160	143	870	166	71.2	114	186	106
11096-82-5	PCB-1260 (Aroclor 1260)	ug/kg	21.6 U	21.3 U	21.5 U	21.3 U	22.2 U	21.9 U	48.5	67.2
11100-14-4	PCB-1268 (Aroclor 1268)	ug/kg	21.6 U	21.3 U	21.5 U	21.3 U	22.2 U	21.9 U	21.6 U	22 U
	OTHER									
SOLID	Solids, Percent	%	89.3	90.8	92.1	91.1	89.8	87.4	92.4	90.7

NYSDEC-J&L Steel Site 2016 Site Investigation Validated Soil Data SDGs: R0993 & R0994		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	SS060C SS060C-0-2 SC27776-05 SPECTRUM SC27776 SOIL 10/26/2016 10:15 11/29/2016	SS060C SS060C-2-12 SC27776-06 SPECTRUM SC27776 SOIL 10/26/2016 10:20 11/29/2016	SS060D SS060D-0-2 SC27776-07 SPECTRUM SC27776 SOIL 10/26/2016 10:40 11/29/2016	SS060D SS060D-2-12 SC27776-08 SPECTRUM SC27776 SOIL 10/26/2016 10:50 11/29/2016	SS40A SS40A-0-2 SC27773-05 SPECTRUM SC27773 SOIL 10/26/2016 13:00 11/29/2016	SS40A SS40A-2-12 SC27773-06 SPECTRUM SC27773 SOIL 10/26/2016 13:05 11/29/2016	Dup of SS40A-2-12 SS40A SS40A-2-12-FD SC27773-07 SPECTRUM SC27773 SOIL 10/26/2016 12:02 11/29/2016	SS40B SS40B-0-2 SC27773-08 SPECTRUM SC27773 SOIL 10/26/2016 13:10 11/29/2016
CAS NO.	COMPOUND	UNITS:								
	PESTICIDES									
12674-11-2	PCB-1016 (Aroclor 1016)	ug/kg	21.5 U	21.7 U	21.7 U	20.7 U	22.5 U	21.8 U	22.4 U	22 U
11104-28-2	PCB-1221 (Aroclor 1221)	ug/kg	21.5 U	21.7 U	21.7 U	20.7 U	22.5 U	21.8 U	22.4 U	22 U
11141-16-5	PCB-1232 (Aroclor 1232)	ug/kg	21.5 U	21.7 U	21.7 U	20.7 U	22.5 U	21.8 U	22.4 U	22 U
53469-21-9	PCB-1242 (Aroclor 1242)	ug/kg	21.5 U	21.7 U	21.7 U	20.7 U	22.5 U	21.8 U	22.4 U	22 U
12672-29-6	PCB-1248 (Aroclor 1248)	ug/kg	21.5 U	21.7 U	21.7 U	20.7 U	22.5 U	31.6 J	22.4 UJ	22 U
11097-69-1	PCB-1254 (Aroclor 1254)	ug/kg	2260	364	21.7 U	23.1 J	40.2	21.8 U	22.4 U	22 U
11096-82-5	PCB-1260 (Aroclor 1260)	ug/kg	21.5 U	21.7 U	21.7 U	20.7 U	22.5 U	21.8 U	22.4 U	22 U
11100-14-4	PCB-1268 (Aroclor 1268)	ug/kg	21.5 U	21.7 U	21.7 U	20.7 U	22.5 U	21.8 U	22.4 U	22 U
	OTHER									
SOLID	Solids, Percent	%	89.4	91	89.4	94.9	87.8	88.5	87	89.1

NYSDEC-J&L Steel Site 2016 Site Investigation Validated Soil Data SDGs: R0993 & R0994		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	SS40B SS40B-2-12 SC27773-09 SPECTRUM SC27773 SOIL 10/26/2016 13:15 11/29/2016	SS45A SS45A-0-2 SC27773-11 SPECTRUM SC27773 SOIL 10/26/2016 13:35 11/29/2016	SS45A SS45A-2-12 SC27773-12 SPECTRUM SC27773 SOIL 10/26/2016 13:40 11/29/2016	SS57A SS57A-0-2 SC27776-09 SPECTRUM SC27776 SOIL 10/26/2016 11:05 11/29/2016	SS57A SS57A-2-12 SC27776-10 SPECTRUM SC27776 SOIL 10/26/2016 11:10 11/29/2016	Dup of SS57A-2-12 SS57A SS57A-2-12-FD SC27776-11 SPECTRUM SC27776 SOIL 10/26/2016 12:01 11/29/2016	SS57B SS57B-0-2 SC27776-12 SPECTRUM SC27776 SOIL 10/26/2016 11:20 11/29/2016	SS57B SS57B-2-12 SC27776-13 SPECTRUM SC27776 SOIL 10/26/2016 11:25 11/29/2016
CAS NO.	COMPOUND	UNITS:								
	PESTICIDES									
12674-11-2	PCB-1016 (Aroclor 1016)	ug/kg	21.3 U	38.3 U	25.4 U	20.8 U	22.5 U	20.9 U	23.4 U	21.6 U
11104-28-2	PCB-1221 (Aroclor 1221)	ug/kg	21.3 U	38.3 U	25.4 U	20.8 U	22.5 U	20.9 U	23.4 U	21.6 U
11141-16-5	PCB-1232 (Aroclor 1232)	ug/kg	21.3 U	38.3 U	25.4 U	20.8 U	22.5 U	20.9 U	23.4 U	21.6 U
53469-21-9	PCB-1242 (Aroclor 1242)	ug/kg	21.3 U	38.3 U	25.4 U	20.8 U	22.5 U	20.9 U	23.4 U	21.6 U
12672-29-6	PCB-1248 (Aroclor 1248)	ug/kg	21.3 U	38.3 U	25.4 U	20.8 U	22.5 U	20.9 U	23.4 U	21.6 U
11097-69-1	PCB-1254 (Aroclor 1254)	ug/kg	35.2	58.4	30.1 J	137	124 J	342 J	1610	22.6
11096-82-5	PCB-1260 (Aroclor 1260)	ug/kg	21.3 U	38.3 U	25.4 U	20.8 U	22.5 U	20.9 U	23.4 U	21.6 U
11100-14-4	PCB-1268 (Aroclor 1268)	ug/kg	21.3 U	38.3 U	25.4 U	20.8 U	22.5 U	20.9 U	23.4 U	21.6 U
	OTHER									
SOLID	Solids, Percent	%	92.7	50.1	75.1	93.6	85.9	93.8	83.8	92.7

NYSDEC-J&L Steel Site 2016 Site Investigation Validated Soil Data SDGs: R0993 & R0994		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	FIELDQC EB-1 SC27776-14 SPECTRUM SC27776 WATER 10/26/2016 11:30 11/29/2016	FIELDQC EB-2 SC27773-10 SPECTRUM SC27773 WATER 10/26/2016 13:30 11/29/2016
CAS NO.	COMPOUND	UNITS:	ug/L	ug/L
	PESTICIDES			
12674-11-2	PCB-1016 (Aroclor 1016)	ug/kg	0.241 U	0.222 U
11104-28-2	PCB-1221 (Aroclor 1221)	ug/kg	0.241 U	0.222 U
11141-16-5	PCB-1232 (Aroclor 1232)	ug/kg	0.241 U	0.222 U
53469-21-9	PCB-1242 (Aroclor 1242)	ug/kg	0.241 U	0.222 U
12672-29-6	PCB-1248 (Aroclor 1248)	ug/kg	0.241 U	0.222 U
11097-69-1	PCB-1254 (Aroclor 1254)	ug/kg	0.241 U	0.222 U
11096-82-5	PCB-1260 (Aroclor 1260)	ug/kg	0.241 U	0.222 U
11100-14-4	PCB-1268 (Aroclor 1268)	ug/kg	0.241 U	0.222 U
	OTHER			
SOLID	Solids, Percent	%		

ATTACHMENT B

DATA USABILITY SUMMARY REPORT

FORMER J&L STEEL SITE

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LIST OF ATTACHMENTS

ATTACHMENT A VALIDATED LABORATORY DATA

SECTION 1

DATA USABILITY SUMMARY

Soil samples were collected from the Former J&L Steel site in Clifton, New York on May 11, 2017. Analytical results from these samples were validated and reviewed by Parsons for usability with respect to the following requirements:

- Work Plan,
- NYSDEC Analytical Services Protocol (ASP), and
- USEPA Region II Standard Operating Procedures (SOPs) for organic and inorganic data review.

The analytical laboratory for this project was Eurofins - Spectrum Analytical (Spectrum). This laboratory is certified to perform project analyses through the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP).

1.1 LABORATORY DATA PACKAGES

The laboratory data package turnaround time, defined as the time from sample receipt by the laboratory to receipt of the analytical data packages by Parsons, was 31 days for the project samples.

The data packages received from Spectrum were paginated, complete, and overall were of good quality. Comments on specific quality control (QC) and other requirements are discussed in detail in the attached data validation report which is summarized by sample media in Section 2.

1.2 SAMPLING AND CHAIN-OF-CUSTODY

The samples were collected, properly preserved, shipped under a chain-of-custody (COC) record, and received at Spectrum within one day of sampling. All samples were received intact and in good condition at the laboratory overall.

1.3 LABORATORY ANALYTICAL METHODS

The soil samples that were collected from the site were analyzed for polychlorinated biphenyls (PCBs). Summaries of issues concerning these laboratory analyses are presented in Subsection 1.3.1. The data qualifications resulting from the data validation review and statements on the laboratory analytical precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) are discussed for each analytical method by media in Section 2. The laboratory data were reviewed and may be qualified with the following validation flags:

"U" - not detected at the value given,

"UJ" - estimated and not detected at the value given,

"J" - estimated at the value given,

"J+" - estimated biased high at the value given,

"J-" - estimated biased low at the value given,

"N" - presumptive evidence at the value given, and

"R" - unusable value.

The validated laboratory data were tabulated and are presented in Attachment A.

1.3.1 PCB Organic Analysis

The project samples were analyzed for PCBs using the USEPA SW-846 8082A analytical method. The reported results for these samples did not require qualification resulting from data validation. The reported analytical results for these samples were considered 100% complete (i.e., usable) for the project data. PARCCS requirements were met.

SECTION 2

DATA VALIDATION REPORT

2.1 SOIL

Data review has been completed for data packages generated by Spectrum containing soil samples collected from the site. Analytical results from these samples were contained within sample delivery group (SDGs) SC34687. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. The validated laboratory data are presented in Attachment A.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. This data validation and usability report is presented by analysis type.

2.1.1 PCBs

The following items were reviewed for compliancy in the PCB analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- MS/MSD precision and accuracy
- Laboratory duplicate precision
- LCS recoveries
- Laboratory method blank and equipment blank contamination
- Initial calibrations
- Verification calibrations
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols.

Usability

All PCB results for the soil samples were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, comparability, and sensitivity. The PCB soil data presented by Spectrum were 100% complete with all data considered usable and valid. The validated data are tabulated and presented in Attachment A.

ATTACHMENT A

VALIDATED LABORATORY DATA

NYSDEC-J&L Steel Site 2017 Site Investigation Validated Soil Data SDG: SC34687		Location ID: Sample ID: Depth: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	AOC-3B-E AOC-3B-E-0-2 0-2 in SC34687-03 SPECTRUM SC34687 SOIL 5/11/2017 6/15/2017	AOC-3B-E AOC-3B-E-2-12 2-12 in SC34687-04 SPECTRUM SC34687 SOIL 5/11/2017 6/15/2017	AOC-3B-F AOC-3B-F-0-2 0-2 in SC34687-05 SPECTRUM SC34687 SOIL 5/11/2017 6/15/2017	AOC-3B-F AOC-3B-F-2-12 2-12 in SC34687-06 SPECTRUM SC34687 SOIL 5/11/2017 6/15/2017	Dup of AOC-3B-F-2-12 AOC-3B-F AOC-3B-F-2-12DUP 2-12 in SC34687-07 SPECTRUM SC34687 SOIL 5/11/2017 6/15/2017	AOC-3B-G AOC-3B-G-0-2 0-2 in SC34687-08 SPECTRUM SC34687 SOIL 5/11/2017 6/15/2017
CAS NO.	COMPOUND	UNITS:						
	PCBs							
12674-11-2	PCB-1016 (Aroclor 1016)	ug/kg	21.1 U	21.5 U	22.6 U	23 U	23 U	22.1 U
11104-28-2	PCB-1221 (Aroclor 1221)	ug/kg	21.1 U	21.5 U	22.6 U	23 U	23 U	22.1 U
11141-16-5	PCB-1232 (Aroclor 1232)	ug/kg	21.1 U	21.5 U	22.6 U	23 U	23 U	22.1 U
53469-21-9	PCB-1242 (Aroclor 1242)	ug/kg	21.1 U	21.5 U	22.6 U	23 U	23 U	22.1 U
12672-29-6	PCB-1248 (Aroclor 1248)	ug/kg	21.1 U	21.5 U	22.6 U	23 U	23 U	22.1 U
11097-69-1	PCB-1254 (Aroclor 1254)	ug/kg	21.1 U	21.5 U	20.7 J	23 U	23 U	22.1 U
11096-82-5	PCB-1260 (Aroclor 1260)	ug/kg	21.1 U	21.5 U	22.6 U	23 U	23 U	22.1 U
37324-23-5	PCB-1262 (Aroclor 1262)	ug/kg	21.1 U	21.5 U	22.6 U	23 U	23 U	22.1 U
11100-14-4	PCB-1268 (Aroclor 1268)	ug/kg	21.1 U	21.5 U	22.6 U	23 U	23 U	22.1 U
	OTHER							
SOLID	Solids, Percent	%	93.5	92.1	87.1	85.1	86.3	89.1

NYSDEC-J&L Steel Site 2017 Site Investigation Validated Soil Data SDG: SC34687		Location ID: Sample ID: Depth: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	AOC-3B-G AOC-3B-G-2-12 2-12 in SC34687-09 SPECTRUM SC34687 SOIL 5/11/2017 6/15/2017	AOC-3B-H AOC-3B-H-0-2 0-2 in SC34687-10 SPECTRUM SC34687 SOIL 5/11/2017 6/15/2017	AOC-3B-H AOC-3B-H-2-12 2-12 in SC34687-11 SPECTRUM SC34687 SOIL 5/11/2017 6/15/2017	SS-57-C SS-57-C-0-2 0-2 in SC34687-01 SPECTRUM SC34687 SOIL 5/11/2017 6/15/2017	SS-57-C SS-57-C-2-12 2-12 in SC34687-02 SPECTRUM SC34687 SOIL 5/11/2017 6/15/2017	FIELDQC EB_051117 SC34687-12 SPECTRUM SC34687 WATER 5/11/2017 6/15/2017
CAS NO.	COMPOUND	UNITS:						ug/L
	PCBs							
12674-11-2	PCB-1016 (Aroclor 1016)	ug/kg	22.3 U	24.9 U	21.4 U	22.2 U	22.2 U	0.233 U
11104-28-2	PCB-1221 (Aroclor 1221)	ug/kg	22.3 U	24.9 U	21.4 U	22.2 U	22.2 U	0.233 U
11141-16-5	PCB-1232 (Aroclor 1232)	ug/kg	22.3 U	24.9 U	21.4 U	22.2 U	22.2 U	0.233 U
53469-21-9	PCB-1242 (Aroclor 1242)	ug/kg	22.3 U	24.9 U	21.4 U	22.2 U	22.2 U	0.233 U
12672-29-6	PCB-1248 (Aroclor 1248)	ug/kg	22.3 U	24.9 U	21.4 U	22.2 U	22.2 U	0.233 U
11097-69-1	PCB-1254 (Aroclor 1254)	ug/kg	22.3 U	24.9 U	350	115	22.2 U	0.233 U
11096-82-5	PCB-1260 (Aroclor 1260)	ug/kg	22.3 U	24.9 U	21.4 U	22.2 U	22.2 U	0.233 U
37324-23-5	PCB-1262 (Aroclor 1262)	ug/kg	22.3 U	24.9 U	21.4 U	22.2 U	22.2 U	0.233 U
11100-14-4	PCB-1268 (Aroclor 1268)	ug/kg	22.3 U	24.9 U	21.4 U	22.2 U	22.2 U	0.233 U
	OTHER							
SOLID	Solids, Percent	%	88.2	79.3	92.6	88.5	89	

Attachment C

Specifications

SECTION 01100

HEALTH AND SAFETY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. This Section describes the Contractor's responsibilities for producing a written Site-specific Construction Health and Safety Plan (CHASP). Any disregard of the provisions of the CHASP may, without limitation, be deemed just and sufficient reason for termination of the Contractor's services.

1.02 SCOPE OF WORK

A. The Contractor shall be responsible for preparation of a CHASP, its implementation, and related requirements as specified herein. All personnel working or visiting the Site will abide by the Contractor's health and safety (H&S) requirements.

1.03 RELATED SECTIONS

A. Section 01110: Environmental Protection Procedures

B.

1.04 REFERENCES

A. Work performed shall be consistent with the following guidelines and references and in compliance with all applicable regulations and standards including, but not limited to, those listed below. In the case that these requirements are conflicting, the one which offers the greatest worker protection shall be followed.

1. 29 CFR 1904, OSHA Record Keeping
2. 29 CFR 1910, OSHA General Industry Standards
3. 29 CFR 1926, OSHA Construction Industry Standards
4. ACGIH Publication Threshold Limit Values & Biological Exposure Indices

1.05 SUBMITTALS

A. The Contractor shall submit the following items:

1. Safety policy statement
2. Written safety program
3. Safety rules
4. OSHA 300 Logs
5. Three-year OSHA citation history

6. Three-year history of environmental incidents, citations and fines
7. New employee orientation
8. Employee safety training
9. Safety meetings
10. Jobsite self-inspection
11. Safety and Health Program covering procedures to be followed.
12. Job Specific Site Health and Safety Plan
13. Safety Incident Reports (when warranted)
14. Daily Reports
15. Root cause investigative reports with preventative action plans for all Near Misses and worker injuries/illnesses
16. Material Safety Data Sheets (MSDSs) for all chemicals to be brought to the site
17. Total work hours on a weekly basis
18. Incident rates on a project basis
19. Community Air Monitoring Plan (CAMP)

PART 2 PRODUCTS

2.01 GENERAL PROVISIONS

A. The written Health and Safety Program policy statement shall be submitted with the Contractors bid.

B. Prior to start of work, the Contractor shall submit to the Engineer and Owner for acceptance, the final CHASP, which shall include changes (if any) requested by the Engineer or Owner from the preliminary CHASP. The Contractor is responsible for revising the CHASP for finalization and acceptance by Engineer/Owner. The Contractor will not be allowed to perform any on-site work until the CHASP has been accepted by the Engineer and Owner.

C. Upon the Engineer/Owner's review and acceptance, the CHASP shall bear a stamp or specific written indication that the Contractor has satisfied its obligations under the Contract Documents with respect to the health and safety requirements of the CHASP.

D. The Engineer/Owner's review and acceptance will not extend to means, methods, techniques, procedures of construction, or to whether the representations made in the CHASP comply with regulatory standards or good practices.

E. At the time of submittal, the Contractor shall give the Engineer and Owner specific written notice of variations, if any, that the CHASP may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the submittal; and, in addition, by a specific notation made on each

submittal to the Engineer and Owner for review and acceptance of each such variation.

F. Notwithstanding any other provision of the Contract Documents, extensions to the Contract Times will not be granted if caused by undue delay by the Contractor in developing or revising the CHASP.

2.02 HEALTH AND SAFETY PROGRAM

A. The Contractor must develop or have developed safety and environmental training for its employees and subcontractors to perform the work. The program shall be set forth in a written policy statement from the Contractor that establishes the program and assigns responsibility for its implementation to a specific individual on the Contractor's staff.

2.03 HEALTH AND SAFETY PLAN

A. The Contractor shall implement and enforce health and safety requirements and shall take necessary precautions and provide protection for following:

1. Personnel working on or visiting the Site, irrespective of employer;
2. Work and materials or equipment to be incorporated in the work area on- or off-site;
3. Other property at or adjacent to the Site; and
4. Public exposed to job-related operations.

B. The Contractor shall prepare a site-specific CHASP. The Contractor is solely responsible for adequacy of the CHASP's preparation, monitoring, management and enforcement. At a minimum, the Contractor's CHASP shall address the following:

1. Site description and history.
2. Project activities and coordination with other Contractors.
3. A safety and health risk or Activity Hazard Analysis (AHA) evaluation for all on-site job tasks to be performed, which will include task steps, hazards associated with the step, and detailed descriptions of measures which will be set in place to mitigate those hazards including Personal Protective Equipment (PPE) and Engineering Controls.
4. Organizational structure that sets forth lines of authority, responsibility, and communication including the chain of command. The CHASP shall include a description of the organization, qualifications, and responsibilities of the site workers.
5. Work Zones;
6. Personnel training;
7. Personnel protection, clothing and equipment; and
8. Emergency procedures.

C. The CHASP shall be submitted prior to the start of work for acceptance by the Engineer and Owner. The Contractor shall not commence work without the Owner's written acceptance of the CHASP. Any delay in the scheduled work due to lack of an accepted CHASP shall be the responsibility of the Contractor.

D. The CHASP shall be prepared in accordance with all applicable local, state and federal regulations.

E. The Contractor's CHASP shall cover all work to be performed under this Contract. The CHASP shall establish, in detail, the protocols necessary for the recognition, evaluation, and control of all hazards associated with each task performed by the Contractor and its Subcontractors. The CHASP shall address site-specific safety and health requirements and procedures based upon site-specific conditions. Duplication of the general information contained in the Safety and Health Program is unnecessary. The level of detail provided in the CHASP shall be tailored to the type of work, complexity of operations to be accomplished, and hazards anticipated.

G. Initial training shall be conducted prior to commencement of work or entering the site. This training shall cover site hazards, procedures, and all contents of the approved CHASP. All employees including those working in the support zone shall attend this training. Daily job briefings shall be performed daily prior to commencement of work and shall include but not be limited to the hazards expected, specific procedures and precautions to be used to control those hazards, any means to control hazardous energy at the site (e.g., lockout/tagout), and PPE to be used.

I. Standard Operation Safety Procedures, Engineering Controls, Work Practices - Identification of the engineering controls and safe work practices to be implemented for the work covered by these specifications which include, but not be limited to the following:

1. Designated competent employee of Contractor
2. New employee orientation, including requirements of and hazards associated with the work
3. Regular safety meetings/training
4. Method to verify the comprehension of safety training taken by the Contractor's employees
5. Documentation of required training and safety meetings
6. Emergency action/evacuation plan
7. Emergency medical services arranged
8. Incident investigation procedure (down to root cause level)
9. Chemical hazard communication (with appropriate MSDS)
10. Agreement to remove all materials brought on site at the conclusion of work (hazardous materials, paints, oils, chemicals, etc.).

11. Safe work permitting
12. Excavation permitting
13. Fall protection for work at or above four feet in elevation
14. Personal protective equipment required
15. Respiratory protection
16. Monthly power tool/drop cord inspection and identification or use of ground fault circuit interrupters (GFCIs) (OSHA assured equipment grounding conductors)
17. Contractor self-inspection, reporting, tracking
18. Procedures for ensuring effectiveness of the safety orientation

J. Site Control and Work Zones - Established to control the flow of personnel and materials into and out of the work areas. (Contractor shall clearly lay out and identify the work zones in the field and shall limit equipment, operations, and personnel in these zones as required by these specifications and described in the CHASP.) Site controls shall be established for but not be limited to:

1. Preventing trespassing
2. Preventing unqualified/unprotected workers from entering restricted areas
3. Maintaining a log of employees on and visitors to the Site
4. Communicating routes of escape and gathering points
5. Emergency Equipment and First Aid - Describe the emergency and first aid equipment to be provided on-site.
6. Emergency Response and Contingency Plan.
7. Pre-emergency planning and procedures for reporting incidents to appropriate government agencies for potential chemical exposures, personal injuries, fire/explosions, environmental spills, and releases
8. Personnel roles, lines of authority, communications
9. Posted instructions and a list of emergency contacts
10. Emergency recognition and prevention
11. Site topography, layout, and prevailing weather conditions
12. Criteria and procedures for site evaluation (emergency alerting procedures)
13. Employee alarm system, emergency PPE and equipment, safe distances, places of refuge, evacuation routes, site security and control
14. Specific procedures for medical treatment of injured personnel
15. Route maps, with text directions, to nearest pre-notified medical facility
16. Criteria for initiating community alert program, contacts, and

responsibilities

17. Procedures for critique of emergency responses and follow-up

K. Logs, Reports, and Recordkeeping - Logs and records used to document the implementation of the CHASP shall be kept on site. Accident/Injury notification must be reported to the Engineer and Owner immediately following the incident. Completed Forms and investigation reports shall be given to the Engineer and Owner within 24 hours of the injury or Near Miss. Additionally, the Contractor shall provide an investigation report that includes a description of the incident or Near Miss, root cause determination, and preventative actions to be taken to prevent recurrence. Work will not be allowed to re-commence on the activity where the incident or Near Miss occurred until the Engineer/Owner considers the Contractor's preventative action plan to be acceptable.

L. Any violation of safety or health rules and regulations observed at the work Site by Engineer/Owner will be brought immediately to the attention of the Contractor's or Subcontractor's supervisor for immediate corrective action. While corrective action is being implemented, all work at that location shall stop until corrective action is complete, inspected and accepted by Engineer/Owner If corrective action is not taken immediately, Engineer/Owner reserve the right to suspend all of the Contractor's or its subcontractor's work operations and their workforce shall leave the work Site immediately until corrective action is complete. No extra payments will be made to the Contractor for increased costs it may incur due to such work stoppages.

M. If a Contractor conducts construction operations that present a hazard to the environment or to the health and safety of their employees, or the general public, Engineer/Owner reserve the right to stop the project and to have the hazards corrected. Note that Contractor employees may also stop the job for the same reasons

2.04 COMMUNITY AIR MONITORING PLAN (CAMP)

A. The Contractor shall prepare a site-specific CAMP in accordance with NYSDEC Department of Environmental Remediation Technical Guidance for Site Investigation and Remediation DER-10 Appendix 1A.

B. Submit the CAMP to the Engineer/Owner at the same time as the CHASP. The CAMP may be included in the CHASP or submitted as a separate document.

C. Do not proceed with site work until the CAMP has been accepted by the Engineer/Owner.

PART 3 EXECUTION (Not Used)

END OF SECTION

SECTION 01110

ENVIRONMENTAL PROTECTION PROCEDURES

PART 1 GENERAL

1.01 SCOPE OF WORK

A. The Contractor shall furnish all labor including training and supervision, materials, and equipment and perform all work as required for the prevention and avoidance of the exacerbation of environmental pollution, in conformance with all applicable laws and regulations, during and as the result of construction operations and activities under this Contract. For the purpose of this Section, environmental pollution is defined as the discharge or presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic and/or recreational purposes.

B. The control of environmental pollution requires consideration of air, water and land, and involves management of noise and solid waste, as well as other pollutants.

C. Schedule and conduct all work in a manner that will minimize the erosion of soils in the work area. All erosion control measures shall be in place in an area prior to any disturbance and/or construction activity in that area.

D. This Section is intended to ensure that construction is achieved with minimum disturbance to the existing ecological balance between a water resource and its surroundings. These are general guidelines. It is the Contractor's responsibility to determine the specific construction techniques to meet these guidelines and the needs and requirements of this particular site in its existing condition.

1.02 APPLICABLE REGULATIONS

A. The Contractor shall comply with all applicable Federal, State and local laws and regulations concerning environmental pollution control and abatement.

1.03 NOTIFICATIONS

A. The Contractor shall be responsible to monitor its own non-compliance with these provisions; Engineer may notify the Contractor in writing of any non-compliance with the foregoing provisions or of any environmentally objectionable acts and corrective action to be taken, which Engineer may observe, but no act, or failure to act on the part of Engineer shall relieve the Contractor from its obligations under this section. State or local agencies responsible for verification of certain aspects of the environmental protection requirements may notify the Contractor in writing, through the Engineer, of any non-compliance with State or local requirements. After receipt of such notice from the Engineer or from the regulator agency through the Engineer, the Contractor shall immediately take corrective action. Any such notice, when delivered to the Contractor or its authorized representative at the Site, shall be deemed sufficient for the purpose of this Section.

B. If the Contractor fails or refuses to comply promptly or adequately, the Engineer/Owner may (i) issue an order stopping all or part of the work until satisfactory corrective action has been taken, (ii) terminate the Contract, or (iii) undertake the corrective action on its own and back charge the Contractor for all damages including (a) the cost of the corrective work, (b) delay, (c) administrative cost and (d) any and all other damages allowed by law. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor unless it is later determined that the Contractor was in compliance.

1.04 IMPLEMENTATION

A. Prior to commencement of work, the Contractor shall meet with the Engineer to develop mutual understanding relative to compliance with these provisions and administration of the environmental pollution control program.

B. Remove temporary environmental control features, when approved by the Engineer.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.01 EROSION CONTROL

A. Provide positive means of erosion control such as silt fences. Flow of surface water into excavated areas shall be prevented.

3.02 PROTECTION OF CREEKS, SURFACE WATERS AND GROUNDWATER

B. Take all precautions to prevent, or reduce to a minimum, any damage to local creeks, surface or ground water from pollution by debris, sediment or other material, or from the manipulation of equipment and/or materials in or near such creeks or surface water.

C. Take all preventative measures to avoid spillage of petroleum products and other pollutants. In the event of any spillage, prompt remedial action shall be taken in accordance with State and Federal Regulations and as approved by the Engineer.

3.03 PROTECTION OF LAND RESOURCES

A. Restore land resources within the project boundaries and to a condition, after completion of construction that will appear to be natural and not detract from the appearance of the project. Confine all construction activities to areas shown on the Drawings.

3.04 PROTECTION OF AIR QUALITY

A. Burning – The use of burning at the project site for the disposal of refuse and debris will not be permitted.

B. Dust Control

1. Maintain all excavations, embankments, stockpiles, access roads, and all other work areas within the project boundaries free from dust which could cause the standards for air pollution to be exceeded and which would cause a hazard or nuisance to others, as approved by the Engineer.

2. An approved method of stabilization consisting of spraying potable water over disturbed subgrades and stockpiles (manually using a hose) or other similar methods will be permitted to control dust. The use of petroleum products is prohibited. The use of chlorides may be permitted with approval from the Engineer.

3. Spraying of potable water must be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times, and the Contractor shall have sufficient competent equipment on the job to accomplish this. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs, as determined by the Engineer.

3.05 NOISE CONTROL

A. Make every effort to minimize noises caused by the construction operations. Equipment shall be equipped with silencers or mufflers designed to operate with the least possible noise in compliance with Federal and State regulations.

END OF SECTION

Attachment D

Sampling Plan

Sampling Plan

Prepared For:

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

625 Broadway, 12th floor
Albany, NY 12233-7012

Prepared By:

PARSONS

301 Plainfield Road, Suite 350
Syracuse, NY 13212

REVIEWED AND APPROVED BY:

Program Manager: _____ _____

Date

May 2018

SECTION 1

SAMPLING PLAN

1.1 INTRODUCTION

Parsons has developed this Sampling Plan to be used during confirmatory sampling activities associated with the J&L Steel site Interim Remedial Measure (IRM) to address PCB-impacted soils. The objective of this Sampling Plan is to outline methods and procedures used during collection of confirmatory samples.

The methods and procedures described in this Sampling have been prepared in accordance with the most recent and applicable NYSDEC, USEPA and New York State Department of Health (NYSDOH) regulatory guidance and requirements.

1.2 POST EXCAVATION SOIL SAMPLING FOR PCBS

Procedures for the collection of post-excavation confirmatory soil samples for PCBs at self-implementing cleanup sites are described in this section.

1.2.1 Equipment and Supplies

- Log book, sampling forms, project plans, camera
- Stakes/flagging and/or GPS;
- PPE in accordance with the HASP;
- Stainless steel sampling equipment or disposable plastic scoops;
- Stainless steel bowl or disposable aluminum pans;
- Phosphate-free decontamination soaps (such as Alconox), reagent-grade solvents, and deionized water to be used for decontaminating equipment between sampling stations;
- Buckets, plastic wash basins, plastic drop cloths, and scrub brushes to be used for decontaminating equipment;
- Waterproof markers, clear tape, duct tape;
- Resealable plastic bags;
- Laboratory sample containers, labels, coolers, packing/shipping material and ice for sample bottles; and
- Chains-of custody; shipping labels, custody seals.

1.2.2 Confirmatory Sampling Method

- Post-excavation confirmatory soil samples will be collected from the 0-2-inch depth interval.
- Mark out sample locations on a 1.5-meter grid.

- Soil samples will be collected from each location using decontaminated stainless steel or disposable plastic sampling scoops.
- QA/QC samples will be collected in accordance with the requirements of the QAPP (IRM Work Plan Attachment E).
- Samples will be composited in accordance with Subpart O §761.289.
- Each composite sample will be placed into a sealable bag and homogenized before being transferred to containers provided by the analytical laboratory.
- Samples will be stored and shipped on ice following chain of custody procedures to the designated analytical laboratory.
- Each sample will be analyzed for at the laboratory for PCBs using USEPA method SW846 8082.

Attachment E

Quality Assurance Project Plan

Generic Quality Assurance Project Plan (QAPP)

Prepared For:

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

625 Broadway, 12th floor
Albany, NY 12233-7012

Prepared By:

PARSONS

301 Plainfield Road, Suite 350
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O'BRIEN & GERE

333 W. Washington Street
Syracuse, NY 13202

REVIEWED AND APPROVED BY:

Program Manager: _____ _____
Date

May 2011 (Revised August 2014)

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ATTACHMENT 1 SUMMARY OF ANALYTICAL DATA PACKAGE (DQO LEVEL IV)

LIST OF ACRONYMS

ASTM	American Society for Testing and Materials
BFB	4-Bromofluorobenzene
ºC	Degrees Celsius
CAR	Corrective Action Request
CCV	Continuing Calibration Verification
CERCLA	Comprehensive Emergency Response, Compensation, Liability Act
CFR	Code of Federal Regulations
CLP	Contract Laboratory Program
cm/s	centimeter per second
COC	Chain-of-Custody
CPOI	Chemical Parameter of Interest
CVAA	Cold Vapor Atomic Absorption
cy	cubic yards
DFTPP	decafluorotriphenylphosphine
DOT	Department of Transportation
DQO	Data Quality Objective
DUO	Data Use Objective
DUSR	Data Usability Summary Report
EDD	Electronic Data Deliverable
FS	Feasibility Study
GC	Gas Chromatography
GC/ECD	Gas Chromatography/Electron Capture Detection

LIST OF ACRONYMS (CONTINUED)

GC/MS	Gas Chromatography/Mass Spectroscopy
HSC	Health and Safety Coordinator
ICP	Inductively Coupled Plasma
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
ICP/AES	Inductively Coupled Plasma/Atomic Emission Spectroscopy
LCS	Laboratory Control Sample
LIMS	Laboratory Information Management System
LNAPL	Light Non-aqueous Phase Liquid
LPM	Laboratory Project Manager
MD	Matrix Duplicate
mg/kg	milligram per kilogram
mL	milliliter
MS	Matrix Spike
MSB	Matrix Spike Blank
MS/MD	Matrix Spike/Matrix Duplicate
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MSD	Matrix Spike Duplicate
NCM	Nonconformance Memo
ng	nanograms
NIOSH	National Institute of Safety and Health
NIST	National Institute of Standards and Technology
NYSDEC	New York State Department of Environmental Conservation
OM	Operations Manager
OSHA	Occupational Safety and Health Administration
PARCCS	Precision, Accuracy, Representativeness, Completeness, Comparability, and Sensitivity
PCB	Polychlorinated Biphenyl

LIST OF ACRONYMS
(CONTINUED)

PE	Performance Evaluation
PID	Photoionization Detector
PRRL	Project Required Quantitation Limit
PT	Performance Testing
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QAO	Quality Assurance Officer
QAPP	Quality Assurance Project Plan
QC	Quality Control
QL	Quantitation Limit
RL	Reporting Limit
ROD	Record of Decision
RPD	Relative Percent Difference
SAP	Sampling and Analysis Plan
SDG	Sample Delivery Group
SMU	Sediment Management Unit
SOP	Standard Operating Procedure
SVOC	Semivolatile Organic Compound
TAL	Target Analyte List
TCL	Target Compound List
ug	Micrograms
USEPA	Unites States Environmental Protection Agency
VOC	Volatile Organic Compound

SECTION 1

PROJECT DESCRIPTION

1.1 INTRODUCTION

This generic Quality Assurance Project Plan (QAPP) has been prepared to support activities and specifies the quality assurance/quality control (QA/QC) procedures for field and laboratory sampling and measurements for work assignments awarded by the New York State Department of Environmental Conservation (NYSDEC) under Standby Engineering Contract #D007623. The specific objectives of the QAPP are:

- Foster data quality that is sufficient to meet the investigation objectives and to support the decision-making process
- Provide a standard for control and review of measurement data to confirm that the data are scientifically sound, representative, comparable, defensible, and of known quality.

This QAPP has been prepared in accordance with USEPA guidance (USEPA, 2000a, 2002b). Project or site specific work plans for each work assignment awarded will have additional scope and quality requirements that may not be addressed in this QAPP. Addendums to this QAPP may be required for each work assignment.

Project scope and descriptions of the work assignment are provided in the Work Assignment Scoping Documents and Field Activities Plan (FAP).

SECTION 2

PROJECT ORGANIZATION

2.1 PROJECT AND TEAM ORGANIZATION

The project organization and the function and responsibility of each group affected by the QAPP are presented in the Work Assignment Scoping Documents for each assignment. The project organization is designed to promote the exchange of information and for efficient project operation. Key contact information is also summarized in the Work Assignment Scoping Documents.

2.1.1 Analytical Services

The analytical laboratory (or laboratories) will analyze environmental samples collected for the specified project. Laboratory operations will be conducted under the supervision of a general manager or laboratory director and a quality assurance manager. A project manager and alternate will be assigned to each project. The project manager will be the primary point of contact and will be responsible for coordination and quality of all laboratory activities associated with the project. The laboratory's project manager will manage project sample receipt, analysis scheduling, and data reporting. In case of temporary absence, the direct supervisor will assume the responsibilities of the absent employee or delegate the responsibility to qualified personnel. Sample Management Staff is responsible for receiving, logging, and maintaining internal custody of samples during the sample's residence in the laboratory. In addition, the laboratory will ensure that project analytical requirements are met; monitor project analytical compliance and immediately notify Parsons if conflict or discrepancies arise; initiate and implement appropriate corrective actions; ensure adequate quality review of deliverables prior to release; and participate in coordination meetings.

2.2 SPECIAL TRAINING/CERTIFICATION

Management and field personnel must review the requirements of this QAPP to make certain that persons assigned to specific tasks have appropriate credentials and experience. The Field Team Leaders will check that all onsite personnel have read and understood the QAPP.

Field personnel will be required to adhere to the generic Health and Safety Plan (HASP) and FAP. They must also follow applicable task-specific health and safety plans that project subcontractors develop before they begin investigation activities.

Laboratories will have trained and experienced staff capable of performing the analyses specified in this QAPP. Laboratories will have New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) certification for all analyses pertaining to solid and hazardous waste categories. Laboratories performing Level IV analyses (as described in QAPP Section 3.2.1) should have Contract Laboratory Program (CLP) category certification. Additionally, the laboratories must be able to demonstrate that they have analyzed performance-evaluation or proficiency-testing samples within 12 months of beginning the analyses.

All personnel independent of the laboratory generating the data who are performing data validation and verification must have experience in data validation, quality assurance oversight, and auditing. The data validator must have a Bachelors degree in chemistry or natural sciences with a minimum of 20 credit hours in chemistry; one year experience in the implementation and application of analytical laboratory methodologies; and one year experience evaluating data packages of all matrices (e.g., soil, water, air, tissue) for compliance and usability with respect to the NYSDEC Analytical Services Protocol (ASP) and the USEPA National Functional Guidelines with regional modifications.

SECTION 3

DATA QUALITY OBJECTIVES AND DATA QUALITY CRITERIA

3.1 INTRODUCTION

A systematic planning process will develop site-specific data quality objective (DQOs). These DQOs will clarify study objectives, define the appropriate type of data, and specify tolerable levels of potential errors. These parameters, in turn, will be the basis for establishing the quality and quantity of data needed to support the utility of the data. This section was prepared in accordance with USEPA Guidance for the Data Quality Objectives Process (USEPA, August 2000). Project DQOs will be developed using the "seven-step" DQO process, consisting of the following steps:

Step 1: State the problem
Step 2: Identify the decision
Step 3: Identify inputs to the decision
Step 4: Define the study boundaries
Step 5: Define the decision rule
Step 6: Specify tolerable limits of decision error
Step 7: Optimize the design

Data quality objectives specify the underlying reason for collecting the data and the data type, quality, quantity, and uses needed to make decision, and they provide the basis for designing data collection activities. DQOs and quality assurance objectives are related data quality planning and evaluation tools for all sampling and analysis tools.

The purpose of this QAPP is to provide a standard for control and review of measurement data to ensure they are scientifically sound, representative, comparable, defensible, and of known quality. The data will be used to evaluate the physical and chemical attributes of samples collected. The project objective for analytical testing is to characterize the physical characteristics and chemical constituents and to provide data to support the decision-making process.

The data produced during sampling activities will be compared with the defined QA objectives and criteria for precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) to see that the data reported are representative of actual conditions at the site.

This data assessment activity is an on-going coordinated process with data production and is intended to assure that data produced during the project are acceptable for use in subsequent evaluations. Both statistical and qualitative evaluations will be used to assess the quality of the data. The primary evaluation of the data will be based upon the field quality control samples described in Section 8.1.1 and the laboratory quality control samples described in Section 8.1.2. The "blank" samples (laboratory QC blank samples and field QC blank samples) will be used to

evaluate whether or not the laboratory and/or field sample handling represent a possible source of sample contamination. Laboratory duplicate sample results will be used to evaluate analytical precision. Field duplicate sample results will be used to evaluate the overall precision of the sampling and analysis process, as well as sample representativeness and site heterogeneity. Laboratory control samples will be used to evaluate the accuracy of analytical results, as will other analysis-specific criteria, such as surrogate compound recoveries for VOCs, SVOCs, pesticides, PCBs and herbicides. Matrix spike/matrix spike duplicate (MS/MSD) analysis of project samples will be used to evaluate potential sample matrix effects on the analytical results (both of the sample utilized for MS/MSD and of other samples collected from the site). For all sample results, the impact of sample-specific, analysis-specific, and site-specific factors will be evaluated and an assessment will be made as to their impact, if any, on the data. Duplicate sample (field and laboratory QC samples) results will be used to evaluate data precision.

3.1.1 Data Use Objectives

Data use objectives define why analyses are being conducted and how ultimately the data will be used to meet the overall project objectives. For the work assignment activities, these project objectives are stated in the Work Assignment Scoping Documents.

3.2 DATA QUALITY OBJECTIVES (PARCCS PARAMETERS)

3.2.1 Introduction

DQOs are based on the premise that different data uses require different levels of data quality. The term *data quality* refers to a degree of uncertainty with respect to PARCCS data quality indicators. Specific objectives are established to develop sampling protocols and identify applicable documentation, sample handling procedures, and measurement system procedures. These DQOs are established by onsite conditions, objectives of the project, and knowledge of available measurement systems. Overall work assignment DQOs are presented and discussed in detail in this QAPP. A wide range of data quality is achieved through the use of various analytical methods. The following data quality levels are widely accepted as descriptions of the different kinds of data that can be generated for various purposes:

- **Level I, Field screening or analysis using portable instruments (e.g., photoionization detector [PID]):** Results are often not compound-specific but results are available in real time. Depending on the analysis being performed and the instrumentation used, the results may be considered qualitative, semi-quantitative, or quantitative.
- **Level II, Field analysis using more sophisticated portable analytical instruments (e.g., on-site mobile laboratory):** There is a wide range in the quality of data that can be generated depending on the use of suitable calibration standards, reference materials, and sample preparation equipment. Results are available in real-time or typically within hours of sample collection.
- **Level III, All analyses performed in an off-site analytical laboratory using methods other than USEPA-approved analytical methods**: These data generally do not include the level of formal documentation required under Level IV and are not

subject to formal data validation. These data are typically used for engineering studies (e.g., treatability testing), site investigations and remedial design.

- **Level IV, Data generated using USEPA methods and enhanced by a rigorous QA program, supporting documentation, and data validation procedures:** These data are typically used for engineering studies (e.g., treatability testing), risk assessment, site investigations, and remedial design, and may be suitable for litigation/enforcement activities. Results are both qualitative and quantitative.

3.2.2 PARCCS Parameters (Data Quality Indicators)

3.2.2.1 Precision

Precision is an expression of the reproducibility of measurements of the same parameter under a given set of conditions. Specifically, it is a quantitative measurement of the variability of a group of measurements compared to their average value (USEPA, 1987). Precision is usually stated in terms of standard deviation, but other estimates such as the coefficient of variation (relative standard deviation), absolute difference (D), range (maximum value minus minimum value), relative range, and relative percent difference (RPD) are common.

The objectives for precision for each chemical are based on the capabilities of the approved EPA analytical method with respect to laboratory performance. For this project, field-sampling precision will be determined by analyzing coded (blind) duplicate samples for the same parameters, and then, during data validation, calculating the %RPD for duplicate sample results. The laboratory will determine analytical precision by calculating the %RPD or %D, as applicable to the analytical method being used, e.g., pH will be evaluated using %D.

The laboratory will determine analytical precision by calculating the RPD for the results of the analysis of the laboratory duplicates and matrix spike duplicates. The formula for calculating %RPD is as follows:

$$\%RPD = \frac{|V1 - V2|}{(V1 + V2)/2} \times 100$$

where:

RPD	=	Relative percent difference
V1, V2	=	Values to be compared
|V1 - V2|	=	Absolute value of the difference between the two values
(V1 + V2)/2	=	Average of the two values

For data evaluation purposes, in instances where both sample concentrations are less than five times (<5x) the RL, duplicate precision will be evaluated using the calculated %D result. In this instance, the applicable precision criterion will be two times the RL (2xRL). If a value is not detected, the %RPD criterion will be considered to be not applicable and the %RPD will not be calculated (i.e. precision will not be quantitatively determined).

3.2.2.2 Accuracy

Accuracy is a measure of the degree of agreement of a measured value with the true or expected value of the quantity of concern (Taylor, 1987) or the difference between a measured value and the true or accepted reference value. The accuracy of an analytical procedure is best determined by the analysis of a sample containing a known quantity of material and is expressed as the percent of the known quantity that is recovered or measured. The recovery of a given analyte depends on the sample matrix, method of analysis, and the specific compound or element being determined. The concentration of the analyte relative to the detection limit of the analytical method is also a major factor in determining the accuracy of the measurement. Concentrations of analytes that are less than the quantitation limits are less accurate because they are more affected by such factors as instrument "noise." Higher concentrations will not be as affected by instrument noise or other variables and, thus, will be more accurate.

The objectives for accuracy for each chemical are based on the capabilities of the approved USEPA analytical method with respect to laboratory performance. Analytical accuracy is typically assessed by examining the percent recoveries of surrogate compounds that are added to each sample (organic analyses only), the percent recoveries of matrix spike compounds added to selected samples, and the percent recoveries of spike compounds added to laboratory control samples (LCS), or matrix spike blanks (MSB). An LCS (or MSB) will be analyzed to provide additional information on analytical accuracy. Additionally, initial and continuing calibrations must be performed and accomplished within the established method control limits to define the instrument accuracy before analytical accuracy can be determined for any sample set.

Accuracy is normally measured as the percent recovery (%R) of a known amount of analyte, called a *spike*, added to a sample (matrix spike or laboratory control). The accuracy on a per sample basis will be measured using surrogates for the organics analyses. Positive detects from the PCB analysis will be confirmed using second column confirmation. The laboratory will report the lower of the two values with respect to the dual GC column analysis performed. When the percent difference (%D) between the results for the two columns exceeds 25%, the laboratory will qualify the reported result with the *P* qualifier. The %R is calculated as follows:

Matrix Spike Recovery:

$$\%\ \text{Recovery} = \frac{SSR - SR}{SA} \times 100$$

where:

%R	=	Percent recovery
SSR	=	Spike sample result: concentration of analyte obtained by analyzing the sample with the spike added

SR	=	Sample result: the background value; *i.e.*, the concentration of the analyte obtained by analyzing the sample
SA	=	Spiked analyte: concentration of the analyte spike added to the sample

Surrogate Recovery: $\%\ \text{Recovery} = \frac{\text{Concentration (or amount) found}}{\text{Concentration (or amount) spiked}} \times 100$

LCS (or MSB) Recovery: $\%\ \text{Recovery} = \frac{\text{Concentration (or amount) found}}{\text{Concentration (or amount) spiked}} \times 100$

3.2.2.3 Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point or an environmental condition. Representativeness is a qualitative parameter and is most concerned with the proper design of the sampling program (USEPA, 1987). Samples must be representative of the environmental media being sampled. An important factor in the selection of sample locations and sampling procedures will be obtaining representative samples.

Field and laboratory procedures will be performed in such a manner as to ensure, to the degree technically possible, that the data derived represents the in-place quality of the material sampled. Care will be exercised to see that chemical compounds are not introduced to the sample from sample containers, handling, and analysis. Field blanks, trip blanks, and laboratory method/prep blanks will be analyzed to monitor for potential sample contamination from field and laboratory procedures.

The assessment of representativeness also must consider the degree of heterogeneity in the material from which the samples are collected. Sampling heterogeneity will be evaluated during data validation through the analysis of coded (blind) field duplicate samples. The analytical laboratory will also follow acceptable procedures to assure the samples are adequately homogenized prior to taking aliquots for analysis such that the reported results are representative of the sample received. Chain-of-custody procedures will be followed to document the possession of sample containers from the time of container preparation through sample collection and receipt back at the laboratory. Field QC samples will be collected and analyzed to provide information to evaluate sample representativeness. Details of field QC sample collection (rinse blanks, trip blanks, temperature blanks, field duplicates) and chain-of-custody procedures are presented in Section 4.2 and Section 8.1.1.

3.2.2.4 Completeness

Completeness is defined as the percentage of measurements that meet the project's data quality objectives (USEPA, 1987). Completeness is calculated for each method (or analyte) and sample matrix for an assigned group of samples. Completeness for a data set represents the results usable for data interpretation and decision making. The completeness objective for the

analytical and field data is 90%. Completeness is defined as follows for all sample measurements:

$$\%C = \frac{V}{T} \times 100$$

where:

%C = Percent completeness

V = Number of measurements judged valid (not rejected during data validation)

T = Total number of measurements

Completeness, which is expressed as a percentage, is calculated by subtracting the number of rejected and unreported results from the total planned results and dividing by the total number of results. Results rejected because of out-of-control analytical conditions, severe matrix effects, broken or spilled samples, or samples that could not be analyzed for any other reason, negatively affect influence completeness and are subtracted from the total number of results to calculate completeness.

3.2.2.5 Comparability

Comparability expresses the degree of confidence with which one data set can be compared to another (USEPA, 1987). The comparability of all data collected for this project will be managed by:

- Using identified standard methods (including laboratory standard operating procedures) for both sampling and analysis phases of this project
- Requiring traceability of all analytical standards and/or source materials to the USEPA or National Institute of Standards and Technology (NIST)
- Requiring that calibrations be verified with an independently prepared standard from a source other than that used for calibration (if applicable)
- Using standard reporting units and reporting formats including the reporting of QC data
- Performing data validation on the analytical results, including the use of data qualifiers in all cases where appropriate
- Evaluating the sample collection information and analytical QC sample results
- Requiring that the significance of all validation qualifiers be assessed any time an analytical result is used for any purpose.

By taking these steps during the investigation, future users of either the data or the conclusions drawn from them will be able to judge the comparability of these data and conclusions.

3.2.2.6 Sensitivity and Quantitation Limits

When selecting an analytical method during the DQO process, the achievable detection limit (MDL) and method reporting limit (RL) must be evaluated to verify that the method will meet the project quantitation limits necessary to support project decision making requirements. This process ensures that the analytical method sensitivity has been considered and that the methods used can produce data that satisfy users' needs while making the most effective use of resources. The concentration of any one target compound that can be detected and/or quantified is a measure of sensitivity for that compound. Sensitivity is instrument-, compound-, method-, and matrix-specific and achieving the required project quantitation limit (RL) and/or method detection limit (MDL) objectives depends on instrument sensitivity and potential matrix effects. With regard to instrument sensitivity, it is important to monitor the instrument performance to ensure consistent instrument performance at the low end of the calibration range. Instrument sensitivity will be monitored through the analysis of method/prep blanks, calibration check samples, and low standard evaluations.

Laboratories generally establish limits that are reported with the analytical results; these results may be called reporting limits, detection limits, quantitation limits, or other terms. These laboratory-specific limits, apply undiluted analyses and must be less than or equal to the project RLs. The RL, also known as the practical quantitation limit (PQL), represents the concentration of an analyte that can be routinely measured in the sampled matrix within stated limits and with confidence in both identification and quantitation. Throughout various documents RL and PQL may be interchanged, but they effectively have the same meaning. The RLs are established based on specific knowledge about the analyte, sample matrix, project specific requirements, and regulatory requirements. The RL is typically established by the laboratory at the level of the lowest calibration standard and is generally in the range of two to ten times the MDL.

The method detection limit (MDL) is defined as "the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero" (40 CFR 136 Appendix B). The MDL is the lowest concentration at which a specific analyte in a matrix can be measured and reported with 99% confidence that the analyte concentration is greater than zero. MDLs are experimentally determined and verified for each target analyte of the methods in the sampling program. The laboratory will determine MDLs for each analyte and matrix type prior to analysis of project samples. In addition, when multiple instruments are employed for the analysis of the same method, each individual instrument will maintain a current MDL study. MDLs are based on the results of seven matrix spikes at the estimated MDL, and are statistically calculated in accordance with the Title 40, Code of Federal Regulations Part 136 (40 CFR 136) Appendix B. The standard deviation of the seven replicates is determined and multiplied by 3.14 (i.e., the 99% confidence interval from the one-sided student t-test). If risk-based project objectives are developed, then where practicable, MDLs must be lower than the risk-based criteria determined for the project.

The MDLs to be used are intended to allow that both nondetected and detected target compound results will be usable to the fullest extent possible for the project. An MDL check sample an (interference-free MS with all method target compounds) must be analyzed following the MDL study to determine if reasonable MDL concentrations have been achieved. The MDL

check sample should be at a concentration in the range of two to four times the MDL. If any target compound is not recovered, the MDL study must be repeated. In this case, the repeated MDL should be performed with a higher concentration, based on the analyst's judgment, of the target compounds that failed in the MDL check sample. MDLs must be determined annually at a minimum, and verified by analyzing an MDL check sample on each instrument used for the applicable method.

Laboratory RLs and MDLs for all analyses will meet at a minimum the standards criteria specified in the NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives for Unrestricted Use and/or the NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations."

All analytical results will be reported to the MDL. Analytical results below the MDL will be flagged with a *U* at the RL for organics and MDL for metals to indicate the data are non-detect. However, the laboratory will flag analytes detected at a level less than the RL but greater than the MDL (or the laboratory's determined minimum reportable concentration) with a *J* to denote an estimated concentration.

When results are corrected for dry weight, the reporting limits are then elevated accordingly. To compensate for the low solids, modifications are made either to increase the initial volume extracted/digested or to reduce the final volume of extract/digestate.

For samples that do not meet the project-specified RLs or MDLs, (taking into consideration elevated detection limits due to percent solids or percent moisture and aliquots used for the designated analysis), the laboratory must make available compelling documentation (e.g., screening data) and a justifiable explanation for its inability to meet the specified limits using the project protocols. It must also provide an appropriate, justifiable explanation of the issues and resolution in the analytical report/data package (dilution factor, interference, etc.). Excessive, unnecessary dilutions on any sample for a project are unacceptable. The laboratory will analyze all samples initially undiluted, unless for GC/MS analyses (i.e., SW8260C and SW8270D), a preliminary GC-screen is performed and indicates that GC/MS instrument damage or compromise may occur if the sample is not analyzed initially at dilution. In this instance, the sample will be analyzed at the lowest possible dilution factor. If multiple extractions/ analyses are performed (such as undiluted and diluted analyses), resulting in several data sets for the same sample, the laboratory will report all data and results from each of the multiple analyses in the data package.

Quantitation limits for all definitive data quality level laboratory analytical methods, compounds, and matrices are to be addressed for each work assignment in the Work Assignment Scoping Documents. Individual soil sample RLs and MDLs will be adjusted accordingly based on moisture and aliquots used for analysis.

SECTION 4

DATA ACQUISITION

4.1 SAMPLING METHODS

Any non-disposable sampling equipment used for chemical sampling will be cleaned and decontaminated prior to use to prevent potential cross-contamination between each use. Additionally, this QAPP describes management, handling, and tracking procedures for investigation-derived waste, including solid and liquid materials, and personal protective equipment.

The special precautions described here will be taken to confirm that each sample collected is representative of the conditions at that location and that the sampling and handling procedures neither alter nor contaminate the sample. If failure in the sampling or measurement system occurs, the procedures specified in Section10.3 of this QAPP will be followed to identify who is responsible for implementing the appropriate corrective action. This section presents sample container preparation procedures, sample preservation procedures, and sample holding times.

For this program, the laboratory will purchase and distribute certified clean sample containers with chemical preservatives. The sample containers used for chemical analysis must be virgin bottleware, I-Chem™ Series 300 (or equivalent). Vendors are required to provide documentation of analysis for each lot of containers, and the documentation will be kept on file at the laboratory. Alternatively, the laboratory may perform testing to certify that the sample containers are not contaminated. Since the containers supplied by the laboratory will be certified clean, the bottles will not be rinsed in the field prior to use.

Laboratory-supplied sample kits (coolers containing field chain-of-custody forms, custody seals, sample containers, preservatives, and packing material) will be prepared by the laboratory's Sample Management Staff and shipped to the Field Team Leader. The type of containers, required sample volumes, preservation techniques, and holding times for specific analyses are presented in the NYSDEC ASP.

Samples requiring chemical preservation will be collected in sample containers provided by the analytical laboratory that already contain sufficient quantities of the appropriate preservative(s) to ensure that the sample is kept in accordance with the method requirements. The laboratory must provide an adequate amount of pre-preserved bottles with traceable high-purity preservatives, and additional preservative for use if the added amount is not sufficient, based on request by the Field Team Leader and on an as-needed basis if additional bottleware is needed during the field activities. The field team must verify that the preservative has been added appropriately.

4.2 SAMPLE HANDLING AND CUSTODY

This section presents sample handling and custody procedures for both the field and laboratory. Implementation of proper handling and custody procedures for samples generated in the field is the responsibility of field personnel. Both laboratory and field personnel involved in

the chain of custody and transfer of samples will be trained as to the purpose and procedures prior to implementation. For transfer of samples within the laboratory, an internal chain of custody will be required.

4.2.1 Sample Handling

Samples to be collected for each work assignment will be specified in the Work Assignment Scoping Documents and FAP. After the samples are collected, they will be split as necessary among preserved containers appropriate to the parameters to be analyzed. Each container will be provided with a sample label that will be filled out at the time of collection. The sampler will print label information, specified below, on each label either before or immediately after collecting the sample with an indelible writing instrument. The label will be protected from water and solvents with clear label packing tape.

The following information, at a minimum, is required on each sample label (note: the location ID and the sample ID as described in the Data Management section below inherently identify some of this information, see below):

- Client
- Project name
- Sampling location
- Sample number
- Date and time of sample collection
- Parameters to be analyzed
- Preservative(s) added, if any
- Initials of the sampler.

Following sample collection, excess soil, water, etc., will be wiped from the outside of the sample containers with a paper towel and the lids will be checked to verify they are tightly closed. Each glass container will be wrapped with bubble wrap to minimize breakage during transport. Bottles containing soil, sediment, and water samples will be placed in separate Ziploc® bags (one bag) and set on ice (ice bath not necessary). Documentation of equipment and methods used in the field for treating the samples will be maintained in the field logbooks, and a chain of custody will be initiated to document transfer of the samples from the field team to the laboratory. In preparation for shipment to the analytical laboratory, the shipment cooler will be packaged as follows:

- Fill a dry shipment cooler with inert cushioning to a depth of 1 inch to prevent bottle breakage.
- Place the bagged samples and the laboratory-provided temperature blank upright in the sample cooler. The temperature blank should be placed in the center (horizontally and vertically) with the samples surrounding.
- Place additional cushioning material around the sample bottles as necessary.
- Place bags of ice in the remaining void space to keep the samples cooled to 4°C.

- Complete the chain-of-custody form (see Section 4.2.2). Place the chain-of-custody form in a polyethylene, sealable bag (such as a 1-gal Ziploc® bag or equivalent) and tape the bag to the interior of the cooler lid. Field personnel retain a copy of the chain-of-custody form; another copy is transmitted to the QAO and the Project Manager specified in the Work Assignment Scoping Documents.
- Prior to sealing for shipment, the list of samples will be checked against the container contents to verify the presence of each sample listed on the chain-of-custody record including the temperature blank.
- Affix a custody seal to the cooler.
- Seal the cooler securely with packing tape, taking care not to cover labels if already present.
- Label the cooler appropriately in accordance with the Department of Transportation (DOT) regulations (49 CFR 171 through 179).
- Ship the samples in accordance with the DOT requirements outlined in 49 CFR 171 through 179. Complete the carrier bill of lading, and retain a copy on file.
- Samples will be delivered to the laboratory by the most expedient means to meet holding times. Whenever practicable, samples will be shipped on the day of collection for delivery to the laboratory the morning of the day after collection. The laboratory will be required to adhere to the holding times as stated in the NYSDEC ASP for sample analyses. Laboratory performance requirements for analysis turnaround time will be established using the validated time of sample receipt (VTSR) in accordance to NYSDEC requirements. The field team will carefully coordinate sampling activities with the laboratory to see that holding times are met.

The required holding times must be adhered to for the initial sample preparation/analysis. If subsequent reanalysis or re-extraction becomes necessary because of method requirements or additional requirements stated here, the laboratory will make every effort to perform those re-extractions and/or reanalysis within the primary holding times. Any holding time that is exceeded will be reported immediately to the Project Manager and the QAO by the laboratory QA manager.

4.2.2 Field Sample Custody

The primary objective of sample custody procedures is to create an accurate written record that can be used to trace the possession and handling of samples from the moment of their collection through analysis until their final disposition. A sample (or sample container) will be considered under custody if:

- In a person's possession
- Maintained in view after possession is accepted and documented
- Locked and tagged with custody seals placed on the sample cooler so that no one can tamper with it after having been in physical custody
- In a secured area that is restricted to authorized personnel.

The sample custody flowchart is shown in Figure 4.1.

DATA REQUIRED ON CHAIN-OF-CUSTODY*
Project name and client
Signatures of samplers
Sample number, date and time of collection, and grab or composite sample designation
Signatures of individuals involved in sample transfer
If applicable, the air bill or other shipping number
ADDITIONAL ITEMS THAT SHOULD BE INCLUDED:
Sample matrix
Number of sample containers
Analyses to be performed,
Preservative(s)
Name of the analytical laboratory to which the samples are sent
Method of sample shipment
Project number.
*Required by guidance in SW846 Test Methods for Evaluating Solid Waste, Physical and Chemical (USEPA, 1997)

A chain-of-custody record will accompany the samples from the time the samples leave the original sampler's possession through the sample shipments' receipt at the laboratory. Triplicate copies of the chain-of-custody record must be completed for each sample set collected. See chart for data requirements.

If samples are split and sent to different laboratories, a copy of the chain-of-custody record is sent with each sample.

The REMARKS space on the chain-of-custody form is used to indicate if the sample is a matrix spike/matrix spike duplicate (MS/MSD) or matrix spike/matrix duplicate (MS/MD), or any other sample information for the laboratory. Since they are not specific to any one-sample point, blanks are indicated on separate rows. Immediately prior to sealing the sample cooler, the sampler will sign the chain-of-custody form and write the date and time on the first RELINQUISHED BY space. The sampler will also write the method of shipment, the shipping cooler identification number, and the shipper air bill number on the top of the chain-of-custody form. Mistakes will be crossed out with a single line in ink and initialed by the author.

Sampling personnel will retain one copy of the chain-of-custody form, and the other two copies are put into a sealable plastic bag and taped inside the lid of the shipping cooler. The cooler lid is closed, custody seals provided by the laboratory are affixed to the latch and across the back and front lids of the cooler, and the person relinquishing the samples signs his or her name across the seal. The seal is taped, and the cooler is wrapped tightly with clear packing tape. Field personnel then relinquish the cooler to personnel responsible for shipment, typically an overnight carrier.

The chain-of-custody seal must be broken to open the sample cooler. Breakage of the seals before receipt at the laboratory may indicate tampering. If tampering is apparent, the laboratory will contact the Field Team Leader for direction on whether to proceed with the analyses.

Sampling personnel record the information placed on the chain-of-custody record in the field logbook. They also include in the log book a detailed description of the exact locations from which the samples were collected, any pertinent conditions under which the samples were obtained, and the lot number of the containers used.

4.2.3 Laboratory Sample Management

The laboratory has a designated Sample Management Staff responsible for receiving samples in the laboratory, opening the coolers, checking the sample integrity and custody seals, logging samples into the laboratory information management system (LIMS), and controlling the handling and storage of samples while in the laboratory. The laboratory is a secure facility and only authorized laboratory personnel are allowed to handle active samples. The laboratory maintains an SOP for sample management.

4.2.4 Sample Receipt and Logging

Upon receipt at the laboratory, sample-receiving personnel inspect the samples for integrity of the custody seal, check the shipment against the chain-of-custody form, and note any discrepancies. Specifically, the sample-receiving personnel note any damaged or missing sample containers. At this time, the field chain-of-custody record is completed and signed by the Sample Management Staff.

Using the temperature blank in each cooler, the temperature of each incoming sample cooler is measured and recorded during the sample receipt and log-in procedures before samples are placed in laboratory cold storage. Similarly, the laboratory documents that its cold storage facilities are being maintained through daily (at a minimum) documented temperature measurements using a thermometer.

Upon receipt, Sample Management Staff measure and record on the preservation documentation sheet the pH of acid- or base-preserved aqueous samples. Any problems observed during sample receipt must be communicated to the Field Team Leader and/or the QAO verbally and either by fax transmission or email within 24 hr (preferably 3 hr beginning with the normal business day or immediately following for problems noted during second shifts or weekends) after discovery and before samples are released to the laboratory for analysis. Problems may include but are not limited to broken bottles, errors or ambiguities in paper work, insufficient sample volume or weight, inappropriate pH, and elevated temperature.

When the shipment is inspected and the chain-of-custody record agree, the sample receiving personnel enter the sample and analysis information into the LIMS and assign each sample a unique laboratory number. This number is affixed to each sample bottle.

4.2.5 Sample Storage Security

While in the laboratory, the samples and aliquots that require cold storage will be stored and will be maintained in a secured refrigerator unless they are being used for preparation and/or analysis. All of the refrigerators in the laboratory used for storage of samples have restricted access and are numbered. In addition, dedicated refrigerators are designated for extracts and analytical standards. The sample storage areas are in the laboratory, and access is limited to laboratory personnel. Specific requirements for sample storage are described below:

- Samples will be removed from the shipping container and stored in their original containers unless damaged.
- Damaged samples will be disposed in an appropriate manner, and the disposal will be documented or repacked as necessary and appropriate.
- Samples and extracts will be stored in a secure area designed to comply with the storage method(s) defined in the contract.
- The storage area will be kept secure at all times. The sample custodian or designated personnel will monitor access to the storage area.
- Standards or reagents will not be stored with samples or sample extracts.

The following standard operating procedures for laboratory sample security will be implemented to confirm that the laboratory satisfies sample chain-of-custody requirements:

- Samples will be stored in a secure area.
- Access to the laboratory will be through a monitored area. Other outside access doors to the laboratory will be kept locked.
- Visitors must sign a visitor's log and will be escorted while in the laboratory.
- Refrigerators, freezers, and other sample storage areas will be securely maintained.

Storage blanks will be initiated and analyzed on a weekly basis for each cold storage unit used to hold samples submitted for the analysis of VOCs. Field QC samples must be stored in the same cold storage units as the samples that they are associated with (even if the matrices are different). All soil samples must undergo thorough sample homogenization (stirred within the original sample container) using inert utensils and mixing platforms that will not interfere with the target analytes being requested for analysis with the exception of soil samples submitted for the analysis of VOCs. Samples for VOC determinations will be stored in a secure refrigerator separate from other samples, sample extracts, reagents, and standards.

4.2.6 Retention and Disposal of Samples

The laboratory must retain all excess samples within their original sample bottles for a minimum of 30 days in cold storage (below 4 degrees Celsius) following submission of the validated data to NYSDEC. At that time, the laboratory must contact the Field Team Leader for authorization for responsible disposal or further storage instructions. At the point at which the laboratory is provided authorization to dispose of the samples, the laboratory will be responsible, and will assume all liability for proper characterization and disposal of samples and bottleware in accordance with all local, state, and federal regulations.

FIGURE 4.1

SAMPLE CUSTODY FLOW CHART

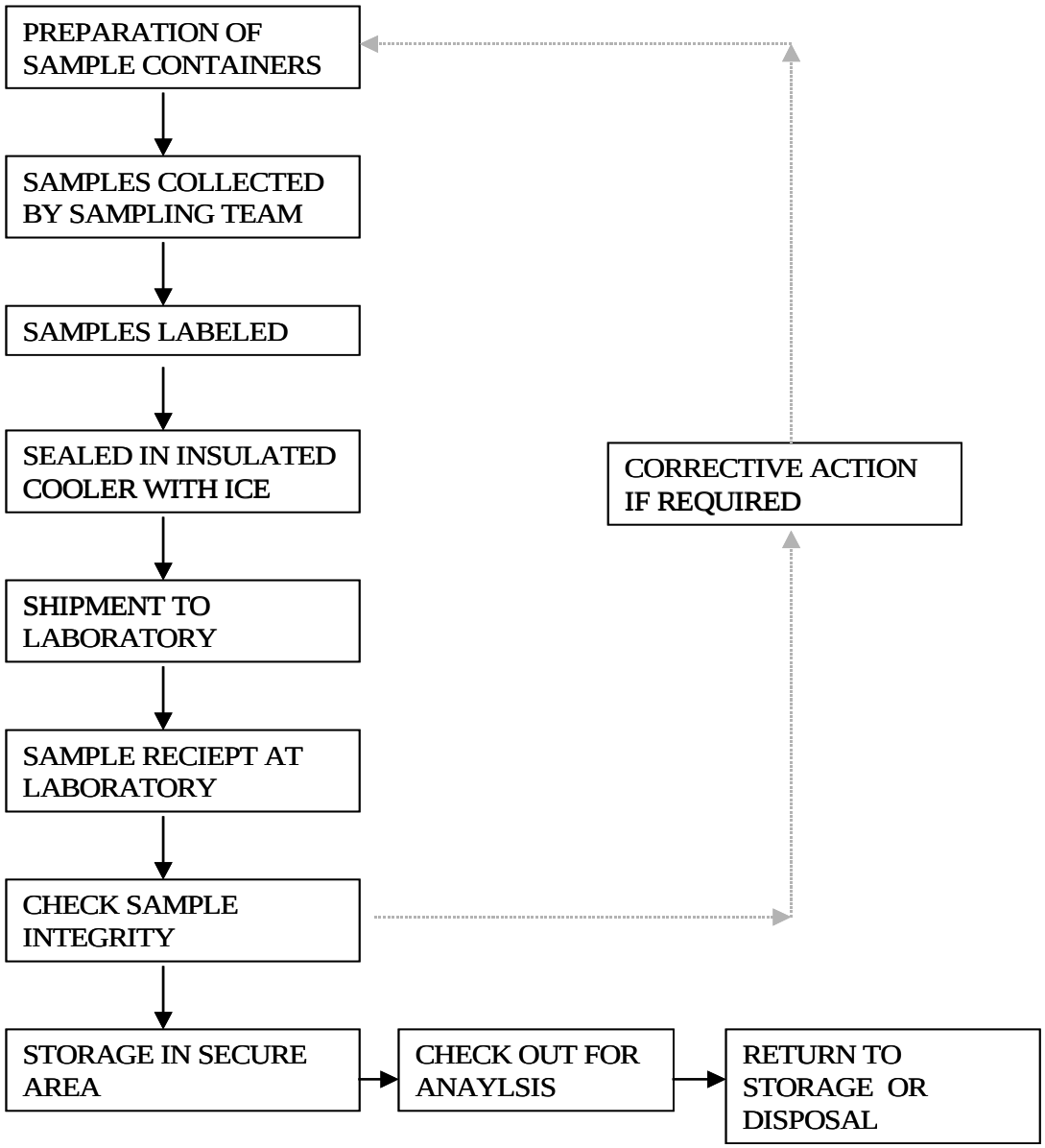

FIGURE 4.2 EXAMPLE CHAIN-OF-CUSTODY RECORD

Submitted to:

Chain Of Custody / Analysis Request

AESI Ref:
COC #:
Lab Use Only
Lab Proj #
Lab ID

Privileged & Confidential
EDD To:
Site Name:
Location of Site:

Client Contact: (name, co., address)
Sampler:
P O #
Analysis Turnaround Time:
Standard - Y
2 weeks -
1 week -
Next Day -

Hardcopy Report To:
Invoice To:

Grab/Composite
Field Filtered Sample ?
Preservative
0 0 2

Job No.
Column Study Sediment

Sample Identification

	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Units												
1																							
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

Special Instructions:

Notes:

Relinquished by	Company		Received by	Company		Condition		Custody Seals Intact	
	Date/Time			Date/Time		Cooler Temp.			
Relinquished by	Company		Received by	Company		Condition		Custody Seals Intact	
	Date/Time			Date/Time		Cooler Temp.			

Preservatives: 0 = None; [1 = HCL]; [2 = HNO3]; [3 = H2SO4]; [4 = NaOH]; [5 = Zn. Acetate]; [6 = MeOH]; [7 = NaHSO4]; 8 = Other (specify):

SECTION 5

DATA MANAGEMENT

5.1 INTRODUCTION

The electronic data management systems for each work assignment will be implemented to process the information effectively without loss or alteration. As of April 1, 2011, the New York State Division of Environmental Remediation (DER) has implemented an Environmental Information Management System (EIMS). The EIMS uses the database software application EQuIS$_{TM}$ from EarthSoft® Inc. In an effort to improve the management of environmental data and reduce paper quantities, all laboratory analytical data minus instrument raw data must be submitted in the DEC-approved Electronic Data Deliverable (EDD).

Data providers must download and install the EQuIS Data Processor (EDP) to check their properly formatted EDD as well as the NYSDEC DER Format file. The EDP performs a series of formatting checks on the EDD and identifies any errors in the data file prior to submission. All EDDs are to be error free when submitted. It is important that the most recent version of the EDP and NYSDEC format file are employed since the valid values used by EIMS are periodically updated for the EDP.

5.2 FIELD DATA MANAGEMENT

The Field Team Leader will manage data generated in the field. He or his designee will be responsible for recording and documenting sampling activities in the field logbook, on sampling records (as appropriate), and on chain-of-custody forms (when samples are collected) as described in Section 4.2.2. The records may be photocopied and stored in the project file along with the original.

A sample nomenclature system will be coordinated with the Data Management Team. Each sample name will be unique to include location ID and field sample ID. The Database Manager will add data to EIMS through the input module of the system.

DATA INPUT TO EIMS MAY INCLUDE:
–Sample planning information (e.g., sample depth) –Chain-of-custody data –Sediment coring logs –Geotechnical data –Location and geographic data –Field measurements –Meteorological data –Waste characterization data –Groundwater levels –Radiodating data –Laboratory analytical data

5.3 LABORATORY DATA MANAGEMENT

Laboratory data management involves several important stages that include data transformation, review, verification, and validation, as well as data storage, retrieval, and security. The laboratory will implement a data management system to manage the data from its generation in the laboratory to its final reporting and storage. The data management system will include, but not be limited to, the use of standard record-keeping practices, standard document control systems, and the electronic data management system.

The laboratory data reduction, verification, validation, and reporting procedures and project data management activities, data/information exchange procedures ensure that complete documentation is maintained, transcription and reporting errors are minimized, and data are properly review.

Specific laboratory data management requirements and procedures are discussed in Sections 6 and 9 of this QAPP.

SECTION 6

DOCUMENTS AND RECORDS

6.1 INTRODUCTION

Records will be maintained to document accurately the data generation process during investigation in the field, sample analysis in the lab, and during data validation. Project documentation will be maintained in general accordance with guidelines in the National Enforcement Investigation Center Policies and Procedures (USEPA, 1986). A project file will be maintained that will contain appropriate project documentation; see components in chart. Some of this documentation may be retained electronically in lieu of paper copies. Table 6.1 summarizes the types of project documents and records.

MINIMUM COMPONENTS OF PROJECT FILE
- Project plans and specifications - Field logbooks and data records - Photographs, maps, and drawings - Sample identification documents - Chain-of-custody records - Data review notes - Report notes and calculations - Progress and technical reports and - Correspondence and other pertinent information - Full analytical data deliverables package provided by the lab, including QC documentation and electronic data deliverable

6.2 FIELD RECORDS

Field personnel are responsible for documenting sample handling activities, observations, and data in field sampling records including field logbooks, chain-of-custody records, photographs, and pre-design investigation records. The Field Team Leader is responsible for maintaining these documents. Each record is described below.

6.2.1 Field Logbook

A Field Logbook will be used to document pre-design investigation activities. The field logbook will have consecutively numbered pages, and documentation will be recorded using waterproof ink. Incomplete lines, pages, and changes in the logbook will be lined out with a single line, dated, and initialed. More detailed procedures for documenting investigation

activities (such as field sampling records and boring log forms) and type of information to include in the field logbook may be developed.

MINIMUM REQUIREMENT FOR INFORMATION IN FIELD LOG
- Responsible person's name - Date and time of activity - Equipment and methods used for field preparation of samples - Field measurements of samples (*e.g.*, pH, temperature) - Information coordinating sample handling activities with appropriate field activities and chain-of-custody documentation *Daily calibration activities:* Calibrator's name Instrument name and model Date and time of calibration Standards used and their source Temperature (if appropriate) Results of calibration Corrective actions taken (if any)

6.2.2 Electronic Field Data Management

The field sampling program will have an electronic data management component. The system will be designed to specify the necessary samples taken at any given location and to provide the ability to be updated and amended in the field. This will provide a management system that efficiently tracks the needs of the sampling scope. As the samples are taken, log entries are put in the database, and sample labels are printed. At any given time a chain-of-custody record can be printed as well.

6.2.3 Chain-of-Custody Record

The chain of custody record establishes the documentation necessary to trace sample possession from the date and time of sample collection, through sample shipment, to the date and time of arrival at the laboratory designated to perform analysis. The ability to trace the history of a sample is essential to show that the sample collected was, indeed, the sample analyzed and that the sample was not subjected to biasing influences. Evidence of sample traceability and integrity is provided by chain-of-custody procedures. These procedures are necessary to support the validity of the data and will accompany each shipping container.

A copy of the chain-of-custody record will be detached and kept with the field logbook or placed in the project file; the original record will accompany the shipment.

6.3 LABORATORY RECORDS

Laboratories providing analytical support for this project must maintain records to ensure that all aspects of the analytical processes are adequately documented to ensure legal defensibility of the data.

When a mistake is made, the wrong entry is crossed out with a single line, initialed, and dated by the person making the entry, and the correct information recorded. Obliteration of an incorrect entry or writing over it is not allowed, nor is the use of correction tape or fluid on any laboratory records.

Overwriting or disposal of any electronic media prior to a 5-yr expiration period is strictly prohibited. All electronic and hardcopy data must be stored in an easily accessible climate-controlled environment. The laboratory will exercise "best practices" in terms of frequent, redundant electronic backup procedures on proper long-term storage media to assure that all electronic data representing Honeywell sample analyses will be maintained for the 5-yr storage period. Electronic data must be stored in a secure, limited-access area with redundant copies stored in fireproof vaults and/ or stored off-site of the laboratory facilities.

Sample preparation in the laboratory must be fully documented and include sample preparation conditions (such as digestion temperatures). In addition, documentation must allow complete traceability to all prepared or purchased reagents, acids and solvents, and reference solutions. All spike solutions and calibration standards must be used prior to labeled expiration dates and stored in accordance with manufacturers recommended conditions. Complete and unequivocal documentation must exist to enable traceability of all prepared spike solutions, calibration standards, and prepared reagents back to the reference materials utilized. Organic extracts must be stored in the same type of vials (amber or clear) as the associated standards at the appropriate storage temperatures.

The unit conventions set forth in the figures for reported data will be consistent with standard laboratory procedures. Reporting units used are those commonly used for the analyses performed. Concentrations in soil and sediment samples will be expressed in terms of weight per unit dry weight, with moisture content reported for each sample.

Laboratory records used to document analytical activities in the laboratory will include reagent and titrant preparation records, standard preparation logs, sample preparation logs, bench data sheets, instrument run logs, and strip chart recordings/chromatograms/computer output. Additional records will include calibration records, maintenance records, nonconformance memos, and Corrective Action Request (CAR) forms.

LAB RECORDS SHOULD CONVEY:
- What was done - When it was done - Who did it and - What was found

REQUIREMENTS FOR LAB RECORDKEEPING
- Data entries must be made in indelible water-resistant ink - Date of each entry and observer must be clear - Observer uses his or her full name or initials - Initial and signature log is maintained so the recorder of every entry can be identified - Information must be recorded in notebook or on other records when the observations are made - Recording information on loose pieces of paper not allowed

6.3.1 Operational Calibration Records

Operational calibration records will document the calibration of instruments and equipment that are corrected on an operational basis. Such calibration generally consists of determining instrumental response against compounds of known composition and concentration or the preparation of a standard response curve of the same compound at different concentrations. Records of these calibrations are maintained in the following documents:

- Standard preparation information, to trace the standards to the original source solution of neat compound, is maintained in LIMS or laboratory standard preparation logs.
- Instrument logbook provides an ongoing record of the calibration for a specific instrument. The logbook should be indexed in the laboratory operations records and should be maintained at the instrument by the chemist. The chemist must sign and date all entries, and the QM or his designee must review them.
- For Level IV data packages, copies of the raw calibration data will be kept with the analytical sample data so the results can readily be processed and verified as one complete data package. If samples from several projects are processed together, the calibration data is copied and included with each group of data. The laboratory will maintain all calibration, analysis, and corrective action documentation (both hard copy and electronic data) for a minimum of 7 years. The documentation maintained must be sufficient to show all factors used to derive the final (reported) value for each sample. Documentation must include all calculation factors such as dilution factor, sample aliquot size, and dry-weight conversion for solid samples. The individual who performs hand calculations must sign and date them. This documentation must be stored with the raw data. Calculations performed by the data system will be documented and stored as electronic and hard copy data. The instrument printouts will be kept on file, and the electronic data will be stored by the laboratory for a minimum of 7 years

6.3.2 Maintenance Records

Maintenance records will be used to document maintenance activities, service procedures, and schedules. They must be traceable to each analytical instrument, tool, or gauge. The individual responsible for the instrument must review, maintain, and file these records. These records may be audited by the QAO to verify compliance. Logs must be established to record and control maintenance and service procedures and schedules.

6.3.3 Nonconformance Memos

Nonconformance Memos (NCM) may be either a hard copy record or an electronic database record. In either case, review and release of the record must be documented by the initiator, the analytical group leader where appropriate, the laboratory project manager, and the laboratory QA manager. All internal laboratory nonconformance documentation will be communicated to the Field Team Leader by the laboratory project manager verbally and summarized in the report narrative. The NCM will be used to document equipment that fails calibration and will identify any corrective actions taken.

6.3.4 Corrective Action Request (CAR) Forms

The laboratory must use CAR forms to document any incidents requiring corrective action. The CAR form will be issued to the personnel responsible for the affected item or activity. A copy will also be submitted to the laboratory project manager. The individual to whom the CAR is addressed will return the requested response promptly to the QA personnel and will affix his or her signature and date to the corrective action block after stating the cause of the conditions and corrective action to be taken. QA personnel will maintain a log for status of CAR forms to confirm the adequacy of the intended corrective action and to verify its implementation. CARs will be retained in the project record file.

6.3.5 Analytical Data Reports

Analytical data will be reported as an Electronic Data Deliverable (EDD) and as an analytical data package (two copies on CD-Rom and one hard copy). The analytical laboratories are required to submit all data, preliminary and final, in formatted EDDs in accordance with NYSDEC's requirements. The laboratory must meet 100% compliance with these requirements. The Parsons Database Manager will submit written requests dictating the requirements and appropriate files to be supplied by the laboratory. The specifications of the EDD are presented in Section 5.

Analytical data reports will be provided by the laboratory within 28 calendar days following receipt of a complete Sample Delivery Group (SDG) and will include the specifications identified in Attachment 1. An SDG is considered to include all samples received for the same project or site, to a maximum of twenty investigative samples not to exceed 5 consecutive days of sampling. The data package provided by the laboratory will be Level IV, unless an alternative requirement is specified in a laboratory statement of work (SOW) and will contain all information to support the data validation in accordance with the USEPA Region II Standard Operating Procedures (SOP) as described in Section 9. Additionally, the completed copies of the chain-of-custody records, accompanying each sample from the time of initial bottle preparation to completion of analysis, must be attached to the analytical reports.

6.4 DATA VALIDATION AND AUDIT RECORDS

Data validation personnel are responsible for documenting validation procedures and results in the form of a data usability summary report (DUSR). The QAO will be responsible for maintaining this report and the QAO will be responsible for its distribution. Additionally, audit reports will be prepared and distributed by the QAO. A brief description of each record is described below.

6.4.1 Data Usability Summary Reports

The DUSR will be prepared as required by NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 2B, May, 2010. The DUSR will summarize the impacts of using data that do not achieve overall data quality objectives or that do not meet PARCC and sensitivity criteria identified in Section 3.3. Additionally, the report will be used to identify, assess and present issues associated with the overall data.

6.4.2 Audit Reports

Among other QA audit reports, which may be generated during the conduct of activities, a final audit report for this project may be prepared by the QAO. The report will include:

- Periodic assessment of measurement data accuracy, precision, and completeness
- Results of performance audits and/or system audits
- Significant QA problems and recommended solutions for future projects
- Status of solutions to any problems previously identified

TABLE 6.1
SUMMARY OF FIELD, LABORATORY, AND DATA MANAGEMENT RECORDS

REPORT	PERSON RESPONSIBLE FOR: MAINTENANCE	PERSON RESPONSIBLE FOR: DISTRIBUTION	STORAGE
PROJECT FILES AND FIELD SAMPLING RECORDS			
Field Logbook	Field Team Leader	Project Manager	Job File at Primary Contractor's Location
Photographs	Field Team Leader	Project Manager	Job File at Primary Contractor's Location
Chain-of-Custody	Field Team Leader	Project Manager	Job File at Primary Contractor's Location
Field Sampling Records	Field Team Leader	Project Manager	Job File at Primary Contractor's Location
LABORATORY RECORDS			
Reagent and Titrant Preparation Records	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Standards Preparation Logs	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Sample Preparation Logs	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Bench Data Sheets	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Instrument Run Logs	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory

TABLE 6.1
SUMMARY OF FIELD, LABORATORY, AND DATA MANAGEMENT RECORDS (CONT.)

REPORT	PERSON RESPONSIBLE FOR MAINTENANCE	PERSON RESPONSIBLE FOR DISTRIBUTION	STORAGE
Strip Chart Recordings/ Chromatograms/Computer Output	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Analytical Data Reports	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Log-in Sheets	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Maintenance Records	Quality Assurance Manager	Laboratory Project Manager	Instrument Maintenance Logbook at Laboratory
Periodic Calibration Records	Quality Assurance Manager	Laboratory Project Manager	QA Files at Laboratory
Operational Calibration Records	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Nonconformance Memos	Quality Assurance Manager	Laboratory Project Manager	Maintained in Datbase File at Laboratory
Corrective Action Request Forms	Quality Assurance Manager	Laboratory Project Manager	Client Correspondence Records at Laboratory
DATA VALIDATION AND AUDIT RECORDS			
Data Validation Reports	Quality Assurance Officer	Quality Assurance Officer	Job File at Primary Contractor's Location
Audit Reports	Quality Assurance Officer	Quality Assurance Officer	Job File at Primary Contractor's Location

SECTION 7

ANALYTICAL PROCEDURES

7.1 INTRODUCTION

To meet program specific regulatory requirements for chemicals of concern, all methods will be followed as stated, with some specific requirements noted below. Chemical analyses for inorganics, organics, and wet chemistry parameters will be conducted in accordance with the QAPP, the Work Assignment Scoping Documents, NYSDEC ASP, laboratory's SOPs (maintained "on-file" at the laboratory), and with referenced analytical methods including USEPA SW846 Test Methods for Evaluating Solid Waste, Physical, and Chemical (USEPA, 1997), and Methods for Chemical Analysis of Water and Wastes (USEPA, 1983). Where requirements conflict, the technical and QA/QC requirements in this QAPP, or the Work Assignment Scoping Documents take precedence.

7.2 STANDARD OPERATING PROCEDURES

Standard Operating Procedures (SOPs) are a written step-by-step description of laboratory operating procedures exclusive of analytical methods. Laboratories providing analytical support for this project will be required to document all procedures in SOPs. The SOPs must address the following areas:

- Storage containers and sample preservatives
- Sample receipt and logging
- Sample custody
- Sample handling procedures
- Sample transportation
- Glassware cleaning
- Laboratory security
- QC procedures and criteria
- Equipment calibration and maintenance
- Documentation
- Safety
- Data handling procedures
- Document control
- Personnel training and documentation
- Sample and extract storage
- Preventing sample contamination
- Traceability of standards

- Data reduction and validation
- Maintaining instrument records and logbooks
- Nonconformance
- Corrective actions
- Records management

SECTION 8

QUALITY CONTROL

8.1 INTRODUCTION

A QC program is a systematic process that controls the validity of analytical results by measuring the accuracy and precision of method and matrix, developing expected control limits, using these to detect anomalous events, and requiring corrective action techniques to prevent or minimize the recurrence of these events. QC measurements for analytical protocols are designed to evaluate laboratory performance, and measurement biases resulting from the sample matrix and field performance.

- **Field performance:** QC samples are used to evaluate the effectiveness of the sampling program to obtain representative samples, eliminating any cross contamination. These samples will include trip blanks, field duplicates and rinse blanks.
- **Sample performance:** Factors associated with sample preparation and analysis influence accuracy and precision. Such factors are monitored by the use of internal QC samples. QC field samples are analyzed to evaluate measurement bias due to the sample matrix based on evaluation of matrix spike (MS), matrix spike duplicate (MSD), and/or matrix duplicate (MD) samples. If acceptance criteria are not met, matrix interferences are confirmed either by reanalysis or by inspection of the LCS (or MSB) results to verify that laboratory method performance is in control. Data are reported with appropriate qualifiers or discussion.
- **Laboratory method performance:** All QC criteria for method performance should be met for all target analytes for data to be reported. These criteria generally apply to instrument detector assessment (such as, tunes, ICP interference check sample), calibration, method blanks, and LCS (or MSB). Variances will be documented and noted in the case narrative of the report.

8.1.1 Field Quality Control Samples

QC samples will be collected in the field as part of the sampling program to allow evaluation of data quality. Field QA/QC samples will consist of the collection and analysis of rinse blanks, field duplicates, and “extra volume samples”, to be used for matrix spike/matrix spike duplicate (MS/MSD) samples, at a frequency of 1:20 for each sample media (sediment, porewater, and soil borings). Temperature blanks will accompany each sample shipment container (cooler) shipped to the laboratory for sample analysis. A rinse blank will be collected from disposable sampling equipment at a frequency of once per lot. Standard sample identifiers will identify field QA/QC samples and they may provide no indication of their nature as QA/QC samples.

A summary of the type and collection frequency of field QC sample to be collected respective to the sampling programs specified in this QAPP, is included in Table 8.1. A description of each QC sample is included below.

8.1.1.1 Equipment Rinse Blanks

To assess field sampling and decontamination performance, rinse blanks will be used to evaluate the effectiveness of the decontamination procedures for chemical sampling equipment. Rinse blanks will be collected as part of all chemical sampling programs, except for waste characterization. An equipment rinse blank (rinse blank) is a sample of deionized water provided by the laboratory that is poured over or through the sampling equipment (such as split spoon, wipe template), into the sample container. A rinse blank will be collected at a frequency of 1:20 samples per type of sample collection activity using non-disposable sampling equipment. A rinse blank will be collected from disposable sampling equipment at a frequency of once per lot.

8.1.1.2 Field Duplicates

Coded (blind) field duplicates will be used to assess the precision of field sampling procedures. Precision of a sample is calculated by quantifying the RPD between two sample measurements (Section 3.2.2.1). If the RPD of field duplicate results is greater than the precision criterion, environmental results for the field duplicate pair will be qualified as estimated. The Field Leader responsible for sample collection and processing should be notified to identify the source of variability (if possible), and corrective action should be taken (Section 10.3).

Coded (blind) field duplicates will be collected to evaluate the representativeness and effectiveness of homogenization and proper mixing for soil and aqueous samples. The field duplicate will be analyzed for all of the parameters for which the associated samples are being analyzed. The samples will be labeled in such a manner that the laboratory will not be able to identify the sample as a duplicate sample. This will eliminate bias that could arise by laboratory personnel.

8.1.1.3 Trip Blanks

During field sampling and sample shipping, contamination may be introduced to the samples that could affect the accuracy of analysis results. Trip blanks will be used during sample shipment to detect cross-contamination. Each cooler of aqueous samples sent to the laboratory for analysis of VOCs will contain one trip blank. Trip blanks are prepared only when VOCs samples are taken and are analyzed for VOCs analytes. The trip blank consists of a VOC sample vial filled in the laboratory with ASTM Type II reagent grade water, transported to the sampling site, handled like an environmental sample, and returned to the laboratory for analysis. Trip blanks are not opened in the field.

8.1.1.4 Temperature Blank

The temperature blank is used to indicate the temperature of the sample cooler upon receipt at the laboratory. A temperature blank consists of laboratory reagent in a 40-ml glass vial sealed with a Teflon® septum. Any cooler temperature exceeding the allowable 4 ± 2 degrees Celsius (°C) must be noted and the QAO notified prior to sample analyses.

8.1.2 Laboratory Quality Control Samples

QC data from the laboratory are necessary to determine precision and accuracy of the analyses and to demonstrate the absence of interferences and contamination of glassware and reagents. The laboratory will analyze QC samples routinely as part of the laboratory QC procedures. Laboratory QC results will consist of analysis of MS/MSD or MS/MD, LCS (or MSB), method/preparation blanks, and surrogate spikes. The frequency of the analysis of laboratory QC is summarized in Table 8.2. QC samples will be prepared and analyzed utilizing the same preparation and analysis procedures as the field samples. These laboratory QC sample analyses will be run independently of the field QC samples. Results of these analyses will be reported with the sample data and kept in the project QC data file. The QC checks, their frequency, acceptance criteria, and corrective actions for noncompliance are summarized for each analytical method in the NYSDEC ASP.

QC samples will be prepared and analyzed utilizing the same preparation and analysis procedures as the field samples. Re-preparation and/or reanalysis of the laboratory QC samples due to a failing recovery and/or precision failure without the re-preparation and reanalysis of the associated samples is prohibited. In all events, QC failures, holding time exceedances, or any other non-standard occurrence must be communicated immediately to the QAO and prior to reporting and then, with approval to report the data, summarized in the case narrative. If the criteria are not met, appropriate corrective action must be taken as specified in Section 9.1 and Section 10.

8.1.2.1 Matrix Spike/Matrix Spike Duplicate/ Matrix Duplicates

MS/MSD, or matrix duplicates (MD) for methods not requiring MS/MSD, samples for organics, metals, and wet chemistry parameters will be taken at a frequency of 1 per 20 field samples (per SDG) per matrix per method. MD samples will be analyzed by the laboratory at frequency required by the analytical method. A “batch” is considered up to twenty samples from the same matrix, of the same extraction/digestion type, prepared and/or analyzed by a given analyst, within 12-hr, within an extraction/digestion event, whichever is more frequent. These samples are used to assess the effect of the sample matrix on the recovery of target compounds or target analytes by spiking a normal field sample with a known concentration of the analyte of interest. Samples identified as rinse blanks will not be used for the MS/MSD or MS/MD preparation or analysis.

Spiked samples will be analyzed, and the percent recovery will be calculated. Results of the analysis will be used to evaluate accuracy and precision of the actual sample matrix. For MS/MSD or MD, the result will be compared and used to evaluate the precision of the actual sample matrix. The percent recovery for each analyte in the MS and MSD should fall within the limits established by laboratory QC protocol. The percent recovery and RPD control limits between the MS and MSD and the sample and the duplicate concentrations are provided in the NYSDEC ASP.

The original sample, MS/MSD, and MD sample aliquots will be treated exactly the same throughout the sample preparation and analysis and will not be homogenized more than any other project sample (either in the field or at the laboratory). The spike samples will be analyzed for the same parameters as the sample. Field personnel must indicate on the chain-of-custody

form which sample(s) are designated as MS/MSD (or MS/MD). If samples are not designated for these QC purposes and/or insufficient sample is available the Project Manager and/or QAO will be notified for resolution.

8.1.2.2 Laboratory Control Samples

Laboratory Control Samples (LCS), or matrix spike blanks (MSB) are designed to check the accuracy of the analytical procedure by measuring a known concentration of an analyte of interest. An LCS (or MSB) will be analyzed for each analytical batch requested for sample preparation and analysis. LCSs (or MSBs) must be prepared at a frequency of one per batch for all analytical methods. If high LCS (or MSB) recoveries are observed and the associated samples are reported as "not detected" for the requested target analytes, no action is necessary other than to note the issue in the case narrative of the final analytical report. LCS (or MSB) recoveries must meet the criteria specified in NYSDEC ASP.

8.1.2.3 Method and Preparation Blanks

Laboratory blank samples (also referred to as method or preparation blanks) are designed to detect contamination resulting from the laboratory environment or sample preparation procedure. Method blanks verify that method interferences caused by contaminants in solvents, reagents, glassware, or in other sample processing hardware, are known. Method blanks will be analyzed for each analytical batch using similar preparation techniques (separatory funnel and liquid/liquid extraction) to assess possible contamination and evaluate which corrective measures may be taken, if necessary.

Method blanks associated with field samples must undergo all of the processes performed on investigative samples, including but not limited to pre-filtration and sample cleanups. The blank will be deionized water for water samples or a purified solid matrix such as sodium sulfate for extractable soil samples. Where all the field samples in a batch do not require an additional cleanup procedure, an additional blank may be prepared to check the performance of the additional cleanup and will be associated with the field samples getting the specific additional cleanup. Where this is done, both blanks will be reported, and the procedure described in the case narrative. Method blanks must be prepared at a frequency of one per analytical batch.

8.1.2.4 Surrogate Spike Analyses

Surrogate spikes (applicable to organic analysis only) are used to determine the efficiency of analyte recovery in sample preparation and analysis. Calculated percent recovery of the spikes is used to measure the accuracy of the analytical method. A surrogate spike is prepared by adding a known amount of a compound similar in type to the analytes of interest. Surrogate compounds will be added to all samples analyzed by USEPA Methods, including method blanks, MS/MSDs, project environmental samples, and duplicate samples in accordance with the method. Surrogate spike recoveries should fall within the limits established by laboratory QC protocol and the NYSDEC ASP.

8.2 INSTRUMENT/EQUIPMENT TESTING, INSPECTION, AND MAINTENANCE

8.2.1 Field Equipment

Equipment failure will be minimized by routinely inspecting all field equipment to ensure that it is operational and by performing preventative maintenance procedures. Field sampling equipment will be inspected prior to sample collection activities, and repairs will be made prior to decontamination and reuse of the sampling equipment. Equipment, instruments, tools, gauges, and other items requiring preventive maintenance will be serviced in accordance with the manufacturer's specified recommendations and written procedure, based on the manufacturer's instructions or recommendations. Maintenance will be performed in accordance with the schedule specified by the manufacturer to minimize the downtime of the measurement system. Qualified personnel must perform maintenance work.

MINIMUM ROUTINE PREVENTIVE MAINTENANCE
Removal of foreign debris from exposed surfaces
Storage in a cool dry place protected from the elements
Daily inspections
Verification of instrument calibrations (Section 8.3.1)

A list of critical spare parts will be developed prior to the initiation of fieldwork. Field personnel will have ready access to critical spare parts to minimize downtime while fieldwork is in progress. A service contract for rapid instrument repair or backup instruments may be substituted for the spare part inventory.

Non-routine maintenance procedures require field equipment to be inspected prior to initiation of fieldwork to determine whether or not it is operational. If it is not operational, it will be serviced or replaced. Batteries will be fully charged or fresh, as applicable.

8.2.2 Laboratory Instrumentation

Periodic preventive maintenance is required for all sensitive equipment. Instrument manuals will be kept on file for reference if equipment needs repair. The troubleshooting section of factory manuals may be used in assisting personnel in performing maintenance tasks.

Major instruments in the laboratory are covered by annual service contracts with manufacturers or other qualified personnel (internal or external). Under these agreements, trained service personnel make regular preventive maintenance visits. Maintenance is documented and maintained in permanent records by the individual responsible for each instrument.

The laboratory manager is responsible for preparation, documentation, and implementation of the program. The laboratory QA manger reviews implementation to verify compliance during scheduled internal audits.

Written procedures will establish the schedule for servicing critical items to minimize the downtime of the measurement system. The laboratory will adhere to the maintenance schedule and arrange any necessary and prompt service. Qualified personnel will perform required service.

8.3 INSTRUMENT/EQUIPMENT CALIBRATION AND FREQUENCY

Instruments (field and laboratory) used to perform chemical measurements will be properly calibrated prior to use to obtain valid and usable results. The requirement to properly calibrate instruments prior to use applies equally to field instruments as it does to fixed laboratory instruments to generate appropriate data to meet DQOs.

8.3.1 Field Instruments

All field analytical equipment will be calibrated immediately prior to each day's use. The calibration procedures of field instruments (such as PID, pH, temperature), will conform to manufacturer's standard instructions to ensure that the equipment functions within the allowable tolerances established by the manufacturer and required by the project. Personnel performing instrument calibrations must be trained in its proper operation and calibration. Records of all instrument calibration will be maintained by the Field Team Leader in the field logbook (Section 6.2) and will be subject to audit by the QAO or authorized personnel. The Field Team Leader will maintain copies of all the instrument manuals on the site.

8.3.2 Laboratory Instruments

A formal calibration program will control instruments and equipment used in the laboratory. The program will verify that equipment is of the proper type, range, accuracy, and precision to provide data compatible with specified requirements. Instruments and equipment that measure a quantity or whose performance is expected at a stated level will be subject to calibration. Laboratory personnel or external calibration agencies or equipment manufacturers will calibrate the instruments using reference standards. Upon request, the laboratory will provide all data and information to demonstrate that the analytical system was properly calibrated at the time of analysis including calibration method, frequency, source of standards, concentration of standards, response factors, linear range, check standards, and all control limits. This data will be documented in a calibration record (Section 6.3.1). Calibration records will be prepared and maintained for each piece of equipment subject to calibration.

This section provides an overview of the practices used by the laboratory to implement a calibration program. Detailed calibration procedures, calibration frequencies, and acceptance criteria are specified in the laboratory's analytical method SOPs. The requirements for the calibration of instruments and equipment depend on the type and expected performance of individual instruments and equipment. Therefore, the laboratory will use the guidelines provided here to develop a calibration program.

Two types of calibration are described in this section: periodic calibration and operational calibration. The results of the calibration activities will be documented in the analytical data package and the calibration records (Section 6.3.1).

- **Periodic calibration:** Performed at prescribed intervals for equipment, such as balances and thermometers. In general, equipment which can be calibrated periodically is a distinct, singular purpose unit and is relatively stable in performance.
- **Operational calibration:** routinely performed as part of an analytical procedure or test method, such as the development of a standard curve for use with an atomic

absorption spectrophotometer. Operational calibration is generally performed for instrument systems.

Equipment that cannot be calibrated or becomes inoperable will be removed from service. Such equipment must be repaired and satisfactorily recalibrated before reuse. For equipment that fails calibration, analysis cannot proceed until appropriate corrective action is taken, and the analyst achieves an acceptable calibration. This type of failure will be documented in an NCM (Section 10).

8.3.3 Calibration System

The calibration system includes calibration procedures, equipment identification, calibration frequency, calibration reference standards, calibration failure, and calibration records. These elements are described next.

8.3.3.1 Calibration Procedures

Written procedures will be used by the laboratory for all instruments and equipment subject to calibration. Whenever possible, recognized procedures, such as those published by ASTM or USEPA, will be adopted. If established procedures are not available, a procedure will be developed considering the type of equipment, stability characteristics of the equipment, required accuracy, and the effect of operational error on the quantities measured. Calibration procedure established by the laboratory must, at a minimum, meet the calibration requirements of the method on which the SOP is based.

MINIMUM CALIBRATION PROCEDURES
Equipment to be calibrated
Reference standards used for calibration
Calibration technique and sequential actions
Acceptable performance tolerances
Frequency of calibration
Calibration documentation format

8.3.3.2 Equipment Identification

Equipment that is subject to calibration is identified by a unique number assigned by the laboratory. Calibration records reference the specific instrument identification.

8.3.3.3 Calibration Frequency

Instruments and equipment will be calibrated at prescribed intervals and/or as part of the operational use of the equipment. Calibration frequency will be based on the type of equipment, inherent stability, manufacturer's recommendations, values provided in recognized standards, intended data use, specified analytical methods, effect of error upon the measurement process, and prior experience.

8.3.3.4 Calibration Reference Standards

Two types of reference standards will be used by the laboratory for calibration:

- **Physical standards**, such as weights for calibrating balances and certified thermometers for calibrating working thermometers, refrigerators and ovens, are generally used for periodic calibration. Physical reference standards that have known relationships to nationally recognized standards (such as NIST) or accepted values of natural physical constants will be used whenever possible. If national standards do not exist, the basis for the reference will be documented. Physical reference standards will be used only for calibration and will be stored separately from equipment used in analyses. In general, physical standards will be recalibrated annually by a certified external agency, and documentation will be maintained. Balances will be calibrated against class "S" weights by an outside source annually. Physical standards such as the laboratory's class "S" weights will be recertified annually.
- **Chemical standards,** such as vendor certified stock solutions and neat compounds, will generally be used for operational calibration. The laboratory, to provide traceability for all standards used for calibration and QC samples, will document standard preparation activities.

8.3.4 Operational Calibration

Operational calibration will generally be performed as part of the analytical procedure and will refer to those operations in which instrument response (in its broadest interpretation) is related to analyte concentration. Formulas used for calibration are listed in Table 8.3.

8.3.4.1 Preparation of a Calibration Curve

Preparation of a standard calibration curve will be accomplished by analyzing calibration standards that are prepared by adding the analyte(s) of interest to the solvent that is introduced into the instrument. The concentrations of the calibration standards will be chosen to cover the working range of the instrument or method. All sample measurements will be made within this working range. Average response factors will be used or a calibration curve will be prepared by plotting or regressing the instrument responses versus the analyte concentrations. Where appropriate a best-fit curve may be used for nonlinear curves and the concentrations of the analyzed samples will be back-calculated from the calibration curve.

8.3.4.2 Periodic Calibration

Periodic calibrations are performed for equipment (such as balances and thermometers), that is required in the analytical method, but that is not routinely calibrated as part of the analytical procedure. Table 8.4 lists the periodic calibration requirements used by the laboratories.

8.4 INSPECTION/ACCEPTANCE OF SUPPLIES AND CONSUMABLES

In the laboratory, personnel qualifying reagents and standards must be trained to perform the associated instrumental analysis, including instrument calibration, calculations, and data interpretation. Laboratory personnel must document the purchase, receipt, handling, storage, and tracking of supplies and consumables used during analysis. For example, analytical standards, source materials, and reference materials used for instrumental calibration/tunes/checks must be

certified and traceable to the USEPA or NIST through reference numbers documented directly in each analytical sequence. Calibration for all requested analyses must be verified by an independent second source reference. Adhering to these procedures precludes the use of expired supplies and consumables or supplies and consumables that do not meet standard acceptance criteria.

Records must be maintained on reagent and standard preparation in the LIMS reagent system or laboratory standard preparation logs. The records should indicate traceability of the standards to their original source solution or neat compound, the name of the material, concentration, the method and date of preparation, the expiration date, storage conditions, and the preparer's initials. Each prepared reagent or standard should be labeled with a unique identifier that links the solution to the preparation documentation that specifies an expiration and/or re-evaluation date for the solution.

TABLE 8.1

SUMMARY OF FIELD QC SAMPLE TYPES AND COLLECTION FREQUENCY

Field QC Sample Type	Sample Type	Collection Frequency
Rinse	Soil, Water	Once per week for non-disposable sampling equipment. Once per lot for disposable sampling equipment.
Field Duplicates	Soil, Water, Air	1:20 Samples
Extra Volume Sample (collected for MS/MSD)	Soil, Water, Air	1:20 Samples

Field QA/QC samples will be identified by using standard sample identifiers that will provide no indication of their nature as QA/QC samples.

TABLE 8.2

LABORATORY QUALITY CONTROL SAMPLE FREQUENCY

QC Sample	Frequency
Method/prep Blanks	1 per analytical batch of 1-20 samples, per preparation event
Laboratory Control Sample	1 per analytical batch of 1-20 samples, per preparation event
Surrogates	Spiked into all field and QC samples (Organic Analyses)
Matrix Spike/Matrix Spike Duplicate or Matrix (Laboratory) Duplicate	1 per batch of 1-20 samples

TABLE 8.3

OPERATIONAL CALIBRATION FORMULAS

Application	Formula	Symbols
Linear calibration curves	$C = (R - a_0)/a_1$	C = analytical concentration R = instrument response a_0 = intercept of regression curve (instrument response when concentration is zero) a_1 = slope of regression curve (change in response per change in concentration)
Calibration factors [1]	$CF = A_x / C$	C = concentration (µg/L) CF = calibration factor Ax = peak size of target compound in sample extract
Response factors [2]	$RF = C_{is} A_x / C A_{is}$	C = concentration (µg/L) RF = internal standard response factor Cis = concentration of the internal standard (µg/L) Ax = area of the characteristic ion for the target compound Ais = area of the characteristic ion for the internal standard

1. Used for quantitation by the external standard technique
2. Used for quantitation by the internal standard technique

Note: For organic analysis, the laboratory will make efforts to use the best curve technique for each analyte. This practice is described in detail in the laboratory calibration criteria documents for GC analysis. This may require the use of a quadratic curve for some compounds.

TABLE 8.4

PERIODIC CALIBRATION REQUIREMENTS

Instrument	Calibration Frequency		Corrective Actions
Analytical Balances	Daily: Annually:	Sensitivity (with a Class S-verified weight) Calibrated by outside vendor against certified Class S weights	Adjust sensitivity Service balance
Thermometers	Annually:	Calibrated against certified NIST thermometers	Tag and remove from service
Automatic Pipettors	Quarterly:	Gravimetric check	Service or replacement

TABLE 8.5

SAMPLE CONCENTRATION CALCULATION FORMULAS

Application	Formula	Symbols
Linear regression calibration curves	$C = (R - a_0)/a_1$	C = analytical concentration R = instrument response a_0 = intercept of regression curve (instrument response when concentration is zero) a_1 = slope of regression curve (change in response per change in concentration)
Calibration factors [1]	$C = A_x V_f / CF V_i$	C = concentration (µg/L) CF = calibration factor A_x = peak size of target compound in sample extract V_f = final volume of extracted sample (mL) V_i = initial volume of sample extracted (mL)
Response factors [2]	$C = C_{is} A_x V_f / RF A_{is} V_I$	C = concentration (µg/L) RF = internal standard response factor C_{is} = concentration of the internal standard (µg/L) A_x = area of the characteristic ion for the target compound V_f = final volume of extracted sample (mL) A_{is} = area of the characteristic ion for the internal standard V_i = initial volume of sample extracted (mL)
Residues [3]	R = (W – T)/V x 1,000,000	R^6 = residue concentration (mg/L) W = weight of dried residue + container (g) T = tare weight of container (g) V = volume of sample used (mL)
Solid samples [4]	K = C V D / W (%S/100)	K = dry-weight concentration (mg/kg) C = analytical concentration (mg/L) V = final volume (mL) of processed sample solution D = dilution factor W = wet weight (g) of as-received sample taken for analysis %S = percent solids of as-received sample

1. Used for quantitation by the external standard technique
2. Used for quantitation by the internal standard technique
3. Used for total, filterable, nonfilterable, and volatile residues as well as gravimetric oil and grease
4. Used to calculate the dry-weight concentration of a solid sample from the analytical concentration of the processed sample.
5. Conversion factor to convert g/mL to mg/L:

$$\frac{mg}{L} = \frac{g}{mL} \times \frac{10^3 mL}{L} \times \frac{10^3 mg}{g}$$

SECTION 9

DATA VALIDATION AND USABILITY ELEMENTS

9.1 DATA REVIEW, VERIFICATION, AND VALIDATION

The data collected during this project will undergo a systematic review for compliance with the DQOs and performance objectives as stated in Section 3. In particular, field, laboratory, and data management activities will be reviewed to confirm compliance with the method QC criteria for performance and accuracy and to show that data were collected in a manner that is appropriate for accomplishing the project objectives. These data will be evaluated as to their usability during data verification. In particular, data outside QC criteria, but not rejected, will be reviewed for possible high and low bias. All data will be validated following verification and reduction.

Qualified data validation personnel will assess and verify data; they will review the data against QC criteria, DQOs (Sections 3 and 9.2.2), NYSDEC ASP, and USEPA Region 2 SOPs for data review to identify outliers or errors and to flag suspect values. Field and laboratory activities that should be reviewed include, at a minimum, sample collection, handling, and processing techniques; field documentation records; verification of proper analytical methods; analytical results of QC samples; and calibration records for laboratory instruments and field equipment. A review of such elements is necessary to demonstrate whether the DQOs outlined in 3 were met. Samples that deviate from the experimental design and affect the project objectives must be reported to the QAO and data validation personnel.

Departures from standard procedures (in the FAP, this QAPP, or the laboratory SOPs, may lead to exclusion of that data from the project database or validation process, based on discussions with and approval of the NYSDEC. However, routine field audits involving thorough reviews of sample collection procedures and sample documentation should preclude such deviations from occurring. Additionally, routine laboratory audits will be used to document proper sample receipt, storage, and analysis; instrument calibration; use of the proper analytical methods; and use of QC samples specified in Section 8 to assist in appropriately qualifying the data.

The laboratory's analytical report for each sample delivery group (SDG) will be assembled by collecting and incorporating all the data for each analysis associated with the reported samples; the analytical narratives; and other report-related information such as copies of chain-of-custody forms, communication records, and nonconformance forms. The information included in the analytical data report is summarized in Attachment 1.

Before the laboratory submits data, the laboratory's data review process will include a full first level "technical" review by the laboratory's analyst during sample analysis and data generation. The review must include a check of all QC data for errors in transcription, calculations, and dilution factors and for compliance with QC requirements. Failure to meet method performance QC criteria may result in the reanalysis of the sample or analytical batch.

After the initial review is completed, the data will be collected from summary sheets, workbooks, or computer files and assembled into a data package.

The laboratory's first review will be followed by a second-level technical review of the data package. The second level review may be performed by a peer trained in the procedures being reviewed or by the appropriate analytical group supervisor. The reviewer will check the data packages for completeness and compliancy with the project requirements and will certify that the report meets the DQOs for PARCCS specifications. The report narrative will be generated at this stage of the data review. Any problems discovered during the review and the corrective actions necessary to resolve them will be communicated to the responsible individual, who will discuss the findings with the laboratory QA manager for resolution.

The first and second review will be conducted throughout sample analysis and data generation to validate data integrity during collection and reporting of analytical data. Data review checklists will be used to document the performance and review of the QC and analytical data.

Before the laboratory's final release to the client, the data will undergo a final review by the laboratory's QA officer or his/her designee. This third level review is to confirm that the report is complete and meets project requirements for performance and documentation. The laboratory's QA officer must review reports involving non-conforming data issues. A summary of all non-conformances will be included in the case narrative. The report will then be released to the client for data validation, and a copy will be archived by the laboratory for a period of 7 yrs.

The laboratory analytical data will be validated using project-specific data validation procedures to confirm that data meet the applicable data quality objectives. Depending on the type of data and the intended data uses, the data validation process for a given SDG (or a specific percentage of sample analyses) or analytical method may be performed following an EPA Level IV protocol (full validation), or an EPA Level III protocol (sample plus QC summary data only, no raw data review). The project-specific Level III data validation protocol will provide a level of review resulting in the generation of a data usability summary report (DUSR), as defined by NYSDEC. Level III validation will be performed on all DQO Level III and all DQO Level IV data. Ten percent (10%) of the DQO Level IV Data for each analytical method will undergo a Level IV validation. Certain geotechnical and field screening data may be evaluated in a manner suitable for the intended data uses.

A data validation report will be issued and reviewed by the QAO before finalization. The data validation report will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain-of-custody procedures, and a summary assessment of PARCCS criteria for each analytical method. The validation criteria are objective and are not sample dependent, except for consideration of sample matrix effects. The criteria specify performance requirements that should be under the control of the field-sampling contractor or analytical laboratory. This QAPP will be the primary reference for evaluating the data.

After data validation, the data will be evaluated for consistency with site conditions and developed conceptual models. Data validation personnel will prepare a project DUSR that summarizes the implications of the use of any data out of criteria. In addition, the data usability

report will include the percentage of sample completeness for critical and non-critical samples and a discussion of any issues in representativeness of the data that may develop as a result of validation. The data usability report will address overall data quality and achievement of PARCCS criteria and assess issues associated with the overall data and data quality for all validated Level III and Level IV data.

9.2 VERIFICATION AND VALIDATION METHODS

9.2.1 Laboratory

The laboratory will verify and assess analytical data against the stated requirements on the chain-of-custody record, the sample handling procedures (Section 4), and the QC parameters. The laboratory data reviewers will also check that transcriptions of raw or final data and calculations were performed correctly and are verified.

Following data verification, analytical data generated by the laboratory will be reduced and managed based on the procedures specified in this QAPP and analytical methodologies. Data reduction includes all processes that change either the values or numbers of data items. The data reduction processes used in the laboratory includes establishment of calibration curves, calculation of sample concentrations from instrument responses, and computation of QC parameters. Table 8.5 lists the formulas used to calculate sample concentrations.

The reduction of instrument responses to sample concentrations takes different forms for different types of methods. For most analyses, the sample concentrations are calculated from the measured instrument responses using a calibration curve. The sample concentrations can be back-calculated from a regression equation fitted to calibration data. For gravimetric and titrimetric analyses, the calculations are performed according to equations given in the method. For chromatographic analyses, the unknown concentrations are determined using either calibration factors (external standard procedure) or relative response factors (internal standard procedure). GC analyses are generally quantitated using the external standard technique; GC/MS analyses are quantitated using the internal standard technique. These calculations are generally performed by the associated computerized data systems.

Validated analytical data will be loaded into a database and reported in tabular format. Database fields will include the field sample identification, laboratory sample identification, blinded sample number, analytical results, detection limits, and validation qualifiers. The usability of the data will be evaluated by the QAO or designee.

9.2.2 Analytical Data Validation

The data review process is performed in two phases:

1. **Initial phase, contract compliance screening (CCS)**: Review of sample data deliverables for completeness. Completeness is evaluated by ensuring that all required data deliverables are received in a legible format with all required information. The CCS process also includes a review of the chain-of-custody forms, case narratives, and RLs. Sample resubmission requests, documentation of nonconformances with respect to data deliverable completeness, and corrective actions often are initiated during the CCS review. The results of the CCS process are incorporated into the data validation process.

2. **Second phase, data validation:** A project-specific data validation procedure based on a "Level III" or the "Level IV" validation protocol will be performed on the analytical results from the fixed-base laboratory or laboratories, with the exception of the bench-scale testing data. The EPA Level III validation protocol, which be applied to Level III data packages and Level IV data packages not receiving "full" Level IV validation, includes a review of summary information to determine adherence to analytical holding times; results from analysis of field duplicates, method blanks, field blanks, surrogate spikes, MS/MSDs, LCSs (or MSBs), and sample temperatures during shipping and storage. Data qualifiers are applied to analytical results during the data validation process based on adherence to method protocols and laboratory-specific QA/QC limits. The EPA Level IV validation protocol incorporates the Level III validation protocol and adds calculation checks from the raw data of reported and summarized sample data and QC results.

FULL VALIDATION (USEPA LEVEL IV EQUIVALENT)	
Organic Analytical Methods	**Inorganic Constituents, Wet Chemistry Parameters**
Percentage of solids	Percentage of solids
Sample preservation and holding times	Sample preservation and holding times
Instrument tuning	Calibrations
Instrument calibrations	Blank results
Blank results	Interference check samples (inorganics only)
System monitoring compounds or surrogate recovery compounds (as applicable)	LCSs
Internal standard recovery results	Project Required Reporting Limit (PRRL) standard check samples
MS and MSD (or MD) results	Duplicates
LCS (or MSB) results	MSs (pre-digestions and post-digestions for inorganics only)
Target compound identification	ICP serial dilutions and
Chromatogram quality	Results verification and reported detection limits
Duplicate results	
Compound quantitation and reported RLs	
System performance and	
Results verification	

The laboratory will send the required analytical data package deliverables, consisting of CD-ROM and hardcopy versions and the EDD, following completion of the laboratory's validation process (Section 9.2.2). Data validation will be performed in accordance with the USEPA Region 2 Data Validation SOPs for organic and inorganic data review (USEPA, 2012a, 2012b, 2013c, 2013d, 2013e, 2013f, 2014). In addition, Parsons will refer to this QAPP and the Work Assignment Scoping Documents to verify that DQOs were met. If problems are identified during data validation, the QAO and the laboratory QA manager will be alerted, and corrective actions

will be requested. The LPM and data validation chemists will maintain close contact with the QAO to ensure all nonconformance issues are acted upon prior to data manipulation and assessment routines.

Data validation will be conducted using the USEPA guidelines (USEPA, 2008, 2010, 2013a, 2013b) as supplementary guidelines. Where CLP guidelines and SW-846 disagree, this QAPP and data validation professional judgment will prevail.

Trained and experienced data validation chemists will perform the data validation work. The QAO will review the data validation report before it is finalized. The data validation report will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain-of-custody procedures, and a summary assessment of PARCCS criteria for each analytical method. A detailed assessment of each SDG will follow. Based on the results of data validation, the validated analytical results reported will be assigned a usability flag (see chart below).

USABILITY FLAGS FOR VALIDATED RESULTS	
U	Not detected at given value
UJ	Analyte not detected; associated quantitation limit is an approximate (estimated) values.
J	Estimated value
J+	Estimated biased high
J-	Estimated biased low
N	Presumptive evidence at the value given
NJ	Analysis indicates presence of analyte tentatively identified; the associated numerical value is its approximate concentration
R	Result not useable and
No flag	Result accepted without qualification

9.3 RECONCILIATION WITH USER REQUIREMENTS

Following data validation by qualified personnel, the data will be evaluated by the QAO and the project manager as to consistency with site conditions and developed conceptual models to determine whether field and analytical data meet the requirements for decision making. Specifically, the results of the measurements will be compared to the DQOs (Section 3).

The DQOs will be considered complete and satisfied if the data are identified as usable and if no major data gaps are identified. For example, the objective for data collected under the characterization program is to further refine the limits of dredging and/or capping. If the collected data sufficiently characterizes these limits in a manner that is acceptable for remedial action, then the DQO is satisfied. In cases where data may be considered not usable (for example, rejected during data validation), resampling may be required at a specific location. If resampling is not possible, the data will be identified and noted in the project database to make data users aware of its limitations.

SECTION 10

ASSESSMENT AND OVERSIGHT

10.1 ASSESSMENTS AND RESPONSE ACTIONS

Performance and system audits of both field and laboratory activities may be performed. Any such audits will be performed at a frequency to be determined to ensure that sampling and analysis activities are completed in accordance with the procedures specified in the FAP and this QAPP.

Quality assurance audits will be carried out under the direction of the QAO on field activities, including sampling and field measurements. They will be implemented to verify that established procedures are being followed and to evaluate the capability and performance of project and subcontractor personnel, items, activities, and documentation of the measurement system(s).

The QAO will plan, schedule, and approve system and performance audits based on procedures customized to the project requirements. If required, the QAO may request additional personnel with specific expertise from company and/or project groups to assist in conducting performance audits. Quality auditing personnel will not have responsibility for field or laboratory project work.

10.2 PROJECT-SPECIFIC AUDITS

Project-specific audits include system and performance audits of sampling and analysis procedures, and of associated recordkeeping and data management procedures. Project-specific audits will be performed on a discretionary basis at a frequency determined by the project manager.

10.2.1 System Audits

The QAO may perform system audits. Such audits will encompass a qualitative evaluation of measurement system components to ascertain their appropriate selection and application. In addition, field and laboratory QC procedures and associated documentation may be system-audited including the field logbook, field sampling records, laboratory analytical records, sample handling, processing, and packaging in compliance with the established procedures, maintenance of QA procedures, and chain-of-custody procedures. These audits may be carried out during execution of the project to confirm that sampling crews employ consistent procedures. However, if conditions adverse to quality are detected additional audits may occur.

Findings from the audit will be summarized and provided to the PM and/or designated personnel so that necessary corrective action can be monitored from initiation to closure.

10.2.2 Performance Audits

The laboratory may be required to conduct an analysis of PE samples or provide proof that PE samples were submitted by an approved USEPA or NYSDEC performance testing provider

within the past 12 months. If necessary, proof that applicable PE samples have been analyzed at the laboratory within the past 12 months will be included in the laboratory procurement package.

10.2.3 Formal Audits

Formal audits are any system or performance audit that the QAO documents and implements. These audits encompass documented activities performed by qualified lead auditors to a written procedure or checklist to verify objectively that QA requirements have been developed, documented, and instituted in accordance with contractual and project criteria. At the discretion of the project manager, the QAO or designated personnel may conduct formal audits on project and subcontractor work during the course of the project.

Auditors who have performed the site audit after gathering and evaluating all data will write audit reports. Items, activities, and documents determined by lead auditors to be in noncompliance must be identified at exit interviews conducted with the involved management. Noncompliance will be logged and documented through audit findings. These findings will be attached to and become part of the integral audit report. These audit-finding forms are directed to management to resolve satisfactorily the noncompliance in a specified and timely manner.

The QAO has overall responsibility to see that all corrective actions necessary to resolve audit findings are acted upon promptly and satisfactorily. Audit reports will be submitted to the PM after completion of the audit. Serious deficiencies will be reported to the PM on an expedited basis. Audit checklists, audit reports, audit findings, and acceptable resolutions will be approved by the QAO prior to issue. Verification of acceptable resolutions may be determined by re-audit or documented surveillance of the item or activity. Upon verification acceptance, the QAO will close out the audit report and findings.

10.2.4 Laboratory Audits

Internal laboratory audits will be performed routinely to review and evaluate the adequacy and effectiveness of the laboratory's performance and QA program, to ascertain if the QAPP is being completely and uniformly implemented, to identify nonconformances, and to verify that identified deficiencies are corrected. The laboratory QA manager is responsible for such audits and will perform them according to a schedule planned to coincide with appropriate activities on the project schedule and sampling plans. Such scheduled audits may be supplemented by additional audits for one or more of the following reasons:

- When significant changes are made in the QAPP
- When necessary to verify that corrective action has been taken on a nonconformance reported in a previous audit
- When requested by the laboratory's project manager or QA manager.

10.2.4.1 Laboratory Performance Audits

Performance audits are independent sample checks made by a supervisor or auditor to arrive at a quantitative measure of the quality of the data produced by one section or the entire measurement process. Performance audits are conducted by introducing control samples, in addition to those used routinely, into the data production process. These control samples include PE samples of known concentrations. The results of performance audits will be evaluated against

acceptance criteria. The results will be summarized and maintained by the laboratory QA manager and distributed to the supervisors who must investigate and respond to any results that are outside control limits.

10.2.4.2 Laboratory Internal Audits

The laboratory QA manager conducts routine internal audits of each laboratory section for completeness, accuracy, and adherence to SOPs. The laboratory audit team will verify that the laboratory's measurement systems are operated within specified acceptable control criteria and that a system is in place to confirm that out-of-control conditions are efficiently identified and corrected.

10.2.4.3 Laboratory Data Audits

The laboratory will maintain raw instrument data for sample analyses on magnetic tape media or optical media in a secured fireproof safe. During routine audits, the audit team will verify the processing of the raw data file by reviewing randomly selected electronic data files and comparing the results with the hardcopy report. Tapes will be archived for a period of 7 yr. Tapes will be also available for audit by the QAO upon request.

10.2.4.4 Laboratory Audit Procedures

Prior to an audit, the designated lead auditor will prepare an audit checklist. During an audit and upon its completion, the auditor will discuss the findings with the individuals audited and discuss and agree on corrective actions to be initiated. The auditor will prepare and submit an audit report to the designated responsible individual of the audited group, the PM, and the QAO. Minor administrative findings that can be resolved to the satisfaction of the auditor during an audit need not be cited as items requiring corrective action. Findings that are not resolved during the course of the audit and findings affecting the overall quality of the project will be included in the audit report.

The designated responsible individual of the audited group will prepare and submit to the QAO a reply to the audit. This reply will include, at a minimum, a plan for implementing the corrective action to be taken on nonconformances indicated in the audit report, the date by which such corrective action will be completed, and actions taken to prevent reoccurrence. If the corrective action has been completed, supporting documentation should be attached to the reply. The auditor will ascertain (by re-audit or other means) if appropriate and timely corrective action has been implemented.

Records of audits will be maintained in the project files. Audit files will include, as a minimum, the audit report, the reply to the audit, and any supporting documents. It is the responsibility of the designated responsible individual of the audited group to conform to the established procedures, particularly as to development and implementation of such corrective action.

10.2.4.5 Laboratory Documentation

To confirm that the previously defined scope of the individual audits is accomplished and that the audits follow established procedures, a checklist will be completed during each audit.

The checklist will detail the activities to be executed and ensure that the auditing plan is accurate. Audit checklists will be prepared in advance and will be available for review.

AUDIT CHECKLIST (AT MINIMUM)
Date and type of audit
Name and title of auditor
Description of group, task, or facility being audited
Names of lead technical personnel present at audit
Checklist of audit items according to scope of audit
Deficiencies or non-conformances

Following each system, performance, and data audit, the QAO or his designee will prepare a report to document the findings of the specific audit. The report will be submitted to the designated individual of the audited group to ensure that objectives of the QA program are met.

MINIMUM CONTENT OF AUDIT REPORT
Description and date of audit
Name of auditor
Copies of completed, signed, and dated audit form and/or checklist
Summary of findings including any nonconformance or deficiencies
Date of report and appropriate signatures
Description of corrective actions

The QAO will maintain a copy of the signed and dated report for each audit. If necessary, a second copy will be placed in project files.

10.3 CORRECTIVE ACTIONS

Corrective action procedures have been established to ensure that conditions adverse to quality, such as malfunctions, deficiencies, deviations, and errors, are promptly investigated, documented, evaluated, and corrected. Corrective action enables significant conditions adverse to quality to be noted promptly at the site, laboratory, or subcontractor location. Additionally, it allows for the cause of the condition to be identified and corrective action to be taken to rectify the problem and to minimize the effect on the data set. Further, corrective action is intended to minimize the possibility of repetition.

Condition identification, cause, reference documents, and corrective action planned to be taken will be documented and reported to the QAO, PM, FTL, and involved subcontractor management, at a minimum. Implementation of corrective action is verified by documented follow-up action. Any project personnel may identify noncompliance issues; however, the designated QA personnel are responsible for documenting, numbering, logging, and verifying the close out action. The designated responsible individual of the audited group will be responsible for ensuring that all recommended corrective actions are implemented, documented, and approved.

Events that trigger corrective actions
When predetermined acceptance standards are not attained
When a deviation from SOP is required or observed
When procedure or data compiled are determined to be deficient
When equipment or instrumentation is found to be faulty
When samples and analytical test results are not clearly traceable
When QA requirements have been violated
When designated approvals have been circumvented
As a result of system and performance audits
As a result of a management assessment
As a result of laboratory/field comparison studies
As required by analytical method

All project personnel have the responsibility, as part of normal work duties, to promptly identify, solicit approved correction, and report conditions adverse to quality. Specifically, the laboratory must designate the assigned individual to act as the primary laboratory contact responsible for timely identification and resolution of any and all issues including contract and administrative issues. Any phone calls initiated by personnel or designated representatives to the laboratory with respect to corrective actions must be returned in a timely manner on a normal business day if the designate individual (or alternate) is not available at the initiation of the phone call.

Project management and related staff, including field investigation teams, remedial design planning personnel, and laboratory groups will monitor on-going work performance as part of daily responsibilities. Work may be audited at the site, the laboratories, or subcontractor locations. Activities or documents ascertained to be noncompliant with QA requirements will be documented. Corrective actions will be mandated through audit finding sheets attached to the audit report. Audit findings are logged, maintained, and controlled by the QAO, PM, or designated personnel.

Personnel assigned to QA functions will have the responsibility to issue and control CAR forms (Figure 10.1). The CAR identifies the out-of-compliance condition, reference document(s), and recommended corrective action(s) to be administered.

Similar to the CAR, the laboratory will record and report nonconformances internally using the laboratory's nonconformance documentation tracking system in the form of an NCM. Each NCM is traceable so that it can be cross-referenced with its resolution to the associated project records. The laboratory QA manager summarizes critical nonconformances, such as reissued reports and client complaints, in a monthly report to the laboratory management staff. Management of the NCM is described in Section 6.3. Corrective action procedures applicable to QC requirements that do not meet the criteria of this QAPP are described in the following

sections. Consistent, frequent contacts between laboratory personnel, the QAO, or designated personnel are required.

TYPICAL CONTENT OF NCM FORMS
Problem description and root cause
Corrective action
Client notification summary
QA verification
Approval history action

FIGURE 10.1

CORRECTIVE ACTION REQUEST FORM

CORRECTIVE ACTION REQUEST

Number _____ Date:_____

TO: _____

You are hereby requested to take corrective actions indicated below and as otherwise determined by you (a) to resolve the noted conditions and (b) to prevent it from recurring. Your written response is to be returned to the Project quality assurance manager by _____.

Condition:

Reference Documents:

_____	_____	_____	_____	_____
Originator	Date	Approval	Date	Approval Date

Response

Cause of Condition:

Corrective Action

Resolution:

(B) Prevention

(B2) Affected Documents

Signature_____ Date_____

CA Follow-up

Corrective Action verified by:_____ Date _____

SECTION 11

REPORTS TO MANAGEMENT

11.1 QA REPORTS

Management personnel receive QA reports appropriate to their level of responsibility. The PM receives copies of all QA documentation. QC documentation is retained within the department that generated the product or service except where this documentation is a deliverable for a specific contract. QC documentation is also submitted to the project QAO for review and approval. Previous sections detailed the QA activities and the reports, which they generate. Among other QA audit reports that may be generated during the conduct of activities, a final audit report for this project will be prepared by the QAO. The report will include:

- Periodic assessment of measurement data accuracy, precision, and completeness
- Results of performance audits and/or system audits
- Significant QA problems and recommended solutions for future projects
- Status of solutions to any problems previously identified.

Additionally, any incidents requiring corrective action will be fully documented.

SECTION 12

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ATTACHMENT 1

SUMMARY OF ANALYTICAL DATA PACKAGE (DQO LEVEL IV)

1.0 INTRODUCTION

In order for data to be used for decision-making purposes it is essential that it be of known and documented quality. Verification and validation of data requires that appropriate quality assurance and quality control (QA/QC) procedures be followed, and that adequate documentation be included for all data generated both in the laboratory and in the field.

The QA/QC documentation provided by any laboratory, in conjunction with sample results, allows for evaluation of the following indicators of data quality:

- Integrity and stability of samples;
- Instrument performance during sample analysis;
- Possibility of sample contamination;
- Identification and quantitation of analytes;
- Analytical precision; and
- Analytical accuracy.

General laboratory documentation requirements discussed in this document are formatted into two sections, organic and inorganic analyses. These specifications are intended to establish general, analytical documentation requirements that laboratories should meet when generating data for this project.

2.0 GENERAL DOCUMENTATION REQUIREMENTS

2.1 Data Package Format

Each data package for Level IV data submitted will consist of five sections:

- Case narrative;
- Chain-of-custody documentation
- Summary of results for environmental samples;
- Summary of QA/QC results; and
- Raw data.

Level II data packages will not contain the raw data.

Data packages will be consistent with, and will supply the data and documentation required for NYSDEC ASP-defined deliverables (i.e. Category B and Category A). Summaries of data and results may be presented in a Contract Laboratory Program (CLP) type format or an equivalent format that supplies the required information as stated below. All laboratory data qualifiers shall be defined in the deliverable.

In cases where the laboratory has varied from established methodologies, they will be required to provide the Standard Operating Procedures (SOPs) for those methods and added as an attachment to the Work Assignment Scoping Documents or as variances to this QAPP. Inclusion of these SOPs will aid in final review of the data by data reviewers and users.

2.2 Case Narrative

The case narrative will be written on laboratory letterhead and the release of data will be authorized by the laboratory manager or their designee. The Case Narrative will consist of the following information:

- Client's sample identification and the corresponding laboratory identification;
- Parameters analyzed for each sample and the methodology used. EPA method numbers should be cited when applicable;
- Whether the holding times were met or exceeded;
- Detailed description of all analytical and/or sample receipt problems encountered;
- Discussion of reasons for any QA/QC sample result exceedances; and
- Observations regarding any occurrences which may adversely impact sample integrity or data quality.

2.3 Chain-of-Custody

Legible copies of all Chain-of-Custody forms for each sample shall be submitted in the data package. Copies of any internal laboratory tracking documents should also be included. It is anticipated that Chain-of-Custody forms and/or internal laboratory tracking documents will include the following information:

- Date and time of sampling and shipping;
- Sampler and shipper names and signatures;
- Type of sample (grab or composite);
- Analyses requested;
- Project, site, and sampling station names;
- Date and time of sample receipt;
- Laboratory sample receiver name and signature;
- Observed sample condition at time of receipt;
- Sample and/or cooler temperatures at time of receipt;
- Air bill numbers;
- Custody seal; and
- Sample numbers.

3.0 ORGANIC ANALYSES DOCUMENTATION REQUIREMENTS

These requirements are applicable to organic methods (e.g., VOCs, SVOCs, pest/PCBs).

3.1 Summary of Environmental Sample Results

The following information is to be included in the summary of sample results for each environmental sample.

- Client's sample identifications and corresponding laboratory identifications;

- Sample collection dates;
- Dates and times of sample extraction and/or analysis;
- Weights or volumes of sample used for extraction and/or analysis;
- Identification of instruments used for analysis;
- Gas Chromatography (GC) column and detector specifications;
- Dilution or concentration factor for the sample;
- Percent Difference between columns, if applicable;
- Percent Moisture or Percent Solids for soil samples;
- Method Detection Limits (MDLs) or sample Reporting Limits (RLs);
- Analytical results and associated units;
- Discussion of any manual integrations; and
- Definitions for any laboratory data qualifiers used.

3.2 Summary of QA/QC Sample Results (as applicable)

The following QA/QC sample results shall be presented on QC summary forms. They shall also include the date and time of analysis. Additional summary forms may be required for some methods. Therefore, when reporting data, laboratories should defer to specific method requirements.

All summary forms should, at a minimum, include in the header:

- Form Title;
- Project Identifier (e.g., Batch QC ID, Site Name, Case Number, Sample Delivery Group);
- Laboratory Name; and
- Sample Matrix.

3.2.1 Instrument Calibration (for each instrument used)

- **GC/MS Tuning**. Report mass listings, ion abundance criteria, and percent relative abundances. List the instrument identification (ID) and the date and time of analysis. Ensure that all ion abundances have been appropriately normalized.
- **Initial Calibration**. Report analyte concentrations of initial calibration standards and the date and time of analysis. List the instrument identification (ID), response factors (RF), relative response factors (RRF), or calibration factors (CF), percent relative standard deviation (%RSD), and retention time (RT) for each analyte. The initial calibration (IC) report must also include a sample identifier (ID), associated injection volume or quantity of sample analyzed, the acceptance criteria, such as minimum RF values, and associated maximum %RSD values.
- **Continuing Calibration**. Report the concentration of the calibration standard used for the continuing calibration and for the mid-level standard, and the date and time of analysis. List the ID, RF, RRF, CF, percent difference (%D), and RT for each analyte.

- **Quantitation Limit** or Project Required Reporting Limit (PRRL) Verification (if applicable). Report results for standards that are used to verify instrument sensitivity. Report the source for the verification standards. Report the concentration for the true value, the concentration found, the percent recovery, and control limits for each analyte analyzed. The date and time of analysis must also be reported.

3.2.2 Method Blank Analysis

List environmental samples and QC analyses associated with each method blank. Report concentrations of any analytes found in method blanks above the instrument detection limit.

3.2.3 Surrogate Standard Recovery

Report the name and concentration of each surrogate compound added. List percent recoveries of all surrogates in the samples, method blanks, matrix spike/matrix spike duplicates and other QC analyses. Also include acceptance ranges that the laboratory used for the analysis.

3.2.4 Internal Standard Summary

Report internal standard area counts of the associated calibration standard and retention times, include upper and lower acceptance limits. List internal standard area counts and retention times for all samples, method blanks, matrix spike/matrix spike duplicates and other QC analyses. Include the ID and the date and time of analysis.

3.2.5 Compound Confirmation

Report retention times of each compound on both columns as well as retention time windows of the associated standard. In addition, report determined concentrations from each column and percent differences between results. List the ID and the date and time of analysis. A summary should be generated for each sample, including dilutions and reanalyses, blanks, MSs, and MSDs.

3.2.6 Peak Resolution Summary

For primary and secondary columns report retention times of any target compounds and/or surrogates that coelute in the standards (ie. the Performance Evaluation Mixture for Contract Laboratory Program pesticides). Calculate and report the percent resolution between each pair of compounds which coelute. Include the ID, column ID, and the date and time of analysis.

3.2.7 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

Report the name and concentration of each spiking compound. Samples are to be spiked with specified compounds of potential concern. List sample results, spiked sample results, duplicate spiked sample results, percent recovery (%R) and the relative percent difference (RPD) between the MS and MSD (if applicable). Acceptance criteria that the laboratory used for the analysis must also be presented.

3.2.8 Laboratory Duplicate Analysis

When performed, report the RPD between duplicate analyses, along with the associated acceptance criteria.

3.2.9 Laboratory QC Check Sample Analysis

Also known as the Laboratory Control Sample (LCS) or Matrix Spike Blank (MSB). Report the name and concentration of each spiking compound. List the QC check sample and duplicate (if applicable) results, %R, and RPD, if performed in duplicate. The acceptance criteria that the laboratory used for the analysis must also be presented.

3.2.10 Other QC Criteria

- **Retention time windows determination**. Report the retention time window for each analyte, for both primary and confirmation analyses.
- **Compound identification**. Report retention times and concentrations of each analyte detected in samples.
- **MDL determination**. List most recent method detection limits, with dates determined maintained in laboratory file. MDL summary forms may be submitted at start of project and not included in individual data packages.
- **Additional method suggested QC parameters, if required**.
- **Any Performance Evaluation (PE) samples** (if identified) associated with the environmental samples.

3.3 Raw Data

Legible copies of the raw data shall be organized systematically, each page shall be numbered, and a table of contents must be included with each package. Raw data for compound identification and quantitation must be sufficient to verify each result.

3.3.1 Gas Chromatographic (GC) Analyses

This section shall include legible copies of raw data for the following:

- Environmental samples arranged in sequential order by laboratory sample number, include dilutions and reanalyses;
- Instrument calibrations; and
- QC analyses (i.e., method blanks, LCS, etc.).

Raw data for both primary and confirmation analyses are to be included. Raw data for each analysis shall include the following:

- Appropriately scaled chromatograms (label all analyte peaks, internal standards and surrogate standards with chemical names). All chromatograms shall be scaled such that individual peaks can be readily resolved from any neighboring peaks;
- Appropriately scaled before and after manual integrations;
- Area print-outs or quantitation reports;

- Instrument analysis logs for each instrument used;
- Sample extraction and cleanup logs;
- Standards preparation logs and manufacturer certificates of analyses for standards, if applicable, sufficient to document traceability of all standards (including surrogates, internal standards, and spike solutions) maintained in "job file" in laboratory, unless otherwise requested;
- Percent Moisture or Percent Solids for soil samples; and
- GC/MS confirmation, as applicable.

Note: Additional raw data may be required for some methods. Therefore, when reporting data, laboratories should defer to specific method requirements.

3.3.2 Gas Chromatographic / Mass Spectrometric (GC/MS) Analyses

This section shall include legible copies of raw data for the following:

- Environmental samples arranged in sequential order by laboratory sample number, include dilutions and reanalyses;
- Mass spectrometer tuning and mass calibration (BFB, DFTPP);
- Initial and continuing instrument calibrations; and
- QC analyses (i.e., method blanks, LCS, etc.).

Raw data for each analysis shall include the following:

- Appropriately scaled chromatograms (label all analyte peaks, internal standards and surrogate standards with chemical names). All chromatograms shall be scaled such that individual peaks can be readily resolved from any neighboring peaks;
- Appropriately scaled before and after manual integrations;
- Ion scans and enhanced spectra of target analytes and tentatively identified compounds (TICs), with the associated best-match spectra;
- Area print-outs and quantitation reports;
- Instrument analysis logs for each instrument used;
- Sample extraction and cleanup logs;
- Standards preparation logs and manufacturer certificates of analyses for standards, if applicable, sufficient to document traceability of all standards (including surrogates, internal standards, and spike solutions) maintained in "job file" in laboratory, unless otherwise requested; and
- Moisture Content (Percent Moisture) for sediment samples.

Note: Additional raw data may be required for some methods. Therefore, when reporting data, laboratories should defer to specific method requirements.

4.0 INORGANIC ANALYSES DOCUMENTATION REQUIREMENTS

4.1 Summary of Environmental Sample Results

The following information is to be included in the summary of sample results for each environmental sample:

- Client's sample identifications and corresponding laboratory identifications;
- Sample collection dates;
- Dates and times of sample digestion and/or analysis;
- Weights or volumes of sample used for digestion and/or analysis;
- Identification of instruments and analytical techniques used for analysis;
- Instrument specifications;
- Dilution or concentration factor for the sample;
- Percent Moisture or Percent Solids for soil samples;
- Detection Limits: MDLs, RLs;
- Analytical results and associated units; and
- Definitions for any laboratory data qualifiers used.

4.2 Summary of QA/QC Results

The following QA/QC sample results shall be presented on QC summary forms. They shall also include the date and time of analysis. Additional summary forms may be required for some methods. Therefore, when reporting data, laboratories should defer to specific method requirements.

All summary forms shall, at a minimum, include in the header:

- Form Title;
- Project Identifier (e.g., Batch QC ID, Site Name, Case Number, Sample Delivery Group);
- Laboratory Name; and
- Sample Matrix.

4.2.1 Instrument Calibration Verification (if applicable)

The order for reporting of calibration verifications for each analyte must follow the chronological order in which the standards were analyzed.

- **Initial Calibration Verification.** Report the source for the calibration verification standards. Report the concentration for the true value, the concentration found, the percent recovery, and control limits for each element analyzed. The date and time of analysis must also be reported.
- **Continuing Calibration Verification**. Report the source for calibration verification standards. Report the concentration for the true value, the concentration found, the

percent recovery, and control limits for each element analyzed. The date and time of analysis must also be reported.

- **Quantitation Limit** or PRRL Verification (if applicable). Report results for standards that are used to verify instrument sensitivity. Report the source for the verification standards. Report the concentration for the true value, the concentration found, the percent recovery, and control limits for each element analyzed. The date and time of analysis must also be reported.

4.2.2 Blank Analysis

Report analyte concentrations above the instrument detection limits found in the initial calibration blanks (ICBs), continuing calibration blanks (CCBs), and in method/ preparation blanks. The date and time of analysis must also be reported. The order for reporting ICB and CCB results for each analyte must follow the chronological order in which the blanks were analyzed.

4.2.3 Matrix Spike (MS) Analysis

Report concentrations of the unspiked sample result, the spiked sample result and the concentration of the spiking solution added to the pre-digestion spike for each analyte. Calculate and report the %R and list control limits. If performed in duplicate, provide the %R for the MSD and the RPD.

4.2.4 Post Digestion Spike Analysis (if applicable)

In addition to matrix spikes, post-digestion spikes are often required by the method. Report concentrations of the unspiked sample results, spiked sample results, and the concentration of the spiking solution added. Calculate and report the %R and list control limits.

4.2.5 Laboratory Duplicate Analysis

Report concentrations of original and duplicate sample results. Calculate and report the RPD and list control limits.

4.2.6 Laboratory Control Sample

Identify the source for the LCS. Report the found concentration of the laboratory control sample and the true concentration for all analytes. Calculate and report the %R and list control limits.

4.2.7 Other QC Criteria (if applicable)

- **Method of Standard Additions (MSA)**. This summary must be included if MSA analyses are performed. Report absorbance values with corresponding concentration values. Report the final analyte concentration and list the associated correlation coefficient and control limits.
- **ICP-AES Serial Dilution**. Report initial and serial dilution results, associated %D, and control limits.

- **ICP-AES Linear Dynamic Ranges.** For each instrument and wavelength used, report the date on which linear ranges were established, the integration time, and the upper limit concentration.
- **MDL Determination**. List most recent method detection limits, with dates determined maintained in laboratory file. MDL summary forms may be submitted at start of project and not included in individual data packages.
- **Any Performance Evaluation (PE) Samples** (if identified) associated with the environmental samples.

4.3 Raw Data

Legible copies of the raw data shall be organized systematically, each page shall be numbered, and a table of contents must be included with each package. Data should be organized sequentially by method and analysis date. Raw data for compound identification and quantitation must be sufficient to verify each result.

4.3.1 Atomic Absorption (AA) and Atomic Emission (AE) Spectrometric Analyses

This section shall include legible copies of raw data for the following:

- Environmental sample results, include dilutions and reanalyses;
- Instrument calibrations; and
- QC analyses (i.e., method blanks, LCS, etc.).
- Measurement print-outs for all instruments used or copies of logbook pages for analyses that do not provide instrument print-outs;
- Absorbance units, emission intensities, or other measurements for all analyses;
- Sample preparation and digestion logs that include reagents used, standards referenced to standards preparation logs, volumes of reagents, digestion times, etc.;
- Instrument analysis logs for each instrument used or summary of sample analyses;
- Standards preparation logs and manufacturer certificates of analyses for standards, if applicable, sufficient to document traceability of all standards (including spike solutions) maintained in "job file" in laboratory, unless otherwise requested;
- Wavelengths used for the analyses; and
- Percent Moisture or Percent Solids for soil samples.

Note: Additional raw data may be required for some methods. Therefore, when reporting data, laboratories should defer to specific method requirements.

4.3.2 Titrimetric and Colorimetric Analyses

This section shall include legible copies of raw data for the following:

- Environmental sample results, include dilutions and reanalyses;
- Calibrations; and
- QC analyses (i.e., method blanks, LCS, etc.).

Raw data for each analysis shall include the following:

- Copies of logbook pages for analyses that do not provide instrument print-outs and calculations used to derive reported sample concentrations;
- Titrant volumes, titration end-points, absorbance units, or other measurements for all analyses;
- Sample preparation and digestion logs that include reagents used, standards referenced to standards preparation logs, volumes of reagents, digestion times, sample volumes, solution normalities, etc.;
- Standards preparation logs and manufacturer certificates of analyses for standards, if applicable, sufficient to document traceability of all standards (including spike solutions) maintained in "job file" in laboratory, unless otherwise requested; and
- Wavelengths used for the analyses.

Note: Additional raw data may be required for some methods. Therefore, when reporting data, laboratories should defer to specific method requirements.

4.3.3 Gravimetric Analyses

This section shall include legible copies of raw data for the following:

- Environmental sample results, include dilutions and reanalyses;
- Calibrations; and
- QC analyses (i.e., method blanks, LCS, etc.).

Raw data for each analysis shall include the following:

- Copies of logbook pages for analyses that do not provide instrument print-outs and calculations used to derive reported sample concentrations;
- Weights, sample volumes, or other measurements for all analyses;
- Sample preparation and digestion logs that include reagents used, standards referenced to standards preparation logs, volumes of reagents, drying times, drying temperatures, etc.; and
- Standards preparation logs and manufacturer certificates of analyses for standards, if applicable, sufficient to document traceability of all standards maintained in "job file" in laboratory, unless otherwise requested.

Note: Additional raw data may be required for some methods. Therefore, when reporting data, laboratories should defer to specific method requirements.

SUMMARY OF REQUIRED LABORATORY DELIVERABLES FOR LEVEL IV DQO DATA PACKAGE (REQUIREMENTS WILL VARY BY METHOD)

Method Requirements	Laboratory Deliverables
Requirements for all methods:	
Parsons project identification number	Case narrative
Discussion of unusual circumstances or problems	Case narrative
Analytical method description and reference citation	Case narrative
Field sample identification	Signed chain-of-custody forms and sample results form
Laboratory assigned sample number	Signed chain-of-custody forms and sample results form
Sample matrix description	Signed chain-of-custody forms and sample results form
Date of sample collection	Signed chain-of-custody forms and sample results form
Date of sample receipt at laboratory	Signed chain-of-custody forms
Analytical method description and reference citation	Signed chain-of-custody forms and case narrative
Sample analysis results	USEPA CLP form or equivalent sample analysis results summary form (e.g., ASP Form I-VOA)
Dates of sample preparation and analysis (including first run and any subsequent runs)	Specific deliverable depends on type of analysis
Laboratory analytical QC batch info and sample analysis associations	Specific deliverable depends on type of analysis
Instrument analysis sequence log	Specific deliverable depends on type of analysis
Analytical holding times compliance	USEPA CLP form or equivalent holding time summary form
Method detection limit (MDL) determination	USEPA CLP form or equivalent MDL summary form
Method reporting limits (RLs) achieved	Specific deliverable depends on type of analysis (see below)
Dilution or concentration factors	Specific deliverable depends on type of analysis
Discussion of unusual circumstances or problems	Case narrative
Laboratory Control Sample (LCS) results	USEPA CLP form or equivalent LCS results summary form
"Raw" analytical data sufficient to recreate and check analysis results for all calibrations, QC sample results, and sample results	Sequentially numbered pages with tabulated index

REQUIRED LABORATORY DELIVERABLES (Continued)

Method Requirements	Laboratory Deliverables
Matrix spike / matrix spike duplicate	USEPA CLP form or equivalent MS/MSD summary form (e.g., NYSDEC ASP Form III-SV
Method blank analysis	USEPA CLP form or equivalent method blank summary form (e.g., NYSDEC ASP Form IV-SV)
GC/MS instrument performance check. Tuning and mass calibration (abundance) using 4-bromofluorobenzene (BFB) for method SW8260B and decafluoro-triphenyphosphine (DFTPP) for method SW8270C	USEPA CLP form or equivalent instrument tuning/performance check summary form
Internal Standard Area Counts and Retention Time, as applicable	USEPA CLP form or equivalent internal standard summary form (e.g., NYSDEC ASP Form VIII-SV)
GC/MS initial calibration data	USEPA CLP form or equivalent initial calibration summary form (e.g., NYSDEC ASP Form VI-SV)
GC/MS continuing calibration data.	USEPA CLP form or equivalent continuing calibration summary form (e.g., NYSDEC ASP Form VII-SV)
GC/MS calibration verification (initial and continuing)/2nd source calibration verification (ICV/CCV)	USEPA CLP form or equivalent calibration verification summary form
GC continuing calibration data for volatile and semivolatile analyses. If calibration factors are used, calibration factors and their percent differences from the initial calibration must be reported. Retention time windows and analyte retention times must be included in this form	USEPA CLP form or equivalent calibration verification summary form
GC/MS internal standard area and retention time summary data	USEPA CLP form or equivalent internal standard summary form
GC second column confirmation, as applicable. To be done for all compounds that are detected above method detection limits	Chromatograms of all confirmations of all samples and the standard laboratory form for all positive results
Surrogate Compound percent recovery summary	USEPA form or equipment percent recovery summary form (e.g., NYSDEC ASP Form II-SV)
"Raw" analytical data sufficient to recreate and check analysis results for all calibrations, QC sample results, and sample results	Sequentially numbered pages with tabulated index
Requirements for inorganic analytical methods:	
Initial and Continuing Calibration Verification	USEPA CLP form or equivalent calibration verification summary form(s) (e.g., NYSDEC ASP Form II-IN)

REQUIRED LABORATORY DELIVERABLES (Continued)

Method Requirements	Laboratory Deliverables
ICP Interference Check Sample (ICS), as applicable	USEPA CLP form or equivalent ICS standard summary form (e.g., NYSDEC ASP Form IV-IN)
ICP Interelement Correction Factors, as applicable	USEPA CLP form or equivalent internal standard summary form (e.g., NYSDEC ASP Form XII-IN
IDL or MDL determination	USEPA CLP form or equivalent IDL or MDL summary form(s)
Post-digestion spike, as applicable	USEPA CLP form or equivalent post-digestion spike summary form(s) (e.g., NYSDEC ASP Form V-IN)
ICP linear range	USEPA CLP form or equivalent linear range summary form(s) (e.g., NYSDEC ASP Form XII-IN)
ICP serial dilution, as applicable	USEPA CLP form or equivalent serial dilution summary form(s) (e.g., NYSDEC ASP Form IX-IN)
Method of standard addition (MSA), as applicable	USEPA CLP form or equivalent MSA summary form(s)
Laboratory duplicate results, as applicable	USEPA CLP form or equivalent duplicate analysis summary form(s) (e.g., NYSDEC ASP Form VI-IN)
Requirements for other methods:	
Preparation and analysis logs	No format
Sample results	No format
MS/MSD results	No format
Lab duplicate sample results	No format
Laboratory control sample	Control limits
Method blank results	No format
Initial calibration results	No format
Continuing calibration check (calibration verification)	No format. Report percent relative standard deviation or percent difference from initial calibration

APPENDIX B

NYSDEC CORRESPONDENCE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau C
625 Broadway, 11th Floor, Albany, NY 12233-7014
P: (518) 402-9662 I F: (518) 402-9679
www.dec.ny.gov

May 18, 2018

Mr. Peter D. Lopez
Regional Administrator
US EPA Region 2
290 Broadway
New York, NY 10007-1866

Dr. James S. Haklar, Ph.D., P.E.
Regional PCB Coordinator
US EPA Region 2
2890 Woodbridge Ave
Edison, NJ 08837-3679

Mr. Keith J. Zimmerman
Director
St. Lawrence County Planning Office
48 Court St
Canton, NY 13617-1169

RE: Notice of Self-Implementation of Interim Remedial Measure
J&L Steel
Town of Clifton, St. Lawrence County
Site no. 645029

Dear Sirs:

The New York State Department of Environmental Conservation (NYSDEC) has prepared this correspondence to provide notification required under 40 CFR 761.61(a)(3)(i) for self-implementation of the Interim Remedial Measure (IRM) work plan involving the on-site cleanup and disposal of polychlorinated biphenyl (PCB) contaminated soils at the J&L Steel site (site), a New York State Superfund site, in the Town of Clifton, NY, St. Lawrence County. The IRM work plan is located at Exhibit G.

The 38-acre site was previously utilized as a mining and ore processing facility. The site is currently owned by St. Lawrence County. A site characterization (SC) report dated August 2016 identified several PCB “hot spots” where PCB soil concentrations exceeded the New York State Soil Cleanup Objective (SCO) for Commercial Use of 1 mg/kg (ppm) (6 NYCRR Part 375-6.8(b)) (Exhibit F). The PCB “hot spots” were further delineated by an initial pre-design investigation (PDI) effort completed in October 2016 and a supplemental PDI conducted in May 2017. A figure showing PCBs in soil samples is located at Exhibit B. PDI sample results tables are located at Exhibit C. A figure showing the sample locations for the SC is located at Exhibit D. The Soil Results Tables

from the SC Report is located at Exhibit E. The SC report is located at Exhibit H, whereas the PDI Data Summary Report is located under Exhibit G, Attachment B.

Based upon the SC report, initial PDI, and supplemental PDI, an IRM work plan was developed to address the PCB impacted soils. The IRM work plan describes 6 separate areas, Excavation Areas A through F, that will be excavated to address sample locations that exceeded the New York State SCO for Commercial Use of 1 ppm for PCBs. Excavation Area A – 1, a concentrated excavation area subject to TSCA regulations, is a subset of Excavation Area A. The IRM Design Drawings are located at Exhibit A.

Excavated materials will be sampled to characterize the waste prior to disposal at a licensed and permitted disposal facility. Confirmatory samples from the excavation sidewalls and bottom of Excavation Area A – 1 will be collected in accordance with the requirements of 40 CFR 761.280-298 (Subpart O). The Composite Sampling Area of Excavation Area A – 1 is located under Exhibit A, Drawing No. 447415-C-002a. The sampling plan is located under Exhibit G, Attachment D. The Quality Assurance Project Plan is located under Exhibit G, Attachment E.

Please contact me with any questions via email at william.wu@dec.ny.gov, or via phone at (518) 402-9662.

Sincerely,

William Wu
Assistant Engineer (Environmental)
Remedial Bureau C
Division of Environmental Remediation

Enclosures

Exhibits:
A – Design Drawings from IRM Work Plan, J&L Steel, May 2018
B – PCBs in Soil Samples Figure from IRM Work Plan, J&L Steel, May 2018
C – PDI tables from IRM Work Plan, J&L Steel, May 2018
D – Sample Locations Figure from SC Report, Former J&L Steel Site, August 2016
E – Soil Results Tables from SC Report, Former J&L Steel Site, August 2016
F – 6 NYCRR Part 375-6.8(b) Restricted use soil cleanup objectives, December 2006
G – IRM Work Plan, J&L Steel, May 2018 (on CD)
H – SC Report, Former J&L Steel Site, August 2016 (on CD)

ec: G. Cross, NYSDEC
S. Berninger, NYSDOH
S. Karpinski, NYSDOH
M. Schuck, NYSDOH
M. Vetter, Parsons

NOTIFICATION AND CERTIFICATION

Upon receipt of approval of this cleanup plan under 40 CFR 761.61(a) from the USEPA Region 2 coordinator, the New York State Department of Environmental Conservation (NYSDEC) will provide written notification to federal, state, and local authorities prior to initiating remedial activities.

The proposed remedial action is scheduled for the summer of 2018. The final schedule may be subject to change due to weather conditions and timing of local permit approvals, where applicable. Upon acceptance of this work plan, the NYSDEC will provide a more detailed schedule to the USEPA.

In accordance with 40 CFR 761.61(a)(3), a copy of this notification will be provided to:

Mr. Peter D. Lopez
Regional Administrator
US EPA Region 2
290 Broadway
New York, NY 10007-1866

Dr. James S. Haklar, Ph.D., P.E.
Regional PCB Coordinator
US EPA Region 2
2890 Woodbridge Ave
Edision, NJ 08837-3679

Mr. William Wu
Project Manager
Division of Environmental Remediation
NYS Dept. of Environmental Conservation
625 Broadway Floor 11
Albany, NY 12233-7014

Mr. Keith J. Zimmerman
Director
St. Lawrence County Planning Office
48 Court St
Canton, NY 13617-1169

As required under 40 CFR 761.61(a)(3)(E), a signed certification for the remediation of bulk PCB remediation waste is provided.

CERTIFICATION

Certification of Self-Implementing Interim Remedial Measure for Clean-Up and Disposal of PCB Remediation Waste
J&L Steel, NYSDEC Site No. 645029, Town of Clifton, St. Lawrence County, NY

This Certification of Notice of Self-Implementing Cleanup & Disposal of PCB Remediation Waste describes response actions that will be conducted at the site, J&L Steel, located at the intersection of New York State Route 3 and County Route 60, Town of Clifton, St. Lawrence County, New York.

As the party responsible for conducting the proposed cleanup, I hereby certify that all sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the site are on file at the following location for USEPA inspection:

- NYS Dept. of Environmental Conservation, Division of Environmental Remediation, 625 Broadway Floor 11, Albany, NY 12233-7014

To access these files, please contact William Wu (NYSDEC) at (518) 402-9662 or william.wu@dec.ny.gov to arrange an appointment and identify the specific records to be inspected. NYSDEC will compile the information requested and make the information available for review in the office, or transmit electronic copies directly to the USEPA representative requesting the information.

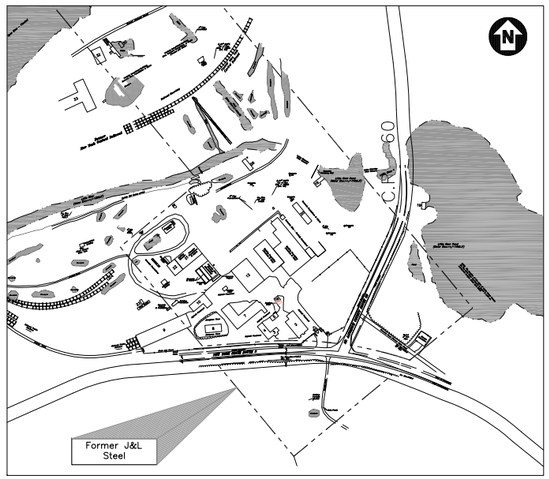
William Wu
Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C
625 Broadway Floor 11
Albany, NY 12233-7014

05/18/2018
Date

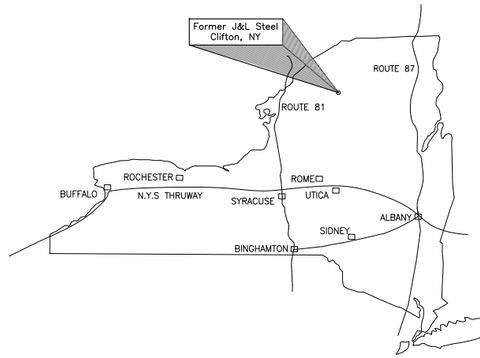
Exhibit A

Design Drawings
IRM Work Plan
J&L Steel
May 2018

FORMER J & L STEEL SITE
PCB IRM EXCAVATION
CLIFTON, NEW YORK



SITE LOCATION MAP
NOT TO SCALE



N.Y. STATE MAP
NOT TO SCALE

DRAWING INDEX

G–001	TITLE SHEET AND DRAWING INDEX
C–001	TOTAL PCBs IN SOIL SAMPLE RESULTS
C–002	EXCAVATION AREAS
C–002a	EXCAVATION AREA A–1 COMPOSITE SAMPLING AREA
C–003	DETAILS AND BORROW PIT AREA

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
A	ISSUED FOR REVIEW (IN PROGRESS)	01/29/18	JR	–	–

DRAWN BY: JR	DATE: 01/29/18	SEAL
CHECKED BY: MV	DATE: –	
APPROVED BY: –	DATE: –	
PROJECT MGR.: –	DATE: –	

PARSONS
COMMERCIAL TECHNOLOGY GROUP

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451–9560

JOB: 447415
WBS: 02000

PROJECT TITLE
FORMER J&L STEEL SITE
IRM WORK PLAN

J&L PCB SOIL REMOVAL
CLIFTON, NEW YORK

DRAWING TITLE
TITLE SHEET
AND DRAWING INDEX

SCALE: NOT TO SCALE (IF PRINTED ON 22x34 SHEET)

DRAWING NO.: 447415–G–001
REV.: A

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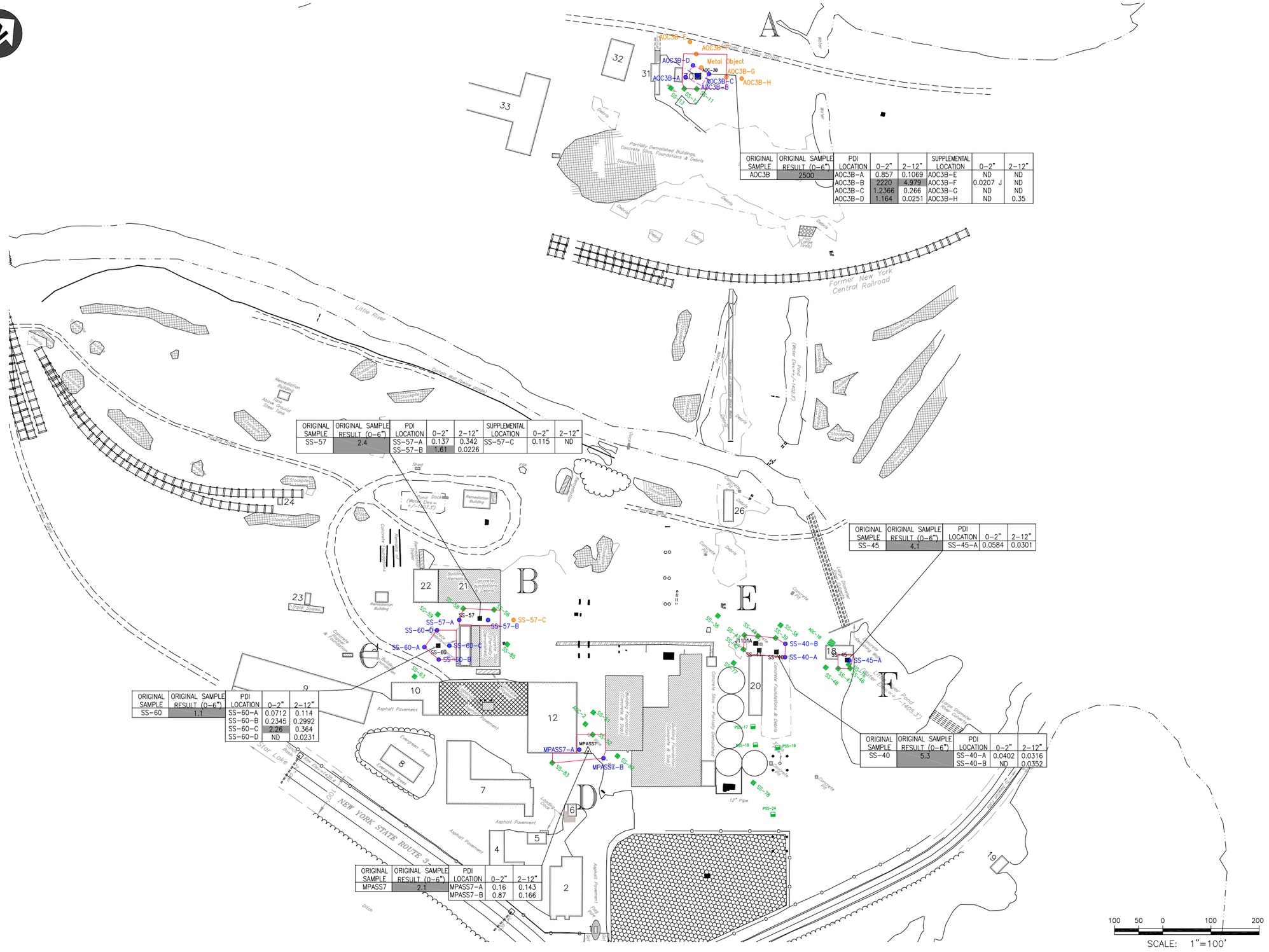
PLOT DATE: 5/10/2018 9:10 AM PLOTTED BY: RUSSO, JILL


A
B
C
D
E
F
Little River
Former New York Central Railroad
NEW YORK STATE ROUTE 3
Guide Rail (Below Grade)
Metal Object
Partially Demolished Buildings, Concrete Slabs, Foundations & Debris
Stockpile
Debris
Ditch
Pole
Shed
Remediation Building
Evergreen Trees
Asphalt Pavement
Concrete Slab
Concrete Foundations & Debris
Large Diameter Water Culvert
Pond (Water Elev.= +/-1405.37)
Pond (Water Elev.= +/-1402.57)
Former Pond Area
Trees
Trees, Shrubs
Utility Pole
Fire Hydrant
Gate Valve
Manhole
Catch Basin
Inlet
Guide Rail
Fence
Overhead Utilities
Underground Utilities
Building Demolition
Concrete Foundations & Debris
Concrete Slab - Former Building
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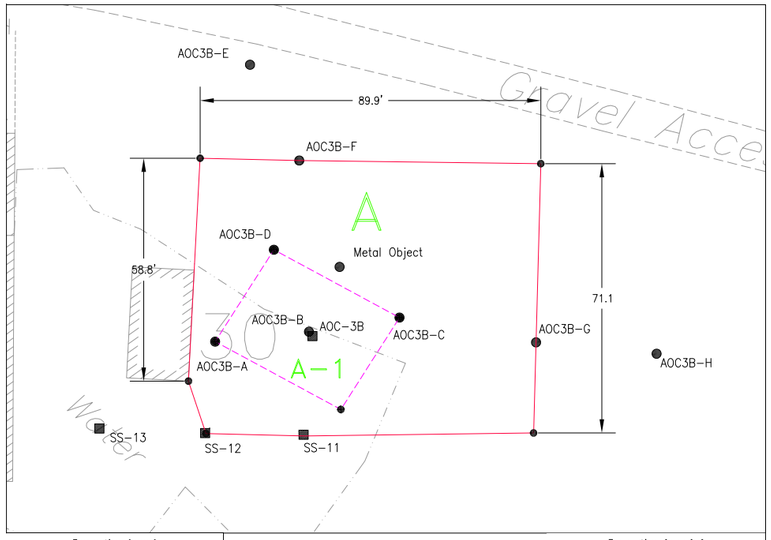
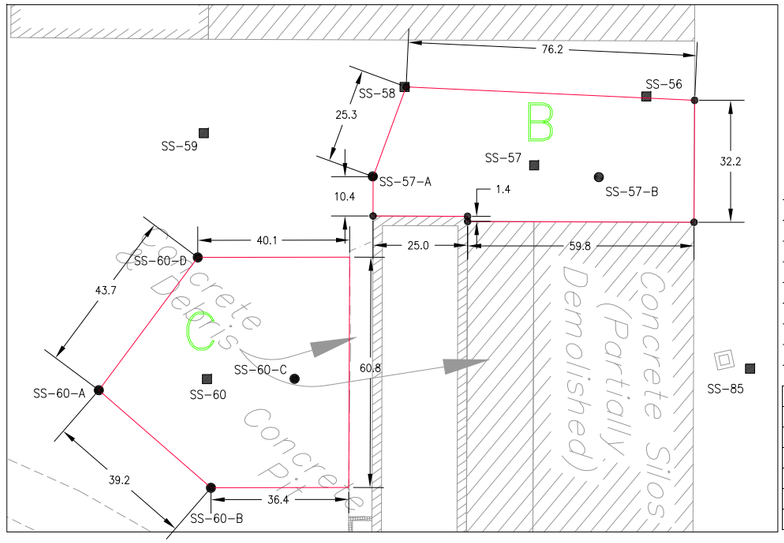


Excavation Area A		
Point	Easting	Northing
A1	361450.59	1945361.99
A2	361520.57	1945418.49
A3	361564.63	1945362.69
A4	361498.31	1945307.18
A5	361485.91	1945314.85

EXCAVATION AREA A

NOT TO SCALE

Excavation Area A-1		
Point	Easting	Northing
TSCA-1	361481.02	1945355.92
TSCA 2	361517.95	1945363.41
TSCA-3	361521.60	1945334.87
TSCA-4	361484.65	1945327.37



Excavation Area B		
Point	Easting	Northing
B1	361837.41	1944185.21
B2	361898.15	1944231.27
B3	361918.66	1944206.45
B4	361872.60	1944168.32
B5	361871.74	1944169.36
B6	361852.52	1944153.45
B7	361845.91	1944161.43

Excavation Area C		
Point	Easting	Northing
C1	361823.99	1944115.43
C2	361859.39	1944145.07
C3	361893.49	1944094.32
C4	361865.61	1944070.97
C5	361826.40	1944071.78

EXCAVATION AREAS B & C

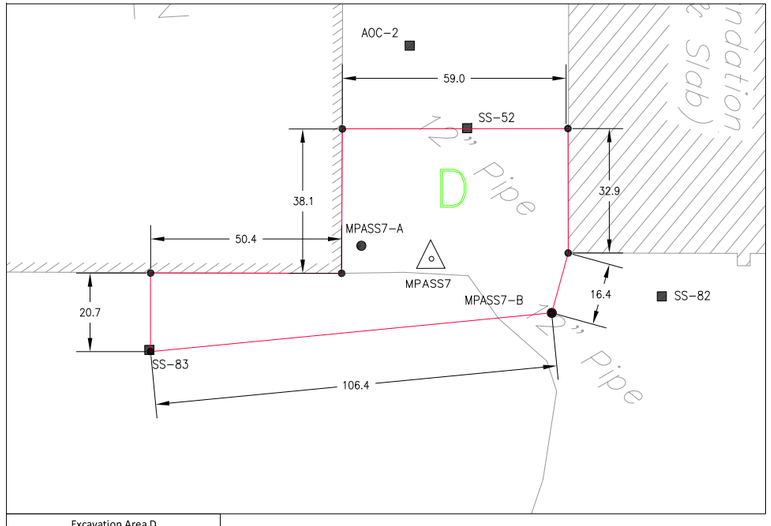
NOT TO SCALE

LEGEND:

- PREVIOUS SAMPLE LOCATIONS WHERE TOTAL PCB CONCENTRATIONS ARE BELOW THE 6NYCRR PART 375 COMMERCIAL SCOs.
- PDI SAMPLE LOCATIONS
- SUPPLEMENTAL PDI SAMPLE LOCATIONS
- EXCEEDS 6 NYCRR COMMERCIAL SOIL CLEANUP OBJECTIVE OF 1 mg/kg
- EXCAVATION AREA
- TSCA EXCAVATION
- STOCKPILE AREA
- SUPPORT/EQUIPMENT LAYDOWN AREA

NOTES:

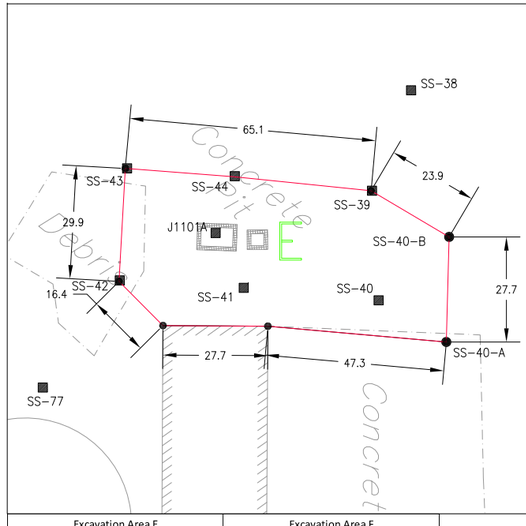
1. ALL CONCENTRATIONS SHOWN IN mg/kg
2. ND NOT DETECTED
3. J LABORATORY ESTIMATED VALUE
4. ANALYTICAL DATA COMPARED TO 6NYCRR COMMERCIAL SOIL CLEANUP OBJECTIVES.
5. ALL UNITS AND DIMENSIONS IN FEET UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL CONTACT DIGSAFE FOR LOCATION OF UNDERGROUND UTILITIES BEFORE BEGINNING EARTHWORK ACTIVITIES.

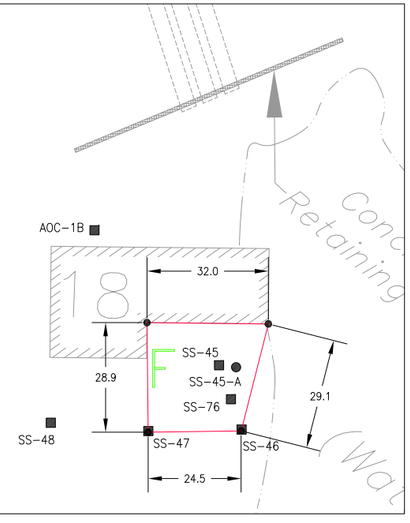


Excavation Area D		
Point	Easting	Northing
D1	362185.70	1944134.75
D2	362231.36	1944172.96
D3	362252.45	1944147.77
D4	362259.23	1944132.85
D5	362184.08	1944059.02
D6	362171.19	1944073.12
D7	362209.95	1944105.36

EXCAVATION AREA D

NOT TO SCALE





Excavation Area E			Excavation Area F		
Point	Easting	Northing	Point	Easting	Northing
E1	362319.93	1944515.85	F1	362495.53	1944609.33
E2	362373.53	1944552.86	F2	362520.36	1944629.58
E3	362397.15	1944556.71	F3	362532.93	1944603.29
E4	362414.34	1944534.94	F4	362514.30	1944587.31
E5	362354.13	1944490.36			
E6	362337.76	1944491.89			

EXCAVATION AREAS E & F

NOT TO SCALE

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
A	ISSUED FOR REVIEW (IN PROGRESS)	10/25/17	JR	–	–

DRAWN BY	JR	DATE 10/25/17
CHECKED BY	MS	DATE –
APPROVED BY	–	DATE –
PROJECT MGR.	–	DATE –

SEAL

PARSONS
COMMERCIAL TECHNOLOGY GROUP
OFFICE 301 PLAINFIELD ROAD SYRACUSE, NY 13212 (315) 451-9560

JOB 447415

WBS 02000

PROJECT TITLE

FORMER J&L STEEL SITE
IRM WORK PLAN

J&L PCB SOIL REMOVAL
CLIFTON, NEW YORK

DRAWING TITLE

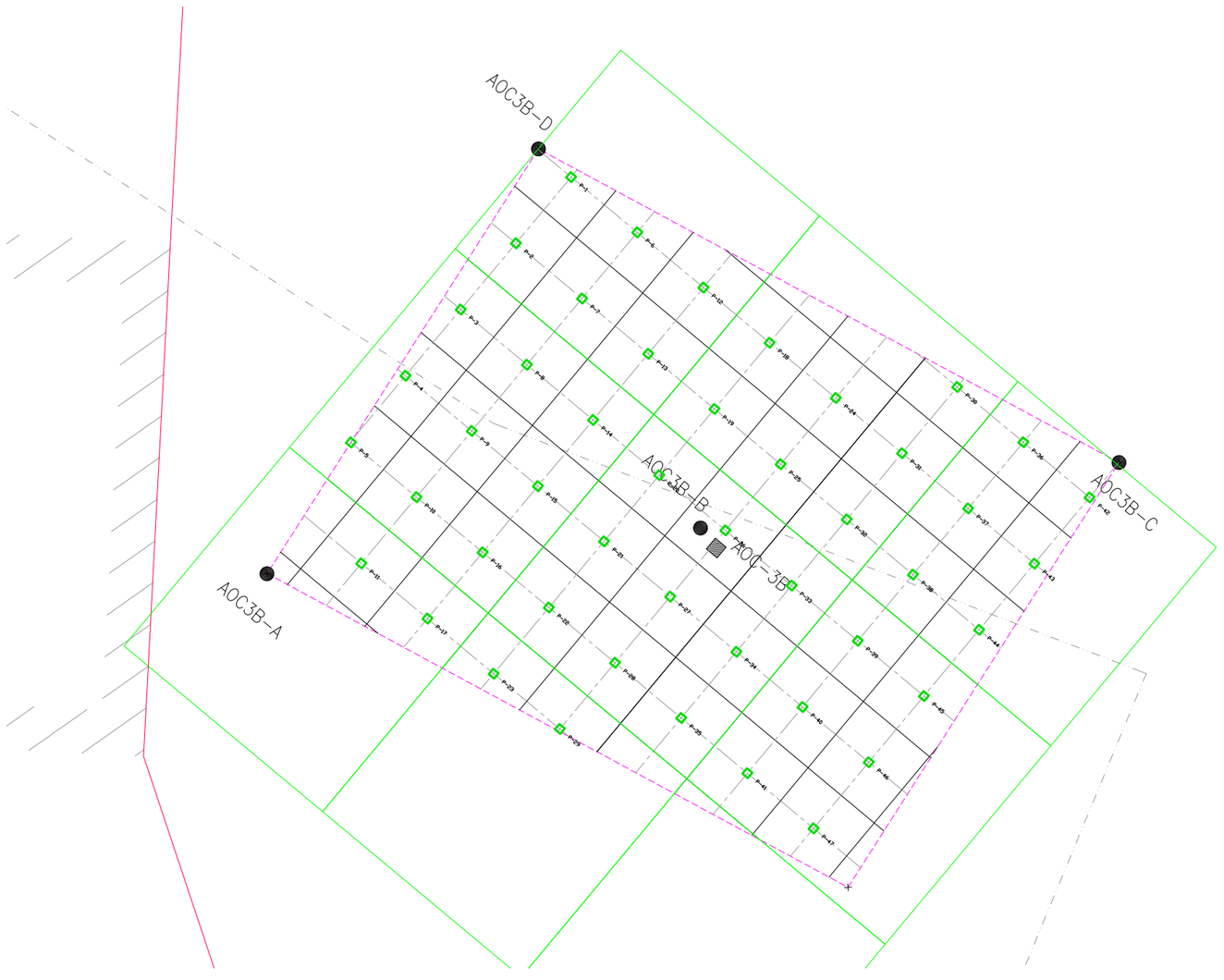
EXCAVATION AREAS

SCALE NOT TO SCALE (IF PRINTED ON 22x34 SHEET)

DRAWING NO. 447415-C-002

REV. A

FILE NAME: P:\NYSDEC PROGRAM\447415 WA #3 J&L STEEL SITE CHARACTERIZATION\10.0 TECHNICAL CATEGORIES\10.1 CAD - GIS\FIGURES\IRM WORK PLAN\447415-IRM-003.DWG
PLOT DATE: 3/30/2018 2:09 PM PLOTTED BY: RUSSO, JILL



EXCAVATION AREA A–1
NOT TO SCALE

LEGEND:

- PREVIOUS SAMPLE LOCATIONS WHERE TOTAL PCB CONCENTRATIONS ARE BELOW THE 6NYCRR PART 375 COMMERCIAL SCOs.
- PDI SAMPLE LOCATIONS
- SUPPLEMENTAL PDI SAMPLE LOCATIONS
- EXCEEDS 6 NYCRR COMMERCIAL SOIL CLEANUP OBJECTIVE OF 1 mg/kg
- EXCAVATION AREA
- TSCA EXCAVATION
- STOCKPILE AREA
- SUPPORT/EQUIPMENT LAYDOWN AREA
- SAMPLE LOCATION
- COMPOSITE AREAS

Sample Point	Easting	Northing
P-1	361483.48	1945355.88
P-2	361483.48	1945350.96
P-3	361483.48	1945346.04
P-4	361483.48	1945341.12
P-5	361483.53	1945336.19
P-6	361488.40	1945355.88
P-7	361488.40	1945350.96
P-8	361488.40	1945346.04
P-9	361488.40	1945341.12
P-10	361488.40	1945336.19
P-11	361488.40	1945331.27
P-12	361493.32	1945355.88
P-13	361493.32	1945350.96
P-14	361493.32	1945346.04
P-15	361493.32	1945341.12
P-16	361493.32	1945336.19
P-17	361493.32	1945331.27
P-18	361498.25	1945355.88
P-19	361498.25	1945350.96
P-20	361498.25	1945346.04
P-21	361498.25	1945341.12
P-22	361498.25	1945336.19
P-23	361498.25	1945331.27
P-24	361503.17	1945355.88
P-25	361503.17	1945350.96
P-26	361503.17	1945346.04
P-27	361503.17	1945341.12
P-28	361503.17	1945336.19
P-29	361503.17	1945331.27
P-30	361508.09	1945360.80
P-31	361508.09	1945355.88
P-32	361508.09	1945350.96
P-33	361508.09	1945346.04
P-34	361508.09	1945341.12
P-35	361508.09	1945336.19
P-36	361513.01	1945360.80
P-37	361513.01	1945355.88
P-38	361513.01	1945350.96
P-39	361513.01	1945346.04
P-40	361513.01	1945341.12
P-41	361513.01	1945336.19
P-42	361517.93	1945360.80
P-43	361517.93	1945355.88
P-44	361517.93	1945350.96
P-45	361517.93	1945346.04
P-46	361517.93	1945341.12
P-47	361517.93	1945336.19

Excavation Area A		
Point	Easting	Northing
A1	361450.59	1945361.99
A2	361520.57	1945418.49
A3	361564.63	1945362.69
A4	361498.31	1945307.18
A5	361485.91	1945314.85

Excavation Area A-1		
Point	Easting	Northing
TSCA-1	361481.02	1945355.92
TSCA 2	361517.95	1945363.41
TSCA-3	361521.60	1945334.87
TSCA-4	361484.65	1945327.37

NOTES:

1. ALL UNITS AND DIMENSIONS IN FEET UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL CONTACT DIGSAFE FOR LOCATION OF UNDERGROUND UTILITIES BEFORE BEGINNING EARTHWORK ACTIVITIES.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
A	ISSUED FOR REVIEW (IN PROGRESS)	05/09/18	JR	–	–

DRAWN BY	JR	DATE	05/09/18
CHECKED BY	LT	DATE	–
APPROVED BY	–	DATE	–
PROJECT MGR.	–	DATE	–

SEAL

PARSONS
COMMERCIAL TECHNOLOGY GROUP
OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 447415
WBS 02000

PROJECT TITLE
FORMER J&L STEEL SITE
IRM WORK PLAN

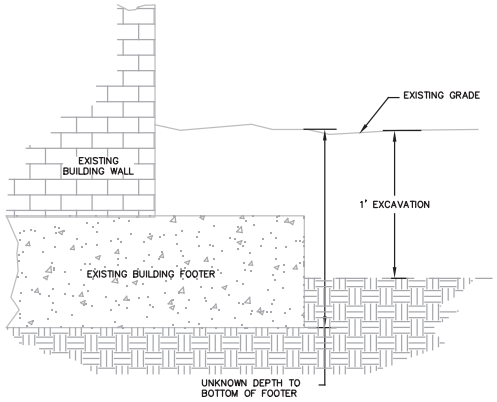
J&L PCB SOIL REMOVAL
CLIFTON, NEW YORK

DRAWING TITLE
EXCAVATION AREA A–1
COMPOSITE SAMPLING AREA

SCALE NOT TO SCALE
(IF PRINTED ON 22x34 SHEET)

DRAWING NO. 447415–C–002a
REV. A

FILE NAME: P:\NYSDEC PROGRAM\447415 WA #3 J&L STEEL SITE CHARACTERIZATION\10.0 TECHNICAL CATEGORIES\10.1 CAD – GIS\FIGURES\IRM WORK PLAN\447415–IRM–003.DWG
PLOT DATE: 5/9/2018 2:53 PM PLOTTED BY: RUSSO, JILL

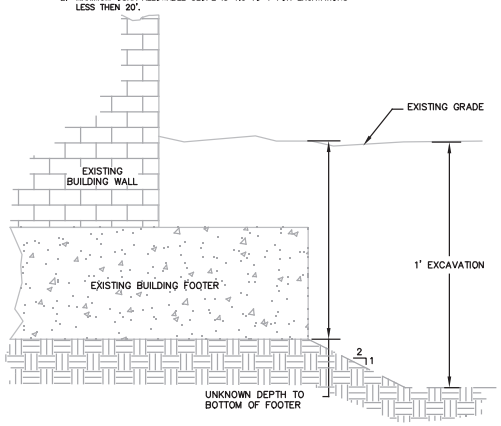


EXCAVATION DETAIL–ADJACENT TO BUILDING

NOT TO SCALE

NOTES:

1. IF CONFIRMATORY SAMPLING REQUIRES DEEPER EXCAVATION, 2:1 SIDE SLOPE WILL BE MAINTAINED FROM BOTTOM OF BUILDING FOOTER UNTIL REQUIRED DEPTH IS ACHIEVED.
2. MAXIMUM OSHA ALLOWABLE SLOPE IS 1:5 TO 1 FOR EXCAVATIONS LESS THEN 20'.

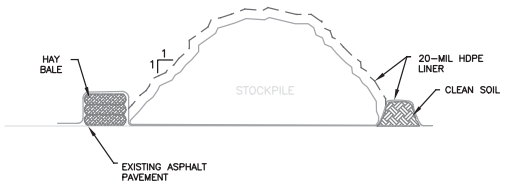


EXCAVATION DETAIL

NOT TO SCALE

NOTES:

1. IF CONFIRMATORY SAMPLING REQUIRES DEEPER EXCAVATION, 2:1 SIDE SLOPE WILL BE MAINTAINED FROM BOTTOM OF BUILDING FOOTER UNTIL REQUIRED DEPTH IS ACHIEVED.
2. MAXIMUM OSHA ALLOWABLE SLOPE IS 1:5 TO 1 FOR EXCAVATIONS LESS THEN 20'.

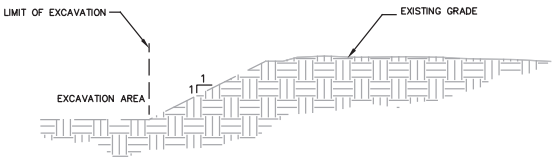


NOTE:

1. CONTRACTOR MAY PROPOSE ALTERNATIVE LINER MATERIALS AND PERIMETER BERM CONSTRUCTION.
2. DISPOSE OF USED LINER WITH PCB CONTAMINATED SEDIMENT AND SOIL.
3. OPERATE STOCKPILE AREA TO PREVENT DAMAGE TO LINER.
4. PROVIDE 20–MIL HDPE COVER. KEEP STOCKPILED MATERIAL COVERED AT ALL TIMES EXCEPT WHEN ACTIVELY PLACING OR REMOVING MATERIAL FROM STOCKPILE.
5. COLLECT AND DISPOSE OF WATER CONTACTING/DRAINING FROM STOCKPILE MATERIAL.
6. MAXIMUM SLOPE FOR STOCKPILE IS 1:1.

STOCKPILE DETAIL

NOT TO SCALE



EXCAVATION LIMIT DETAIL (TYP)

NOT TO SCALE

BORROW PIT LOCATION

1"=300'

NOTES:

1. DEPLOY EROSION CONTROL POINTS PRIOR TO INITIATING EARTHWORK ACTIVITIES.
2. ALL EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
A	ISSUED FOR REVIEW (IN PROGRESS)	10/25/17	JR	–	–

		SEAL
DRAWN BY: JR	DATE: 10/25/17	
REVIEWED BY: MS	DATE: –	
APPROVED BY: –	DATE: –	
PROJECT MGR: –	DATE: –	

PARSONS
COMMERCIAL TECHNOLOGY GROUP
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451–9560

JOB: 447415
REV: 02000

PROJECT TITLE:
FORMER J&L STEEL SITE
IRM WORK PLAN

J&L PCB SOIL REMOVAL
CLIFTON, NEW YORK

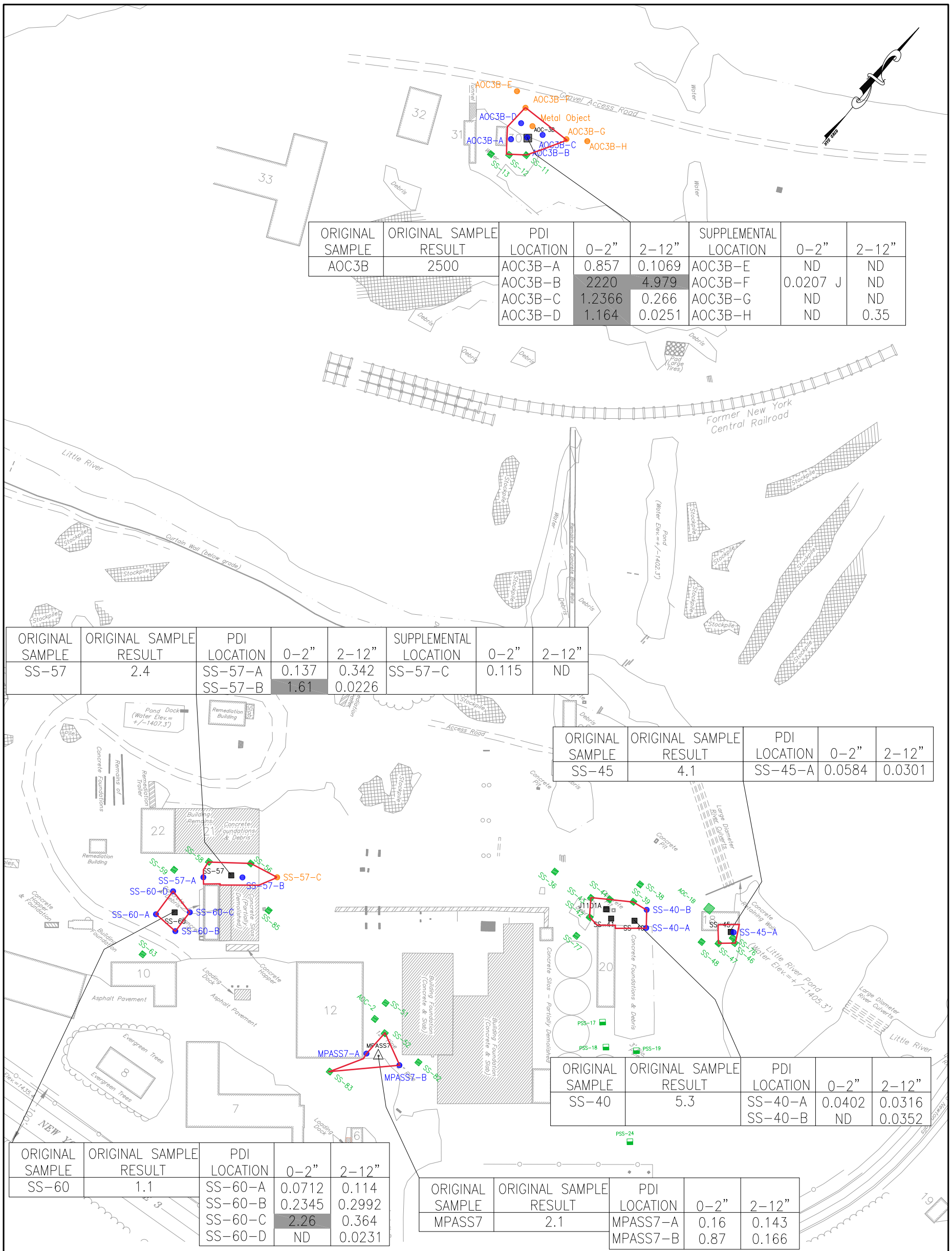
DRAWING TITLE:
DETAILS AND
BORROW PIT AREA

SCALE: NOT TO SCALE
(IF PRINTED ON 22x34 SHEET)

DRAWING NO.: 447415–C–003
REV: A

Exhibit B

PCBs in Soil Samples Figure
IRM Work Plan
J&L Steel
May 2018



ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT	PDI LOCATION	0–2"	2–12"	SUPPLEMENTAL LOCATION	0–2"	2–12"
AOC3B	2500	AOC3B–A	0.857	0.1069	AOC3B–E	ND	ND
		AOC3B–B	2220	4.979	AOC3B–F	0.0207 J	ND
		AOC3B–C	1.2366	0.266	AOC3B–G	ND	ND
		AOC3B–D	1.164	0.0251	AOC3B–H	ND	0.35

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT	PDI LOCATION	0–2"	2–12"	SUPPLEMENTAL LOCATION	0–2"	2–12"
SS–57	2.4	SS–57–A	0.137	0.342	SS–57–C	0.115	ND
		SS–57–B	1.61	0.0226			

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT	PDI LOCATION	0–2"	2–12"
SS–45	4.1	SS–45–A	0.0584	0.0301

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT	PDI LOCATION	0–2"	2–12"
SS–40	5.3	SS–40–A	0.0402	0.0316
		SS–40–B	ND	0.0352

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT	PDI LOCATION	0–2"	2–12"
SS–60	1.1	SS–60–A	0.0712	0.114
		SS–60–B	0.2345	0.2992
		SS–60–C	2.26	0.364
		SS–60–D	ND	0.0231

ORIGINAL SAMPLE	ORIGINAL SAMPLE RESULT	PDI LOCATION	0–2"	2–12"
MPASS7	2.1	MPASS7–A	0.16	0.143
		MPASS7–B	0.87	0.166

LEGEND:

- PREVIOUS SAMPLE LOCATIONS WHERE TOTAL PCB CONCENTRATIONS ARE BELOW THE 6NYCRR PART 375 COMMERCIAL SCOs.
- PDI SAMPLE LOCATIONS
- SUPPLEMENTAL PDI SAMPLE LOCATIONS
- EXCEEDS 6 NYCRR COMMERCIAL SOIL CLEANUP OBJECTIVE OF 1 mg/kg

NOTES:

1. ALL CONCENTRATIONS SHOWN IN mg/kg
2. ND NOT DETECTED
3. J LABORATORY ESTIMATED VALUE
4. ANALYTICAL DATA COMPARED TO 6NYCRR COMMERCIAL SOIL CLEANUP OBJECTIVES.

150 0 150 300

SCALE: 1"=150'

FIGURE 1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

JONES & LAUGHLIN/BENSON MINE

TOTAL PCBs IN SOIL SAMPLE RESULTS

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 * 315–451–9560

FILE NAME: P:\NYSDEC PROGRAM\447415 WA #3 J&L STEEL SITE CHARACTERIZATION\10.0 TECHNICAL CATEGORIES\10.1 CAD – GIS\FIGURES\2017\447415–SK002–2017.DWG
PLOT DATE: 8/14/2017 4:27 PM PLOTTED BY: RUSSO, JILL

Exhibit C

PDI Tables
IRM Work Plan
J&L Steel
May 2018

Table 1
Soil Analytical Results

NYSDEC-J&L Steel Site 2016 Site Investigation Validated Soil Data Detected Compound Summary		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	AOC3BA AOC3BA-0-2 SC27773-13 SPECTRUM SC27773 SOIL 10/26/2016 15:00 11/29/2016	AOC3BA AOC3BA-2-12 SC27773-14 SPECTRUM SC27773 SOIL 10/26/2016 15:05 11/29/2016	AOC3BB AOC3BB-0-2 SC27773-15 SPECTRUM SC27773 SOIL 10/26/2016 15:10 11/29/2016	AOC3BB AOC3BB-2-12 SC27773-16 SPECTRUM SC27773 SOIL 10/26/2016 15:15 11/29/2016	AOC3BC AOC3BC-0-2 SC27773-17 SPECTRUM SC27773 SOIL 10/26/2016 15:20 11/29/2016	AOC3BC AOC3BC-2-12 SC27773-18 SPECTRUM SC27773 SOIL 10/26/2016 15:25 11/29/2016	AOC3BD AOC3BD-0-2 SC27773-19 SPECTRUM SC27773 SOIL 10/26/2016 15:30 11/29/2016	AOC3BD AOC3BD-2-12 SC27773-20 SPECTRUM SC27773 SOIL 10/26/2016 15:35 11/29/2016
CAS NO.	COMPOUND		UNITS:								
	PESTICIDES										
12672-29-6	PCB-1248 (Aroclor 1248)		mg/kg	0.73	0.0729	2220	4.87	1.19	0.226	1.04	ND
11097-69-1	PCB-1254 (Aroclor 1254)		mg/kg	ND	ND	ND	ND	ND	ND	ND	0.0251 J
11096-82-5	PCB-1260 (Aroclor 1260)		mg/kg	0.127	0.034	ND	0.109	0.0466 J	ND	0.124	ND
	Total PCBs	**1**	**mg/kg**	**0.857**	**0.1069**	**2220**	**4.979**	**1.2366**	**0.226**	**1.164**	**0.0251**
	OTHER										
SOLID	Solids, Percent		%	66.1	70.2	67.2	72.7	70.1	78.2	66.6	74.6

Table 1
Soil Analytical Results

NYSDEC-J&L Steel Site 2016 Site Investigation Validated Soil Data Detected Compound Summary		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MPASS7A MPASS7A-0-2 SC27773-01 SPECTRUM SC27773 SOIL 10/26/2016 12:00 11/29/2016	MPASS7A MPASS7A-2-12 SC27773-02 SPECTRUM SC27773 SOIL 10/26/2016 12:05 11/29/2016	MPASS7B MPASS7B-0-2 SC27773-03 SPECTRUM SC27773 SOIL 10/26/2016 12:15 11/29/2016	MPASS7B MPASS7B-2-12 SC27773-04 SPECTRUM SC27773 SOIL 10/26/2016 12:20 11/29/2016	SS060A SS060A-0-2 SC27776-01 SPECTRUM SC27776 SOIL 10/26/2016 9:45 11/29/2016	SS060A SS060A-2-12 SC27776-02 SPECTRUM SC27776 SOIL 10/26/2016 9:50 11/29/2016	SS060B SS060B-0-2 SC27776-03 SPECTRUM SC27776 SOIL 10/26/2016 10:50 11/29/2016	SS060B SS060B-2-12 SC27776-04 SPECTRUM SC27776 SOIL 10/26/2016 10:10 11/29/2016
CAS NO.	COMPOUND		UNITS:								
	PESTICIDES										
12672-29-6	PCB-1248 (Aroclor 1248)		mg/kg	ND	ND	ND	ND	ND	ND	ND	0.126
11097-69-1	PCB-1254 (Aroclor 1254)		mg/kg	0.16	0.143	0.87	0.166	0.0712	0.114	0.186	0.106
11096-82-5	PCB-1260 (Aroclor 1260)		mg/kg	ND	ND	ND	ND	ND	ND	0.0485	0.0672
	Total PCBs	**1**	**mg/kg**	**0.16**	**0.143**	**0.87**	**0.166**	**0.0712**	**0.114**	**0.2345**	**0.2992**
	OTHER										
SOLID	Solids, Percent		%	89.3	90.8	92.1	91.1	89.8	87.4	92.4	90.7

Table 1
Soil Analytical Results

NYSDEC-J&L Steel Site 2016 Site Investigation Validated Soil Data Detected Compound Summary		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	SS060C SS060C-0-2 SC27776-05 SPECTRUM SC27776 SOIL 10/26/2016 10:15 11/29/2016	SS060C SS060C-2-12 SC27776-06 SPECTRUM SC27776 SOIL 10/26/2016 10:20 11/29/2016	SS060D SS060D-0-2 SC27776-07 SPECTRUM SC27776 SOIL 10/26/2016 10:40 11/29/2016	SS060D SS060D-2-12 SC27776-08 SPECTRUM SC27776 SOIL 10/26/2016 10:50 11/29/2016	SS40A SS40A-0-2 SC27773-05 SPECTRUM SC27773 SOIL 10/26/2016 13:00 11/29/2016	SS40A SS40A-2-12 SC27773-06 SPECTRUM SC27773 SOIL 10/26/2016 13:05 11/29/2016	Dup of SS40A-2-12 SS40A-FD SS40A-2-12-FD SC27773-07 SPECTRUM SC27773 SOIL 10/26/2016 12:02 11/29/2016	SS40B SS40B-0-2 SC27773-08 SPECTRUM SC27773 SOIL 10/26/2016 13:10 11/29/2016
CAS NO.	COMPOUND		UNITS:								
	PESTICIDES										
12672-29-6	PCB-1248 (Aroclor 1248)		mg/kg	ND	ND	ND	ND	ND	0.0316 J	ND	ND
11097-69-1	PCB-1254 (Aroclor 1254)		mg/kg	2.26	0.364	ND	0.0231 J	0.0402	ND	ND	ND
11096-82-5	PCB-1260 (Aroclor 1260)		mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
	Total PCBs	**1**	**mg/kg**	**2.26**	**0.364**	**ND**	**0.0231**	**0.0402**	**0.0316**	**ND**	**ND**
	OTHER										
SOLID	Solids, Percent		%	89.4	91	89.4	94.9	87.8	88.5	87	89.1

Table 1
Soil Analytical Results

NYSDEC-J&L Steel Site 2016 Site Investigation Validated Soil Data Detected Compound Summary		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	SS40B SS40B-2-12 SC27773-09 SPECTRUM SC27773 SOIL 10/26/2016 13:15 11/29/2016	SS45A SS45A-0-2 SC27773-11 SPECTRUM SC27773 SOIL 10/26/2016 13:35 11/29/2016	SS45A SS45A-2-12 SC27773-12 SPECTRUM SC27773 SOIL 10/26/2016 13:40 11/29/2016	SS57A SS57A-0-2 SC27776-09 SPECTRUM SC27776 SOIL 10/26/2016 11:05 11/29/2016	SS57A SS57A-2-12 SC27776-10 SPECTRUM SC27776 SOIL 10/26/2016 11:10 11/29/2016	Dup of SS57A-2-12 SS57A SS57A-2-12-FD SC27776-11 SPECTRUM SC27776 SOIL 10/26/2016 12:01 11/29/2016	SS57B SS57B-0-2 SC27776-12 SPECTRUM SC27776 SOIL 10/26/2016 11:20 11/29/2016	SS57B SS57B-2-12 SC27776-13 SPECTRUM SC27776 SOIL 10/26/2016 11:25 11/29/2016
CAS NO.	COMPOUND		UNITS:								
	PESTICIDES										
12672-29-6	PCB-1248 (Aroclor 1248)		mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
11097-69-1	PCB-1254 (Aroclor 1254)		mg/kg	0.0352	0.0584	0.0301 J	0.137	0.124 J	0.342 J	1.61	0.0226
11096-82-5	PCB-1260 (Aroclor 1260)		mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
	Total PCBs	**1**	**mg/kg**	**0.0352**	**0.0584**	**0.0301**	**0.137**	**0.124**	**0.342**	**1.61**	**0.0226**
	OTHER										
SOLID	Solids, Percent		%	92.7	50.1	75.1	93.6	85.9	93.8	83.8	92.7

Table 2
Validated Surface Soil Detected Compound Summary
Supplemental PDI

NYSDEC-J&L Steel Site 2017 Site Investigation Validated Soil Data SDG: SC34687 Detected Compound Summary		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Depth: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	AOC-3B-E AOC-3B-E-0-2 0-2 in SC34687-03 SPECTRUM SC34687 SOIL 5/11/2017 13:50 6/15/2017	AOC-3B-E AOC-3B-E-2-12 2-12 in SC34687-04 SPECTRUM SC34687 SOIL 5/11/2017 13:55 6/15/2017	AOC-3B-F AOC-3B-F-0-2 0-2 in SC34687-05 SPECTRUM SC34687 SOIL 5/11/2017 14:00 6/15/2017	AOC-3B-F AOC-3B-F-2-12 2-12 in SC34687-06 SPECTRUM SC34687 SOIL 5/11/2017 14:05 6/15/2017	Dup of AOC-3B-F-2-12 AOC-3B-F AOC-3B-F-2-12DUP 2-12 in SC34687-07 SPECTRUM SC34687 SOIL 5/11/2017 12:01 6/15/2017
CAS NO.	COMPOUND		UNITS:					
	PCBs							
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND	ND	0.0207 J	ND	ND
	OTHER							
SOLID	Solids, Percent	NS	%	93.5	92.1	87.1	85.1	86.3

Table 2
Validated Surface Soil Detected Compound Summary
Supplemental PDI

NYSDEC-J&L Steel Site 2017 Site Investigation Validated Soil Data SDG: SC34687 Detected Compound Summary		6 NYCRR Part 375 Commercial Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Depth: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	AOC-3B-G AOC-3B-G-0-2 0-2 in SC34687-08 SPECTRUM SC34687 SOIL 5/11/2017 14:30 6/15/2017	AOC-3B-G AOC-3B-G-2-12 2-12 in SC34687-09 SPECTRUM SC34687 SOIL 5/11/2017 14:35 6/15/2017	AOC-3B-H AOC-3B-H-0-2 0-2 in SC34687-10 SPECTRUM SC34687 SOIL 5/11/2017 14:40 6/15/2017	AOC-3B-H AOC-3B-H-2-12 2-12 in SC34687-11 SPECTRUM SC34687 SOIL 5/11/2017 14:45 6/15/2017	SS-57-C SS-57-C-0-2 0-2 in SC34687-01 SPECTRUM SC34687 SOIL 5/11/2017 11:30 6/15/2017	SS-57-C SS-57-C-2-12 2-12 in SC34687-02 SPECTRUM SC34687 SOIL 5/11/2017 11:35 6/15/2017
CAS NO.	COMPOUND		UNITS:						
	PCBs								
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND	ND	ND	0.35	0.115	ND
	OTHER								
SOLID	Solids, Percent	NS	%	89.1	88.2	79.3	92.6	88.5	89

Exhibit D

Sample Locations Figure
SC Report
Former J&L Steel Site
August 2016

LEGEND:

18 BUILDING NUMBER

SURFACE SOIL SAMPLES (Hg, METALS & PCBs)
(SAMPLES COLLECTED UP TO 6" BELOW GROUND SURFACE)

SURFACE SOIL SAMPLES (PART 375) "Bull Ditch Area"
(SAMPLES COLLECTED UP TO 6" BELOW GROUND SURFACE)

SURFACE SOIL SAMPLES (LEAD & ASBESTOS)
(SAMPLES COLLECTED UP TO 6" BELOW GROUND SURFACE)

2015 SUPPLEMENTAL SURFACE SOIL SAMPLE (PART 375)
(SAMPLES COLLECTED UP TO 1' BELOW GROUND SURFACE)

MONITORING WELL SURFACE SOIL SAMPLES (PART 375)
(SAMPLES COLLECTED UP TO 6" BELOW GROUND SURFACE)

J&L SITE BOUNDARY

300 150 0 300 600

SCALE: 1"=300'

FIGURE 10

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

JONES & LAUGHLIN/BENSON MINE

SURFACE SOIL SAMPLE LOCATIONS

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

FILE NAME: P:\NYSDEC PROGRAM\447415 WA #3 J&L STEEL SITE CHARACTERIZATION\10.0 TECHNICAL CATEGORIES\10.1 CAD - GIS\FIGURES\2015\447415-SK008.DWG
PLOT DATE 2/4/2016 PLOTTED BY RUSSO III

Exhibit E

Soil Results Tables
SC Report
Former J&L Steel Site
August 2016

Table 8
Former J and L Steel Site
Validated Monitoring Well Borings Soil Results
Detected Compound Summary

NYSDEC-J&L Steel Site 2012 Site Investigation Validated Soil Analytical Data		6 NYCRR Part 375 Unrestricted Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Depth Sampled: Validated:	JL-MW-01-SS JL-MW-01-SS L2120-03 MITKEM L2120 SOIL 0-0.5 ft 10/1/2012 12/13/2012	JL-MW-02-SS JL-MW-02-SS L2120-02 MITKEM L2120 SOIL 0-0.5 ft 10/2/2012 12/13/2012	JL-MW-03-SS JL-MW-03-SS L2120-01 MITKEM L2120 SOIL 0-0.5 ft 10/1/2012 12/13/2012	JL-MW-04-SS JL-MW-04-SS L1928-01 MITKEM L1928 SOIL 0-0.5 ft 9/5/2012 12/13/2012	JL-MW-05-SS JL-MW-05-SS L1958-01 MITKEM L1958 SOIL 0-0.5 ft 9/7/2012 12/13/2012	JL-MW-06-SS JL-MW-06-SS L1958-02 MITKEM L1958 SOIL 0-0.5 ft 9/9/2012 12/13/2012	JL-MW-07-SS JL-MW-07-SS L1958-03 MITKEM L1958 SOIL 0-0.5 ft 9/10/2012 12/13/2012
CAS NO.	COMPOUND		UNITS:							
	VOLATILES									
75-34-3	1,1-DICHLOROETHANE	0.27	mg/Kg	ND	ND	ND	ND	ND	ND	0.042 J
95-63-6	1,2,4-TRIMETHYLBENZENE	3.6	mg/Kg	ND	ND	ND	ND	53 J	ND	50
108-67-8	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	8.4	mg/Kg	ND	ND	ND	ND	8.3	ND	11
67-64-1	ACETONE	0.05	mg/Kg	0.017 J	R	R	0.0045 J	R	R	R
99-87-6	CYMENE (4-ISOPROPYLTOLUENE)	NS	mg/Kg	ND	ND	ND	ND	ND	ND	4.6
100-41-4	ETHYLBENZENE	1	mg/Kg	ND	ND	ND	ND	0.92	ND	5.3
98-82-8	ISOPROPYLBENZENE (CUMENE)	NS	mg/Kg	ND	ND	ND	ND	1.9	ND	3.7
136777-61-2	M,P-XYLENES	0.26	mg/Kg	ND	ND	ND	ND	1.2	ND	6.1
75-09-2	METHYLENE CHLORIDE	0.05	mg/Kg	0.0028 J	0.0029 J	ND	0.0022 J	0.39 UJ	ND	ND
104-51-8	N-BUTYLBENZENE	12	mg/Kg	ND	ND	ND	ND	8.1	ND	11
103-65-1	N-PROPYLBENZENE	3.9	mg/Kg	ND	ND	ND	ND	3.6	ND	6.5
95-47-6	O-XYLENE (1,2-DIMETHYLBENZENE)	0.26	mg/Kg	ND	ND	ND	ND	2.2	ND	2.1
135-98-8	SEC-BUTYLBENZENE	11	mg/Kg	ND	ND	ND	ND	ND	ND	4.9
127-18-4	TETRACHLOROETHYLENE(PCE)	1.3	mg/Kg	ND	ND	ND	ND	0.19 J	ND	ND
XYLENES	XYLENES, TOTAL	0.26	mg/Kg	ND	ND	ND	ND	2.5	ND	5.2
	SEMIVOLATILES									
91-57-6	2-METHYLNAPHTHALENE	NS	mg/Kg	ND	ND	ND	ND	5.6	ND	14
120-12-7	ANTHRACENE	100	mg/Kg	ND	ND	ND	ND	0.094 J	ND	ND
117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	NS	mg/Kg	1.6	0.39 J	0.6	0.25 J	0.26 J	0.093 J	0.16 J
91-20-3	NAPHTHALENE	12	mg/Kg	ND	ND	ND	ND	ND	ND	1.7
84-74-2	DI-N-BUTYL PHTHALATE	NS	mg/Kg	ND	ND	ND	0.14 J	ND	ND	ND
86-73-7	FLUORENE	30	mg/Kg	ND	ND	ND	ND	0.68	ND	0.91
85-01-8	PHENANTHRENE	100	mg/Kg	ND	ND	ND	ND	1.5	ND	1.6
	PCBs									
12672-29-6	PCB-1248 (AROCLOR 1248)	0.1	mg/Kg	ND	ND	ND	0.11	ND	ND	ND
	INORGANICS									
7429-90-5	ALUMINUM	NS	mg/Kg	4480	1220	1370	1540	1290	6170	1240
7440-38-2	ARSENIC	13	mg/Kg	0.66 J	ND	1.3	1.1	0.71 J	4.8	1.1
7440-39-3	BARIUM	350	mg/Kg	231	8.4	15.4	28.1	12.1	30	10.1
7440-41-7	BERYLLIUM	7.2	mg/Kg	0.55	0.22	0.28	0.16 J	0.024 J	2.5	0.0085 J
7440-43-9	CADMIUM	2.5	mg/Kg	ND	ND	ND	0.019 J	0.017 J	0.14 J	ND
7440-70-2	CALCIUM	NS	mg/Kg	1990	778	835	982	550	1190	615
16065-83-1	CHROMIUM III	30	mg/Kg	6.6	ND	ND	ND	ND	11	ND
7440-47-3	CHROMIUM, TOTAL	NS	mg/Kg	6.6	2.4	3.2	4.3	2.3	11.5	2.2
7440-48-4	COBALT	NS	mg/Kg	8.9	1.5 J	4.1	2.8	1.3 J	9.3	1.4 J
7440-50-8	COPPER	50	mg/Kg	55.6	4.1	5.5	3.6	2.2	18.1	2.1
7439-89-6	IRON	NS	mg/Kg	16800	6320	4980	8570	5040	13800	4700
7439-92-1	LEAD	63	mg/Kg	3.9	1	2.3	1.7	1.2	5.8	0.99
7439-95-4	MAGNESIUM	NS	mg/Kg	2310	524	665	823	512	9510	430
7439-96-5	MANGANESE	1600	mg/Kg	191	48.7	130	125	28.5	324	27.3
7439-97-6	MERCURY	0.18	mg/Kg	0.0088 J	ND	ND	0.019 J	ND	0.14	ND
7440-02-0	NICKEL	30	mg/Kg	11.3	1.5 J	2.3	3.1	1.7 J	10.5	1.9 J
7440-09-7	POTASSIUM	NS	mg/Kg	907	145	235	362 J	159	256	162
7440-23-5	SODIUM	NS	mg/Kg	124	53.6	68.7	197 J	89.2	584	83.7
7440-28-0	THALLIUM	NS	mg/Kg	0.51 J	0.26 J	ND	0.44 J	0.25 J	1.7	0.36 J
7440-62-2	VANADIUM	NS	mg/Kg	19.1	5.5	4	8.4	4.5	12.7	4
7440-66-6	ZINC	109	mg/Kg	37.4	9.3	12.6	16.8	10.9	40.4	9.9
	OTHER									
MOIST	MOISTURE, PERCENT	NS	%	14	17	15	11	17	16	22
SOLID	SOLIDS, PERCENT	NS	%	84.7	83.8	84	95.4	81.8	83.7	81.1

ND - Not Detected
J - Estimated Result
R - Rejected Result

TABLE 14
FORMER J AND L STEEL SITE
VALIDATED SURFACE SOIL RESULTS
DETECTED COMPOUND SUMMARY

NYSDEC-J&L Steel Site 2012 Site Investigation Validated Soil Analytical Data (PCBs and Metals Only)		6 NYCRR Part 375 Unrestricted Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	SS-01 SS-01 L1955-09 MITKEM L1955 SOIL 9/10/2012 12/13/2012	SS-02 SS-02 L1955-07 MITKEM L1955 SOIL 9/10/2012 12/13/2012	SS-03 SS-03 L1955-08 MITKEM L1955 SOIL 9/10/2012 12/13/2012	SS-04 SS-04 L1955-06 MITKEM L1955 SOIL 9/10/2012 12/13/2012	SS-05 SS-05 L1955-10 MITKEM L1955 SOIL 9/10/2012 12/13/2012	SS-06 SS-06 L1955-01 MITKEM L1955 SOIL 9/10/2012 12/13/2012	SS-07 SS-07 L1955-03 MITKEM L1955 SOIL 9/10/2012 12/13/2012	SS-08 SS-08 L1955-02 MITKEM L1955 SOIL 9/10/2012 12/13/2012	SS-09 SS-09 L1955-04 MITKEM L1955 SOIL 9/10/2012 12/13/2012	SS-10 SS-10 L1955-05 MITKEM L1955 SOIL 9/10/2012 12/13/2012
CAS NO.	COMPOUND		UNITS:										
	PCBs												
11097-69-1	PCB-1254 (Aroclor 1254)	0.1	mg/Kg	ND	ND	ND	0.12 J	ND	ND	ND	ND	ND	ND
11096-82-5	PCB-1260 (Aroclor 1260)	0.1	mg/Kg	ND	ND	ND	0.13	0.038	0.074	ND	ND	ND	ND
	METALS												
7429-90-5	ALUMINUM	NS	mg/Kg	4900	4380	3640	2850	3520	4730	6140	6930	5000	3870
7440-36-0	ANTIMONY	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7440-38-2	ARSENIC	13	mg/Kg	2.6 J	2.5 J	1.9 J	3 J	3.3 J	3.7 J	4.7 J	5.4 J	3.8 J	1.9 J
7440-39-3	BARIUM	350	mg/Kg	171	198	154	115	146	236	392	415	206	110
7440-41-7	BERYLLIUM	7.2	mg/Kg	ND	ND	ND	ND	ND	0.024 J	0.013 J	0.019 J	ND	ND
7440-43-9	CADMIUM	2.5	mg/Kg	1.1 J	0.88 J	0.92 J	0.54 J	0.73 J	1.4 J	1.3 J	1.2 J	1 J	0.67 J
7440-70-2	CALCIUM	NS	mg/Kg	137	544	293	66.2	566	456	198	929	284	866
7440-47-3	CHROMIUM, TOTAL	NS	mg/Kg	13.9	16.8	18	136	17.2	12.6	12.9	11.4	17.3	13.3
7440-48-4	COBALT	NS	mg/Kg	20.6	20.9	14.7	13.6	14.8	25.9	21	15.2	16.9	15
7440-50-8	COPPER	50	mg/Kg	39.2 J	62.8 J	40.1 J	60.1 J	48.8 J	101 J	91.2 J	128 J	78.3 J	42.9 J
7439-89-6	IRON	NS	mg/Kg	75600	61000	54200	45900	50400	77300	82700	77300	70900	49400
7439-92-1	LEAD	63	mg/Kg	16	104	48.6	611	52.7	41.5	8.2	13.4	29.5	42.6
7439-95-4	MAGNESIUM	NS	mg/Kg	3060	2490	1810	1470	1910	1820	2460	2400	2090	2200
7439-96-5	MANGANESE	1600	mg/Kg	427	366	330	302	278	487	505	499	384	320
7439-97-6	MERCURY	0.18	mg/Kg	0.016 J	0.0092 J	0.0087 J	0.017 J	0.0057 J	0.011 J	0.0099 J	0.0093 J	0.012 J	0.0096 J
7440-02-0	NICKEL	30	mg/Kg	19.9	18.9	14.6	14.6	13.3	23.9	20.7	17.8	21	14.9
7440-09-7	POTASSIUM	NS	mg/Kg	874	903	705	620	684	763	1310	1240	943	743
7782-49-2	SELENIUM	3.9	mg/Kg	ND	1.5 J	0.78 J	1.4 J	0.5 J	ND	1.3 J	ND	ND	ND
7440-22-4	SILVER	2	mg/Kg	0.12 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
7440-23-5	SODIUM	NS	mg/Kg	46.8 J	51.1	44.2	29.1 J	37.2	52.9	50.8 J	52.9	48.3	34.6 J
7440-28-0	THALLIUM	NS	mg/Kg	ND	0.53 J	ND	0.46 J	ND	ND	ND	ND	ND	ND
7440-62-2	VANADIUM	NS	mg/Kg	72.9	56.3	51.8	40.7	46.3	73.5	75.5	68.2	64.9	44.6
7440-66-6	ZINC	109	mg/Kg	58.5	62.1	51.8	80.2	36.3	159	44.7	40.9	45.9	51.6
	OTHER												
MOIST	MOISTURE, PERCENT	NS	%	17	13	6.7 J	6.2 J	7.8 J	10 J	11	13	14	7.2 J

ND - Not Detected
NS - No Standard
J - Estimated Result
JN - Estimated Presumptive Result

TABLE 14
FORMER J AND L STEEL SITE
VALIDATED SURFACE SOIL RESULTS
DETECTED COMPOUND SUMMARY

NYSDEC-J&L Steel Site 2012 Site Investigation Validated Soil Analytical Data (PCBs and Metals Only)		6 NYCRR Part 375 Unrestricted Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	SS-14 SS-14 L1956-01 MITKEM L1956 SOIL 9/12/2012 12/13/2012	SS-15 SS-15 L1956-02 MITKEM L1956 SOIL 9/12/2012 12/13/2012	SS-16 SS-16 L1956-03 MITKEM L1956 SOIL 9/12/2012 12/13/2012	SS-17 SS-17 L1956-04 MITKEM L1956 SOIL 9/12/2012 12/13/2012	SS-18 SS-18 L1956-05 MITKEM L1956 SOIL 9/12/2012 12/13/2012	SS-19 SS-19 L1956-06 MITKEM L1956 SOIL 9/12/2012 12/13/2012	SS-20 SS-20 L1956-07 MITKEM L1956 SOIL 9/12/2012 12/13/2012	Dup of SS-20 SS-20 SS-DUP L1956-12 MITKEM L1956 SOIL 9/12/2012 12/13/2012	SS-21 SS-21 L1956-08 MITKEM L1956 SOIL 9/12/2012 12/13/2012	SS-22 SS-22 L1956-09 MITKEM L1956 SOIL 9/12/2012 12/13/2012
CAS NO.	COMPOUND		UNITS:											
	PCBs													
11097-69-1	PCB-1254 (Aroclor 1254)	0.1	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
11096-82-5	PCB-1260 (Aroclor 1260)	0.1	mg/Kg	0.12	ND	ND	ND	0.039	ND	ND	ND	ND	ND	
	METALS													
7429-90-5	ALUMINUM	NS	mg/Kg	6780	6030	6970	4760	6170	8340	7570	7870	2800	9530	
7440-36-0	ANTIMONY	NS	mg/Kg	2.2	ND	ND	ND	ND	ND	ND	0.86 J	0.41 J	ND	
7440-38-2	ARSENIC	13	mg/Kg	10.7	4.8	1.6	4.9	5.2	8.6	3.5	4.9	0.54 J	4.2	
7440-39-3	BARIUM	350	mg/Kg	281	115	147	178	220	655	957	636	82.1	575	
7440-41-7	BERYLLIUM	7.2	mg/Kg	0.1 J	ND	0.021 J	ND	ND	0.062 J	ND	ND	ND	0.15 J	
7440-43-9	CADMIUM	2.5	mg/Kg	5.1	0.49	1	1	1.8	1.5	3.1	3.2	1.9	3.2	
7440-70-2	CALCIUM	NS	mg/Kg	2750	2980	ND	1450	767	2270	ND	ND	ND	ND	
7440-47-3	CHROMIUM, TOTAL	NS	mg/Kg	40.9	12.8	9.1	9.4	16	10.9	15.9	22.9	11.1	18.6	
7440-48-4	COBALT	NS	mg/Kg	25.8	37.7	23.8	15.3	21.6	19.9	23.1	25.9	16.6	25.7	
7440-50-8	COPPER	50	mg/Kg	157 J	98.6 J	127 J	57.4 J	487 J	130 J	156 J	223 J	48.5 J	68.2 J	
7439-89-6	IRON	NS	mg/Kg	140000	32700	61500	58600	84000	82200	122000	121000	78100	127000	
7439-92-1	LEAD	63	mg/Kg	1010	13.1	4	26.2	87.9	7	19.2 J	96.8 J	2	5.3	
7439-95-4	MAGNESIUM	NS	mg/Kg	3100	6700	2320	1860	3110	3110	2340	2770	727	3040	
7439-96-5	MANGANESE	1600	mg/Kg	989	689	393	337	519	690	502	636	292	650	
7439-97-6	MERCURY	0.18	mg/Kg	0.031 J	0.021 J	0.019 J	0.0062 J	0.017 J	0.011 J	0.018 J	0.027 J	0.0039 J	0.0083 J	
7440-02-0	NICKEL	30	mg/Kg	46.6	34.4	19.6	16.2	22.9	22.8	28.7	30.7	18.6	30.5	
7440-09-7	POTASSIUM	NS	mg/Kg	1030 J	2350 J	526 J	1070 J	1460 J	1510 J	611 J	1770 J	331 J	1550 J	
7782-49-2	SELENIUM	3.9	mg/Kg	ND	1.9 J	0.96 J	1.5 J	0.92 J	ND	ND	ND	ND	ND	
7440-22-4	SILVER	2	mg/Kg	ND	ND	ND	0.89 J	ND	ND	ND	ND	ND	ND	
7440-23-5	SODIUM	NS	mg/Kg	225	70.6	5.5 J	20.3 J	39.9 J	45 J	36.6 J	44.8 J	10 J	51.9 J	
7440-28-0	THALLIUM	NS	mg/Kg	ND	2 J	ND	ND	ND	ND	ND	ND	ND	ND	
7440-62-2	VANADIUM	NS	mg/Kg	44.8	29.6	34.2	45.5	60.5	70.6	105	87.9	76.1	117	
7440-66-6	ZINC	109	mg/Kg	1290	114	55.8	52.1	159	56.9	54.3	71.3	30	64.1	
	OTHER													
MOIST	MOISTURE, PERCENT	NS	%	34	6.8 J	3.5 J	7.4 J	15	17	15	15	3.5 J	11	

ND - Not Detected
NS - No Standard
J - Estimated Result
JN - Estimated Presumptive Result

TABLE 14
FORMER J AND L STEEL SITE
VALIDATED SURFACE SOIL RESULTS
DETECTED COMPOUND SUMMARY

NYSDEC-J&L Steel Site 2012 Site Investigation Validated Soil Analytical Data (PCBs and Metals Only)		6 NYCRR Part 375 Unrestricted Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	SS-23 SS-23 L1956-10 MITKEM L1956 SOIL 9/12/2012 12/13/2012	SS-24 SS-24 L1956-11 MITKEM L1956 SOIL 9/12/2012 12/13/2012	SS-25 SS-25 L1956-13 MITKEM L1956 SOIL 9/13/2012 12/13/2012	SS-26 SS-26 L1956-14 MITKEM L1956 SOIL 9/13/2012 12/13/2012	SS-27 SS-27 L1956-15 MITKEM L1956 SOIL 9/13/2012 12/13/2012	SS-28 SS-28 L1956-16 MITKEM L1956 SOIL 9/13/2012 12/13/2012	SS-39 SS-39 L1955-11 MITKEM L1955 SOIL 9/13/2012 12/13/2012	SS-40 SS-40 L1955-12 MITKEM L1955 SOIL 9/13/2012 12/13/2012	SS-41 SS-41 L1955-13 MITKEM L1955 SOIL 9/13/2012 12/13/2012	SS-42 SS-42 L1955-14 MITKEM L1955 SOIL 9/13/2012 12/13/2012
CAS NO.	COMPOUND		UNITS:										
	PCBs												
11097-69-1	PCB-1254 (Aroclor 1254)	0.1	mg/Kg	ND	ND	ND	0.083	ND	0.089 UJ	ND	5.3	1.4	0.062 J
11096-82-5	PCB-1260 (Aroclor 1260)	0.1	mg/Kg	ND	ND	ND	0.051 J	ND	0.089 UJ	ND	ND	0.97	ND
	METALS												
7429-90-5	ALUMINUM	NS	mg/Kg	4550	5500	5800	4120	6250	1730 J	3620	8060	4250	5380
7440-36-0	ANTIMONY	NS	mg/Kg	ND	ND	0.5 J	0.6 J	ND	ND	ND	ND	ND	ND
7440-38-2	ARSENIC	13	mg/Kg	1.2	3.5	4.2	0.38 J	4.1	1.6 J	2.8 J	5.9 J	2.3 J	2.9 J
7440-39-3	BARIUM	350	mg/Kg	151	226	496	125	259	179 J	151	381	200	312
7440-41-7	BERYLLIUM	7.2	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7440-43-9	CADMIUM	2.5	mg/Kg	3.1	1.9	1.1	2.8	2.1	0.95 J	1.8 J	2.3 J	2.4 J	2.8 J
7440-70-2	CALCIUM	NS	mg/Kg	ND	ND	2650	ND	ND	10200 J	ND	238	ND	ND
7440-47-3	CHROMIUM, TOTAL	NS	mg/Kg	13.9	11.7	9.9	12.4	13.7	7.5 J	13.5	16.1	12.2	14.2
7440-48-4	COBALT	NS	mg/Kg	20	21.2	23	20.7	24.1	14.3 J	22.6	36.4	27.7	28.4
7440-50-8	COPPER	50	mg/Kg	52.2 J	56.2 J	64 J	44.2 J	105 J	31.9 J	72.8 J	200 J	103 J	71.1 J
7439-89-6	IRON	NS	mg/Kg	120000	96600	65700	109000	102000	32700 J	85400	107000	84800	105000
7439-92-1	LEAD	63	mg/Kg	3.2	4.8	14.2	18.8	416	59.8 J	45.8	105	192	16
7439-95-4	MAGNESIUM	NS	mg/Kg	1420	1700	1940	1150	2180	1340 J	834	2730	1470	1730
7439-96-5	MANGANESE	1600	mg/Kg	422	466	306	394	547	163 J	402	676	400	464
7439-97-6	MERCURY	0.18	mg/Kg	ND	0.0076 J	0.077	0.019 J	0.014 J	0.083 J	0.04	0.65	0.26	0.03 J
7440-02-0	NICKEL	30	mg/Kg	22.2	24.5	19.2	25.2	29.6	13.8 J	25.2	35.4	27.6	27.1
7440-09-7	POTASSIUM	NS	mg/Kg	584 J	725 J	1170 J	410 J	821 J	957 J	480	1560	728	1030
7782-49-2	SELENIUM	3.9	mg/Kg	ND	ND	4.1 J	ND	ND	3.3 J	ND	ND	ND	ND
7440-22-4	SILVER	2	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7440-23-5	SODIUM	NS	mg/Kg	24 J	27.3 J	27.2 J	16.2 J	46.5 J	23.4 J	30.9 J	59.5	33 J	37 J
7440-28-0	THALLIUM	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7440-62-2	VANADIUM	NS	mg/Kg	117	88.6	50.5	100	88.5	31.8 J	81.9	101	74.3	96
7440-66-6	ZINC	109	mg/Kg	64.4	45	49.5	37.4	65.3	145 J	75.9	121	94.2	54.4
	OTHER												
MOIST	MOISTURE, PERCENT	NS	%	4.8 J	5.5 J	13	3.3 J	7.9 J	63	9.3 J	12	11	6.8 J

ND - Not Detected
NS - No Standard
J - Estimated Result
JN - Estimated Presumptive Result

TABLE 14
FORMER J AND L STEEL SITE
VALIDATED SURFACE SOIL RESULTS
DETECTED COMPOUND SUMMARY

NYSDEC-J&L Steel Site 2012 Site Investigation Validated Soil Analytical Data (PCBs and Metals Only)		6 NYCRR Part 375 Unrestricted Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	SS-43 SS-43 L1955-15 MITKEM L1955 SOIL 9/13/2012 12/13/2012	SS-44 SS-44 L1955-16 MITKEM L1955 SOIL 9/13/2012 12/13/2012	SS-45 SS-45 L1955-17 MITKEM L1955 SOIL 9/13/2012 12/13/2012	SS-46 SS-46 L1955-18 MITKEM L1955 SOIL 9/13/2012 12/13/2012	SS-47 SS-47 L1955-19 MITKEM L1955 SOIL 9/13/2012 12/13/2012	SS-48 SS-48 L1955-20 MITKEM L1955 SOIL 9/13/2012 12/13/2012	SS-49 SS-49 L2083-01 MITKEM L2083 SOIL 9/27/2012 12/13/2012	SS-50 SS-50 L2083-02 MITKEM L2083 SOIL 9/27/2012 12/13/2012	SS-51 SS-51 L2083-03 MITKEM L2083 SOIL 9/27/2012 12/13/2012	SS-52 SS-52 L2083-04 MITKEM L2083 SOIL 9/27/2012 12/13/2012
CAS NO.	COMPOUND		UNITS:										
	PCBs												
11097-69-1	PCB-1254 (Aroclor 1254)	0.1	mg/Kg	ND	ND	2.1	0.047 J	ND	ND	0.037 JN	0.12 J	0.11 J	0.18 J
11096-82-5	PCB-1260 (Aroclor 1260)	0.1	mg/Kg	0.054 J	0.036 JN	2	0.047 J	ND	0.036	0.057	0.13	0.13	0.23
	METALS												
7429-90-5	ALUMINUM	NS	mg/Kg	3980	4020	3780	3920	4320	4470	3430	3730	3870	3900
7440-36-0	ANTIMONY	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7440-38-2	ARSENIC	13	mg/Kg	2.4 J	2.5 J	2.7 J	1.9 J	1.9 J	3.2 J	3.8	4.4	3.8	3.5
7440-39-3	BARIUM	350	mg/Kg	133	155	127	171	193	218	108	152	389	184
7440-41-7	BERYLLIUM	7.2	mg/Kg	ND	ND	ND	ND	ND	0.0019 J	ND	0.012 J	ND	ND
7440-43-9	CADMIUM	2.5	mg/Kg	2.6 J	1.4 J	4.1 J	2.2 J	2.9 J	1.6 J	1	1.6	1.2	1.5
7440-70-2	CALCIUM	NS	mg/Kg	ND	ND	ND	ND	ND	ND	9450	ND	ND	ND
7440-47-3	CHROMIUM, TOTAL	NS	mg/Kg	16.7	10.7	15.1	12	12	11.6	9.9	15	12.5	11.3
7440-48-4	COBALT	NS	mg/Kg	29.5	23.7	25.8	23.7	23.4	26.2	16.1	22.3	19	15.9
7440-50-8	COPPER	50	mg/Kg	94 J	61.3 J	89.4 J	57.1 J	67.5 J	113 J	57.4	88.8	130	69.6
7439-89-6	IRON	NS	mg/Kg	103000	81000	104000	90000	93600	93800	49400	66700	59000	64900
7439-92-1	LEAD	63	mg/Kg	288	25.5	56.8	8	4.9	7.5	30.7	48.8	46.9	63.7
7439-95-4	MAGNESIUM	NS	mg/Kg	900	1030	812	1090	1270	1490	2970	984	1140	1430
7439-96-5	MANGANESE	1600	mg/Kg	502	389	451	424	430	485	319	396	400	404
7439-97-6	MERCURY	0.18	mg/Kg	0.3	0.017 J	0.055	0.015 J	0.014 J	0.012 J	0.051	0.099	0.042	0.077
7440-02-0	NICKEL	30	mg/Kg	28.8	23.4	32.4	24.5	25.1	26.9	17.2	27.5	20.8	21.2
7440-09-7	POTASSIUM	NS	mg/Kg	701	634	558	692	789	759	529	446	843	959
7782-49-2	SELENIUM	3.9	mg/Kg	ND	ND	ND	ND	ND	ND	4.2	3.3	4.3	4
7440-22-4	SILVER	2	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7440-23-5	SODIUM	NS	mg/Kg	34 J	28.7 J	30.8 J	29.8 J	28.6 J	27.7 J	39 J	22.1 J	28.4 J	25.5 J
7440-28-0	THALLIUM	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7440-62-2	VANADIUM	NS	mg/Kg	94	77.8	98.1	86.4	87.2	84.1	51.4	54.2	56.9	52
7440-66-6	ZINC	109	mg/Kg	97.5	58	405	63	133	69.6	73.3	63.9	69.4	68.9
	OTHER												
MOIST	MOISTURE, PERCENT	NS	%	5.9 J	7.1 J	21	6.1 J	7.1 J	5.2 J	9 J	8.8 J	10	8.6 J

ND - Not Detected
NS - No Standard
J - Estimated Result
JN - Estimated Presumptive Result

TABLE 14
FORMER J AND L STEEL SITE
VALIDATED SURFACE SOIL RESULTS
DETECTED COMPOUND SUMMARY

NYSDEC-J&L Steel Site 2012 Site Investigation Validated Soil Analytical Data (PCBs and Metals Only)		6 NYCRR Part 375 Unrestricted Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	SS-53 SS-53 L2083-05 MITKEM L2083 SOIL 9/27/2012 12/13/2012	SS-54 SS-54 L2083-06 MITKEM L2083 SOIL 9/27/2012 12/13/2012	SS-55 SS-55 L2083-07 MITKEM L2083 SOIL 9/27/2012 12/13/2012	SS-56 SS-56 L2083-08 MITKEM L2083 SOIL 9/27/2012 12/13/2012	SS-57 SS-57 L2083-09 MITKEM L2083 SOIL 9/27/2012 12/13/2012	SS-58 SS-58 L2083-10 MITKEM L2083 SOIL 9/27/2012 12/13/2012	SS-59 SS-59 L2083-11 MITKEM L2083 SOIL 9/27/2012 12/13/2012	SS-60 SS-60 L2083-12 MITKEM L2083 SOIL 9/27/2012 12/13/2012	J1101A J1101A L2356-01 MITKEM L2356 SOIL 11/1/2012 12/13/2012
CAS NO.	COMPOUND		UNITS:									
	PCBs											
11097-69-1	PCB-1254 (Aroclor 1254)	0.1	mg/Kg	0.29 J	0.087 J	0.33 J	0.12	2.4	0.21 J	ND	1.1	6.5 J
11096-82-5	PCB-1260 (Aroclor 1260)	0.1	mg/Kg	0.35	0.091	0.33	0.11	ND	0.21	ND	ND	2.9 J
	METALS											
7429-90-5	ALUMINUM	NS	mg/Kg	3320	5430	5270	1770	2610	3290	4530	3560	3450 J
7440-36-0	ANTIMONY	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	2.4 J
7440-38-2	ARSENIC	13	mg/Kg	3.6	4.5	5	1.3	3.1	8.4	7.8	5.6	ND
7440-39-3	BARIUM	350	mg/Kg	133	101	69.3	46.5	106	201	260	148	381 J
7440-41-7	BERYLLIUM	7.2	mg/Kg	ND	ND	ND	ND	ND	0.013 J	ND	0.016 J	0.15 J
7440-43-9	CADMIUM	2.5	mg/Kg	1.8	0.93	1	0.67	1.9	3.8	0.26	1.4	1.8 J
7440-70-2	CALCIUM	NS	mg/Kg	2560	4000	1750	928	ND	ND	3530	ND	12300 J
7440-47-3	CHROMIUM, TOTAL	NS	mg/Kg	18.1	12.9	17.9	4.4	16.5	20.8	2	10.2	15 J
7440-48-4	COBALT	NS	mg/Kg	19.8	20	17.4	13.1	16.9	21.1	8.5	18.4	31.8 J
7440-50-8	COPPER	50	mg/Kg	91.5	68.4	79.1	30.6	87.8	73.8	104	148	145 J
7439-89-6	IRON	NS	mg/Kg	67300	51300	50400	47500	83900	124000	26300	63200	92500 J
7439-92-1	LEAD	63	mg/Kg	97.1	132	188	8.5	28.9	43.3	6.4	27.2	301 J
7439-95-4	MAGNESIUM	NS	mg/Kg	1940	2580	1620	365	476	701	1990	1430	1510 J
7439-96-5	MANGANESE	1600	mg/Kg	476	441	355	364	395	543	280	393	529 J
7439-97-6	MERCURY	0.18	mg/Kg	0.16	0.036 J	0.13	0.0024 J	0.015 J	0.01 J	0.013 J	0.017 J	0.56 J
7440-02-0	NICKEL	30	mg/Kg	23.7	20.3	18.2	12.3	21.6	28	8.7	17.5	31.9 J
7440-09-7	POTASSIUM	NS	mg/Kg	459	1640	499	366	544	460	1600	612	1380 J
7782-49-2	SELENIUM	3.9	mg/Kg	3.6	5.7	5.4	4	5	0.95 J	4.1	4	7.6 J
7440-22-4	SILVER	2	mg/Kg	ND	ND	ND	ND	ND	ND	0.42 J	ND	ND
7440-23-5	SODIUM	NS	mg/Kg	36.8 J	44.7 J	43.3 J	20.5 J	23.9 J	26 J	68.5	55.4	55 J
7440-28-0	THALLIUM	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	2.5 J
7440-62-2	VANADIUM	NS	mg/Kg	54	54.8	49.8	63	79.1	85	10.8	52.4	75.7 J
7440-66-6	ZINC	109	mg/Kg	97.1	101	284	43.6	77.1	121	24.1	73	355 J
	OTHER											
MOIST	MOISTURE, PERCENT	NS	%	11	32	25	4.6 J	13	15	6.8 J	8.3 J	70

ND - Not Detected
NS - No Standard
J - Estimated Result
JN - Estimated Presumptive Result

TABLE 15
FORMER J AND L STEEL SITE
VALIDATED SURFACE SOIL RESULTS FOR PART 375 ANALYSES
DETECTED COMPOUND SUMMARY

NYSDEC-J&L Steel Site 2012 Site Investigation Validated Soil Analytical Data (Part 375 Compound List)		6 NYCRR Part 375 Unrestricted Cleanup Objective (ppm) NS = not specified	Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	SS-29 SS-29 L1957-01 MITKEM L1957 SOIL 9/13/2012 12/13/2012	SS-30 SS-30 L1957-10 MITKEM L1957 SOIL 9/13/2012 12/13/2012	SS-31 SS-31 L1957-05 MITKEM L1957 SOIL 9/13/2012 12/13/2012	SS-32 SS-32 L1957-04 MITKEM L1957 SOIL 9/13/2012 12/13/2012	SS-33 SS-33 L1957-03 MITKEM L1957 SOIL 9/13/2012 12/13/2012	SS-34 SS-34 L1957-02 MITKEM L1957 SOIL 9/13/2012 12/13/2012	SS-35 SS-35 L1957-09 MITKEM L1957 SOIL 9/13/2012 12/13/2012	SS-36 SS-36 L1957-08 MITKEM L1957 SOIL 9/13/2012 12/13/2012	SS-37 SS-37 L1957-06 MITKEM L1957 SOIL 9/13/2012 12/13/2012	SS-38 SS-38 L1957-07 MITKEM L1957 SOIL 9/13/2012 12/13/2012
CAS NO.	COMPOUND		UNITS:										
	VOLATILES												
75-09-2	METHYLENE CHLORIDE	0.05	mg/Kg	ND	ND	ND	ND	ND	ND	0.0025 J	0.0027 J	0.0058 UJ	ND
	SEMIVOLATILES												
99-09-2	3-NITROANILINE	NS	mg/Kg	0.17 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
83-32-9	ACENAPHTHENE	20	mg/Kg	ND	ND	ND	ND	ND	ND	0.16 J	ND	ND	ND
208-96-8	ACENAPHTHYLENE	100	mg/Kg	ND	ND	ND	0.081 J	ND	ND	0.078 J	0.16 J	0.17 J	ND
120-12-7	ANTHRACENE	100	mg/Kg	ND	ND	ND	0.072 J	ND	ND	0.47	0.19 J	0.19 J	ND
56-55-3	BENZO(A)ANTHRACENE	1	mg/Kg	ND	ND	ND	0.19 J	ND	ND	1.6	0.57	0.5	ND
50-32-8	BENZO(A)PYRENE	1	mg/Kg	ND	ND	ND	0.2 J	ND	ND	1.6	0.44	0.43	ND
205-99-2	BENZO(B)FLUORANTHENE	1	mg/Kg	ND	ND	ND	0.35	ND	ND	1.9	0.77	0.64	0.095 J
191-24-2	BENZO(G,H,I)PERYLENE	100	mg/Kg	ND	ND	ND	0.16 J	ND	ND	1.1	0.32 J	0.28 J	ND
207-08-9	BENZO(K)FLUORANTHENE	0.8	mg/Kg	ND	ND	ND	0.15 J	ND	ND	1.1	0.34 J	0.34 J	ND
117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	NS	mg/Kg	ND	ND	ND	0.085 J	ND	ND	ND	ND	ND	ND
86-74-8	CARBAZOLE	NS	mg/Kg	ND	ND	ND	ND	ND	ND	0.29 J	ND	ND	ND
218-01-9	CHRYSENE	1	mg/Kg	ND	ND	ND	0.29 J	ND	ND	1.5	0.58	0.61	0.076 J
53-70-3	DIBENZ(A,H)ANTHRACENE	0.33	mg/Kg	ND	ND	ND	ND	ND	ND	0.27 J	0.082 J	0.085 J	ND
132-64-9	DIBENZOFURAN	NS	mg/Kg	ND	ND	ND	ND	ND	ND	0.13 J	ND	ND	ND
206-44-0	FLUORANTHENE	100	mg/Kg	ND	ND	ND	0.28 J	ND	ND	2.2	0.59	0.67	ND
86-73-7	FLUORENE	30	mg/Kg	ND	ND	ND	ND	ND	ND	0.15 J	ND	ND	ND
193-39-5	INDENO(1,2,3-C,D)PYRENE	0.5	mg/Kg	ND	ND	ND	0.15 J	ND	ND	1	0.29 J	0.28 J	ND
85-01-8	PHENANTHRENE	100	mg/Kg	ND	ND	ND	ND	ND	ND	1.4	0.12 J	0.28 J	ND
129-00-0	PYRENE	100	mg/Kg	ND	ND	ND	0.25 J	ND	ND	1.8	0.58	0.6	0.071 J
	PESTICIDES												
319-85-7	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	0.036	mg/Kg	ND	ND	0.0027 JN	ND	ND	ND	ND	ND	ND	ND
5103-74-2	BETA-CHLORDANE	NS	mg/Kg	ND	ND	ND	0.0021 JN	ND	ND	ND	0.0051 JN	0.0031 JN	ND
1024-57-3	HEPTACHLOR EPOXIDE	NS	mg/Kg	ND	ND	0.0028	ND	ND	ND	ND	ND	ND	ND
50-29-3	P,P'-DDT	0.0033	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	0.0059	ND
	PCBs												
11097-69-1	PCB-1254 (AROCLOR 1254)	0.1	mg/Kg	ND	ND	ND	0.03 J	0.026 J	ND	ND	ND	0.075	0.036 J
11096-82-5	PCB-1260 (AROCLOR 1260)	0.1	mg/Kg	ND	ND	ND	0.034 J	ND	ND	0.065	ND	0.051 J	0.044
	INORGANICS												
7429-90-5	ALUMINUM	NS	mg/Kg	4480	9920	3030	3080	2750	4590	3120	3160	3100	3150
7440-36-0	ANTIMONY	NS	mg/Kg	ND	ND	0.48 J	ND	0.54 J	0.41 J	0.63 J	0.59 J	ND	0.34 J
7440-38-2	ARSENIC	13	mg/Kg	3.2	8.9	3.1	3	4.9	2.7	3	3.3	3.7	2.7
7440-39-3	BARIUM	350	mg/Kg	153	531	103	160	111	238	155	157	147	139
7440-41-7	BERYLLIUM	7.2	mg/Kg	ND	0.33	0.018 J	ND	ND	ND	ND	ND	0.011 J	ND
7440-43-9	CADMIUM	2.5	mg/Kg	1.4	0.83	1.7	1.5	1.2	1	1.7	1.7	1	1.4
7440-70-2	CALCIUM	NS	mg/Kg	451	5180	ND	ND	ND	ND	ND	ND	ND	ND
16065-83-1	CHROMIUM III	30	mg/Kg	9.9	6.5	10	12	14	9.9	14	13	12	13
7440-47-3	CHROMIUM, TOTAL	NS	mg/Kg	9.9	6.5	10.5	12.2	14.3	9.9	13.8	12.6	12.2	13.5
7440-48-4	COBALT	NS	mg/Kg	22.2	37.6	22.1	21.3	21	20.6	20.7	22.3	20.1	21.9
7440-50-8	COPPER	50	mg/Kg	209	136	55.6	57.1	66.4	142	65.9	67.3	67.6	68.7
7439-89-6	IRON	NS	mg/Kg	69300	57900	78200	83800	74300	71000	77300	81100	65900	71000
7439-92-1	LEAD	63	mg/Kg	4.5	10.6	7.1	22	5.5	7.7	20.5	22.4	19.4	7.1
7439-95-4	MAGNESIUM	NS	mg/Kg	1510	4060	586	671	479	1690	603	678	661	731
7439-96-5	MANGANESE	1600	mg/Kg	264	699	383	378	413	280	372	410	379	367
7439-97-6	MERCURY	0.18	mg/Kg	0.3	0.0056 J	0.021 J	0.014 J	0.02 J	0.047	0.021 J	0.021 J	0.011 J	0.011 J
7440-02-0	NICKEL	30	mg/Kg	22.3	33.4	20.9	24.1	27.5	17.5	24.8	24.4	22.3	21.7
7440-09-7	POTASSIUM	NS	mg/Kg	878	2230	350	411	427	941	437	410	453	457
7782-49-2	SELENIUM	3.9	mg/Kg	2.2	2.4	ND	ND	0.73 J	2.3	ND	ND	1.8	ND
7440-22-4	SILVER	2	mg/Kg	1.3	ND	ND	ND	ND	0.57 J	ND	0.81 J	ND	ND
7440-23-5	SODIUM	NS	mg/Kg	15.6 J	148	22.1 J	20.6 J	24.4 J	14.9 J	25.8 J	20.6 J	27.4 J	21 J
7440-28-0	THALLIUM	NS	mg/Kg	ND	0.39 J	ND	ND	ND	ND	ND	ND	ND	ND
7440-62-2	VANADIUM	NS	mg/Kg	52.6	46.2	82.2	78.7	69.5	54	76.2	78.3	65.6	70
7440-66-6	ZINC	109	mg/Kg	21.9	77.6	52.4	51.5	49.3	29.7	54.7	53.4	52.1	44.1
	OTHER												
MOIST	MOISTURE, PERCENT	NS	%	6.7 J	8.7 J	9.9 J	7.4 J	11	8.5 J	8.1 J	7.5 J	7.6 J	5.6 J
SOLID	SOLIDS, PERCENT	NS	%	84.8	90.6	84.9	84.9	88.2	88	90.4	88.2	88.1	90.7

ND - Not Detected
NS - No Standard
J - Estimated Result
JN - Estimated Presumptive Result

Exhibit F

6 NYCRR Part 375-6.8(b)
Restricted use soil cleanup objectives
December 2006

(b) Restricted use soil cleanup objectives.

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
Metals							
Arsenic	7440-38-2	16[f]	16[f]	16[f]	16[f]	13[f]	16[f]
Barium	7440-39-3	350[f]	400	400	10,000 [d]	433	820
Beryllium	7440-41-7	14	72	590	2,700	10	47
Cadmium	7440-43-9	2.5[f]	4.3	9.3	60	4	7.5
Chromium, hexavalent [h]	18540-29-9	22	110	400	800	1[e]	19
Chromium, trivalent [h]	16065-83-1	36	180	1,500	6,800	41	NS
Copper	7440-50-8	270	270	270	10,000 [d]	50	1,720
Total Cyanide [h]		27	27	27	10,000 [d]	NS	40
Lead	7439-92-1	400	400	1,000	3,900	63[f]	450
Manganese	7439-96-5	2,000[f]	2,000[f]	10,000 [d]	10,000 [d]	1600[f]	2,000[f]
Total Mercury		0.81[j]	0.81[j]	2.8[j]	5.7[j]	0.18[f]	0.73
Nickel	7440-02-0	140	310	310	10,000 [d]	30	130
Selenium	7782-49-2	36	180	1,500	6,800	3.9[f]	4[f]
Silver	7440-22-4	36	180	1,500	6,800	2	8.3
Zinc	7440-66-6	2200	10,000 [d]	10,000 [d]	10,000 [d]	109[f]	2,480
PCBs/Pesticides							
2,4,5-TP Acid (Silvex)	93-72-1	58	100[a]	500[b]	1,000[c]	NS	3.8
4,4'-DDE	72-55-9	1.8	8.9	62	120	0.0033 [e]	17
4,4'-DDT	50-29-3	1.7	7.9	47	94	0.0033 [e]	136
4,4'- DDD	72-54-8	2.6	13	92	180	0.0033 [e]	14
Aldrin	309-00-2	0.019	0.097	0.68	1.4	0.14	0.19
alpha-BHC	319-84-6	0.097	0.48	3.4	6.8	0.04[g]	0.02
beta-BHC	319-85-7	0.072	0.36	3	14	0.6	0.09
Chlordane (alpha)	5103-71-9	0.91	4.2	24	47	1.3	2.9

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
delta-BHC	319-86-8	100[a]	100[a]	500[b]	1,000[c]	0.04[g]	0.25
Dibenzofuran	132-64-9	14	59	350	1,000[c]	NS	210
Dieldrin	60-57-1	0.039	0.2	1.4	2.8	0.006	0.1
Endosulfan I	959-98-8	4.8[i]	24[i]	200[i]	920[i]	NS	102
Endosulfan II	33213-65-9	4.8[i]	24[i]	200[i]	920[i]	NS	102
Endosulfan sulfate	1031-07-8	4.8[i]	24[i]	200[i]	920[i]	NS	1,000[c]
Endrin	72-20-8	2.2	11	89	410	0.014	0.06
Heptachlor	76-44-8	0.42	2.1	15	29	0.14	0.38
Lindane	58-89-9	0.28	1.3	9.2	23	6	0.1
Polychlorinated biphenyls	1336-36-3	1	1	1	25	1	3.2
Semivolatiles							
Acenaphthene	83-32-9	100[a]	100[a]	500[b]	1,000[c]	20	98
Acenapthylene	208-96-8	100[a]	100[a]	500[b]	1,000[c]	NS	107
Anthracene	120-12-7	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Benz(a)anthracene	56-55-3	1[f]	1[f]	5.6	11	NS	1[f]
Benzo(a)pyrene	50-32-8	1[f]	1[f]	1[f]	1.1	2.6	22
Benzo(b)fluoranthene	205-99-2	1[f]	1[f]	5.6	11	NS	1.7
Benzo(g,h,i)perylene	191-24-2	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Benzo(k)fluoranthene	207-08-9	1	3.9	56	110	NS	1.7
Chrysene	218-01-9	1[f]	3.9	56	110	NS	1[f]
Dibenz(a,h)anthracene	53-70-3	0.33[e]	0.33[e]	0.56	1.1	NS	1,000[c]
Fluoranthene	206-44-0	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Fluorene	86-73-7	100[a]	100[a]	500[b]	1,000[c]	30	386
Indeno(1,2,3-cd)pyrene	193-39-5	0.5[f]	0.5[f]	5.6	11	NS	8.2
m-Cresol	108-39-4	100[a]	100[a]	500[b]	1,000[c]	NS	0.33[e]
Naphthalene	91-20-3	100[a]	100[a]	500[b]	1,000[c]	NS	12

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
o-Cresol	95-48-7	100[a]	100[a]	500[b]	1,000[c]	NS	0.33[e]
p-Cresol	106-44-5	34	100[a]	500[b]	1,000[c]	NS	0.33[e]
Pentachlorophenol	87-86-5	2.4	6.7	6.7	55	0.8[e]	0.8[e]
Phenanthrene	85-01-8	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Phenol	108-95-2	100[a]	100[a]	500[b]	1,000[c]	30	0.33[e]
Pyrene	129-00-0	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Volatiles							
1,1,1-Trichloroethane	71-55-6	100[a]	100[a]	500[b]	1,000[c]	NS	0.68
1,1-Dichloroethane	75-34-3	19	26	240	480	NS	0.27
1,1-Dichloroethene	75-35-4	100[a]	100[a]	500[b]	1,000[c]	NS	0.33
1,2-Dichlorobenzene	95-50-1	100[a]	100[a]	500[b]	1,000[c]	NS	1.1
1,2-Dichloroethane	107-06-2	2.3	3.1	30	60	10	0.02[f]
cis-1,2-Dichloroethene	156-59-2	59	100[a]	500[b]	1,000[c]	NS	0.25
trans-1,2-Dichloroethene	156-60-5	100[a]	100[a]	500[b]	1,000[c]	NS	0.19
1,3-Dichlorobenzene	541-73-1	17	49	280	560	NS	2.4
1,4-Dichlorobenzene	106-46-7	9.8	13	130	250	20	1.8
1,4-Dioxane	123-91-1	9.8	13	130	250	0.1[e]	0.1[e]
Acetone	67-64-1	100[a]	100[b]	500[b]	1,000[c]	2.2	0.05
Benzene	71-43-2	2.9	4.8	44	89	70	0.06
Butylbenzene	104-51-8	100[a]	100[a]	500[b]	1,000[c]	NS	12
Carbon tetrachloride	56-23-5	1.4	2.4	22	44	NS	0.76
Chlorobenzene	108-90-7	100[a]	100[a]	500[b]	1,000[c]	40	1.1
Chloroform	67-66-3	10	49	350	700	12	0.37
Ethylbenzene	100-41-4	30	41	390	780	NS	1
Hexachlorobenzene	118-74-1	0.33[e]	1.2	6	12	NS	3.2
Methyl ethyl ketone	78-93-3	100[a]	100[a]	500[b]	1,000[c]	100[a]	0.12

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
Methyl tert-butyl ether	1634-04-4	62	100[a]	500[b]	1,000[c]	NS	0.93
Methylene chloride	75-09-2	51	100[a]	500[b]	1,000[c]	12	0.05
n-Propylbenzene	103-65-1	100[a]	100[a]	500[b]	1,000[c]	NS	3.9
sec-Butylbenzene	135-98-8	100[a]	100[a]	500[b]	1,000[c]	NS	11
tert-Butylbenzene	98-06-6	100[a]	100[a]	500[b]	1,000[c]	NS	5.9
Tetrachloroethene	127-18-4	5.5	19	150	300	2	1.3
Toluene	108-88-3	100[a]	100[a]	500[b]	1,000[c]	36	0.7
Trichloroethene	79-01-6	10	21	200	400	2	0.47
1,2,4-Trimethylbenzene	95-63-6	47	52	190	380	NS	3.6
1,3,5- Trimethylbenzene	108-67-8	47	52	190	380	NS	8.4
Vinyl chloride	75-01-4	0.21	0.9	13	27	NS	0.02
Xylene (mixed)	1330-20-7	100[a]	100[a]	500[b]	1,000[c]	0.26	1.6

All soil cleanup objectives (SCOs) are in parts per million (ppm).
NS=Not specified. See Technical Support Document (TSD).

Footnotes

[a] The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.

[b] The SCOs for commercial use were capped at a maximum value of 500 ppm. See TSD section 9.3.

[c] The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm. See TSD section 9.3.

[d] The SCOs for metals were capped at a maximum value of 10,000 ppm. See TSD section 9.3.

[e] For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.

[f] For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

[g] This SCO is derived from data on mixed isomers of BHC.

[h] The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

[i] This SCO is for the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

[j] This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See TSD Table 5.6-1.

Exhibit G

IRM Work Plan
J&L Steel
May 2018
(on CD)

Exhibit H

SC Report
Former J&L Steel Site
August 2016
(on CD)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau C
625 Broadway, 11th Floor, Albany, NY 12233-7014
P: (518) 402-9662 I F: (518) 402-9679
www.dec.ny.gov

October 04, 2018

Mr. Peter D. Lopez
Regional Administrator
US EPA Region 2
290 Broadway
New York, NY 10007-1866

Dr. James S. Haklar, Ph.D., P.E.
Regional PCB Coordinator
US EPA Region 2
2890 Woodbridge Ave
Edison, NJ 08837-3679

Mr. Keith J. Zimmerman
Director
St. Lawrence County Planning Office
48 Court St
Canton, NY 13617-1169

Dear Sirs:

Re: J&L Steel
St. Lawrence County, site no. 645029
Notification of Start of PCB Interim Remedial Measure (IRM) field work

This letter serves as formal notification of the start of the PCB IRM field work, pursuant to the IRM Work Plan dated May 2018 that was enclosed with the *Notice of Self-Implementation of Interim Remedial Measure*, dated May 18, 2018.

Mobilization for the IRM field work is planned on or around October 15, 2018. It is anticipated that all field work will be completed within one month of that start date. The plan is to excavate the TSCA area first, and collect confirmatory samples there. While the analytical results are pending for the confirmatory samples, the excavations will continue at the other, non-TSCA areas.

Please contact me with any questions via email at william.wu@dec.ny.gov, or via phone at (518) 402-9662.

Sincerely,

William Wu
Assistant Engineer (Environmental)
Remedial Bureau C
Division of Environmental Remediation

ec: G. Heitzman, NYSDEC
G. McCullouch, NYSDEC
M. Duffany, NYSDEC
S. Berninger, NYSDOH
S. Karpinski, NYSDOH
M. Schuck, NYSDOH
M. Vetter, Parsons
C. Harewood, USEPA
B. Conetta, USEPA
M. Burt, DANC
C. Tuttle, DANC
C. Westbrook, Clifton-Fine EDC
H. Ames, St. Lawrence County
J. Pfotenhauer, St. Lawrence County
G. Bowitch, St. Lawrence County
D. Soper, St. Lawrence County

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

RECEIVED
JAN 02 2019
BUR. OF TECH. SUPPORT

Mr. William Wu
Project Manager
New York State Department of Environmental Conservation
625 Broadway, 11th fl.
Albany, New York 12233-7014

Re: J&L Steel, Town of Clifton, St. Lawrence County, New York Site no. 645029 Approval for Cleanup and Disposal of PCB Remediation Waste under 40 CFR §761.61(a), and Approval for Characterization and Verification Sampling under 40 CFR §761.61(c).

Dear Mr. Wu:

This letter is in response to the May 18, 2018, document entitled "Notice of Self-Implementation of Interim Remedial Measure, J&L Steel, Town of Clifton, St. Lawrence County" (Notification), prepared by the New York State Department of Environmental Conservation, on behalf of Town of Clifton, St. Lawrence County, New York. The Notification concerns the Town of Clifton's plan to address polychlorinated biphenyl (PCB) contamination in soil at the Jones & Laughlin (J&L) Steel Site (the Site) located at the crossroads of New York State (NYS) Route No. 3 and CTY Route No. 60 in Town of Clifton. The Notification will be referred to as the "Application." The PCB-contaminated soil is considered to be PCB remediation waste that is subject to the applicable cleanup levels under the federal regulations at 40 CFR §761.61(a)(4).

The work plan describes six "hot spots" areas, Excavation Areas A through F, where PCB concentrations greater than 1 ppm will be excavated. With the exception of the characterization and verification sampling requirements under Subpart N of 40 CFR Part 761, the proposed removal of PCB remediation waste meets the self-implementing cleanup and disposal requirements under 40 CFR §761.61(a). In addition, based on the characterization and proposed verification sampling, in accordance with 40 CFR §761.61(c), the United States Environmental Protection Agency (EPA) finds that this sampling, in this proposed remediation context, is acceptable for purposes of determining compliance with-the High Occupancy Area PCB cleanup standard of 1 ppm without restriction.

EPA hereby approves the Application and the Town of Clifton may proceed with the aforementioned cleanup and disposal under 40 CFR §761.61(a) and (c), subject to this Approval. This Approval constitutes an order under the authority of Section 6 of the Toxic Substances Control Act, 15 U.S.C. § 2605. This Approval only specifies the applicable requirements under TSCA and does not cite to or make any determination regarding the requirements that may be applicable under other federal, state or local law. TSCA disposal requirements do not supersede other, more stringent, applicable federal, state or local laws.

Please note that this Approval does not constitute a determination by EPA that the transporters or the disposal facilities selected by St. Lawrence County Planning Office are authorized to conduct the activities set forth in the Application. St. Lawrence County Planning Office is responsible for ensuring that its selected transporters and disposal facilities are authorized to conduct any such activities in accordance with all applicable federal, state and local statutes and regulations.

Should you have any questions concerning this matter, please feel free to contact contact Charles Harewood, of my staff, at (212) 637-3753 or at harewood.charles@epa.gov.

Sincerely,

John Filippelli, Director
Clean Air and Sustainability Division

cc: Keith J. Zimmerman, Director, St. Lawrence County Planning Office

APPENDIX C

SUBMITTAL LOG AND SUBMITTALS

Submittal 01 - Waste Profile

Submittal 02 – Health and Safety Plan

Submittal 03 – Community

Submittal 04 – Community Air Monitoring Plan

Submittal 05 – Waste Characterization

Submittal 06 – Pre-Excavation Information

Submittal 07 – Confirmatory Samples

Submittal 08 – Wipe Samples

Submittal 09 – Waste Manifests

Submittal 01 - Waste Profile

US ecology

Profile Tracking # _____

WASTE PROFILE FORM

For assistance in completing this document or for additional information on service offerings, please visit our website at www.usecology.com, or call 800-592-5489.

US Ecology will choose the appropriate facility and method of waste management for your waste from the technologies offered at each operation.

If you wish to direct this waste to a specific facility(s) or treatment technology please indicate here:

Waste Common Name:

Section 1 – Generator & Customer Information

Generator EPA ID # NYR000197608

NAICS/SIC Code

Generator JJL STEEL NYSDEC SITE

Facility Address 4669 STATE RT 3

City STAR LAKE State NY Zip 13690

24-hour Emergency Response Number
585 - 594-5545

Mailing Address 48 COURT ST

City CANTON State NY Zip 13617

Generator Contact Matthew L. Vetter

Title Agent for NYSDEC

Phone 315-552-9742 Fax 315-451-9570

E-mail Matthew.Vetter@parsons.com

Internal Use Only: EQ Division

EQ Customer No.

Invoicing Company

Address

City State Zip

Country

Invoicing Contact

Phone Fax

Technical Contact

Phone Fax

Cell Phone

E-mail

Section 2 – Shipping & Packaging Information

2.1) Shipping Volume & Frequency:

a) Volume of Waste to be Shipped: 200 TONS

b) Frequency: ☑ One time ☐ Month ☐ Year ☐ Other:

2.2) DOT Information

a) Is this a U.S. Department of Transportation (USDOT) Hazardous Material? ☑ Yes ☐ No

b) If "Yes", indicate the proper shipping name per 49CFR 172.101 Hazardous Materials Table:

UN3432 POLYCHLORINATED BIPHENYLS, SOLID, PG II

Section 3 – Special Properties

3.1) Color BROWN

3.2) Odor ☑ None ☐ Ammonia ☐ Amines ☐ Mercaptans ☐ Sulfur ☐ Organic Acid ☐ Amines/Ammonia ☐ Other:

3.3) Consistency at 70°F: ☑ Solid ☐ Dust/Powder ☐ Debris ☐ Sludge ☐ Liquid ☐ Gas/Aerosol ☐ Varies

3.4) What is the pH? ☐ ≤2 ☐ 2.1-4.9 ☐ 5 – 10 ☐ 10.1 – 12.4 ☐ ≥12.5 ☑ N/A

3.5) What is the flash point? ☐ <90°F ☐ 90-139°F ☐ 140-199°F ☐ >200°F ☑ N/A

3.6) Does this waste exhibit any of the following properties? **(check all that apply)**

☑ None	☐ Free Liquids	☐ Metal Fines	☐ Water Reactive	☐ Biohazard
☐ Shock Sensitive	☐ Oily Residue	☐ Dioxins	☐ Furans	☐ Aluminum
☐ Asbestos – non-friable	☐ Asbestos – friable	☐ Other Radioactive	☐ Air Reactive	☐ Isocyanates
☐ Biodegradable Sorbents	☐ Pyrophoric	☐ Reactive Sulfide	☐ Reactive Cyanide	☐ Explosives
☐ Temperature Controlled Organic Peroxide		☐ NORM	☐ TENORM	

Section 4 – Composition and Generating Process

4.1) Provide a physical and chemical composition of the waste (e.g. soil, water, PPE, debris, etc.). List the percent ranges of the material, either estimated or known.

SOIL	99 to 100 %	PCB	0 to >1 %
POLY LINER	0 to 1 %		to %

4.2) Provide a description of the generating process. *Remediation & IDW Sites: please provide a site history.*

REMEDIATION OF PCB IMPACTED SOIL AREAS PER SUBMITTED WORK PLAN FOR S, T, E

4.3) Are there any known previous handling or treatment issues involving this waste? ☐ Yes* ☑ No
*If yes, describe:

Section 5 – Hazardous Wastes

As determined by 40 CFR, Part 261 and State Rules: **Please list applicable waste code(s):**

5.1) Is this waste exempted from RCRA? ☐ Yes, please provide exemption: ☑ No

5.2) Is this an EPA RCRA listed hazardous waste (F, K, P or U)? ☐ Yes: ☑ No
a) For F006–F009, F012, does this come from a generator that conducts a cyanide plating process? ☐ Yes ☐ No

5.3) Is this an EPA RCRA characteristic hazardous waste (D001-D043)? ☐ Yes: ☑ No

5.4) Do any State Specific Hazardous Waste Codes apply? ☑ Yes: PCB1, B007 ☐ No

If you answered 'no' to 5.2, 5.3 and 5.4, please proceed to Section 6.

5.5) EPA Source Code: EPA Form Code:

5.6) Waste Code Determination Is Based On: ☐ Generator Knowledge ☑ Analysis ☐ MSDS
Analysis and/or MSDS may be required for review and approval for hazardous and non-hazardous waste streams.

5.7) Does this waste exceed Land Disposal Restriction levels? ☐ Yes ☑ No

a) Is this stream a wastewater (WW) or non-wastewater (NWW)? ☐ WW ☑ NWW
b) If this waste stream is greater than 50% soil, does it meet the alternative soil treatment standards of 40CFR 268.49? ☐ Yes ☑ No
c) Does this waste contain greater than 50% debris, by volume? ☐ Yes ☑ No
(Debris is greater than 2.5 inches in size.)
d) If the debris is larger than 3 ft x 3 ft x 3 ft, please provide the approximate dimensions and weight:

5.8) If this is a characteristic hazardous waste, does it contain Underlying Hazardous Constituents? ☐ Yes* ☑ No

*If Yes, please list:
For a complete list of UHC constituents, please refer to 40 CFR 268.48

Section 6 – Non-Hazardous Wastes

Please list applicable waste code(s):

6.1) Do any State Specific Non-Hazardous Waste Codes apply? ☐ Yes ☑ No

6.2) Is this a Universal (UNIV) waste or a Recyclable Good (RG)? ☐ UNIV ☐ RG ☑ N/A

6.3) Is this waste used oil as defined by 40 CFR Part 279? ☐ Yes ☑ No

a) If yes, is the total halogen content of the used oil waste stream greater than 1,000 ppm? ☐ Yes ☐ No

b) If yes, what is the source of the halogen content?

- ☐ This is a metalworking oil/fluid containing chlorinated paraffins.
- ☐ This is used oil contaminated with chlorofluorocarbons from refrigeration units.
- ☐ This oil contains halogenated solvents. List specific solvents: _____
- ☐ Other, describe:

Section 7 – TSCA Information

7.1) What is the concentration of PCBs in the waste? ☐ None ☐ 0-49 ppm ☑ 50-499 ppm ☐ 500+ ppm

7.2) Does the waste contain PCB contamination from a source with a concentration ≥ 50 ppm? ☐ Yes ☐ No ☑ Unknown

If you answered "none" or "0-49 ppm" to 7.1 and "no" to 7.2, please proceed to Section 8.

7.3) Has this waste been processed into a non-liquid form? ☐ Yes* ☑ No

*If yes, what was the concentration of PCBs prior to processing? ☐ 0-499 ppm ☐ 500+ ppm

7.4) Is this non-liquid PCB waste in the form of soil, rags, debris, or other contaminated media? ☑ Yes ☐ No

7.5) Are you a PCB capacitor manufacturer or a PCB equipment manufacturer? ☐ Yes ☑ No

7.6) Has the PCB Article (e.g., transformer, hydraulic machine, PCB-contaminated electrical equipment) been drained/flushed of all PCBs and decontaminated in accordance with 40 CFR 761.60(b)? ☑ N/A ☐ Yes ☐ No

Section 8 – Clean Air Act Information

8.1) Is this waste subject to regulation under 40 CFR, Part 264, Subpart CC (VOC > 500 ppmw)? ☐ Yes ☑ No

8.2) Is this waste subject to regulation under 40 CFR, Part 63, Subpart DD (VOHAP > 500 ppmw)? ☐ Yes ☑ No

8.3) Is the site, or waste, subject to any other NESHAP/MACT standard(s)? ☐ Yes* ☑ No

*If Yes this document serves as notification that this waste contains chemicals _____, _____ required to be managed in accordance with Part ☐ 61 ☐ 62 ☐ 63 Subpart _____ of NESHAP/MACT standards.

8.4) Does this waste stream contain Benzene? ☐ Yes ☑ No

If you answered "no" to 8.4, please proceed to Section 9.

8.5) Does the waste stream come from a facility subject to 40 CFR 61, Subpart FF (Benzene NESHAP)?

☐ Yes, please provide the SIC/NAICS code: _____ ☑ No

If you answered "no" to questions 8.5, please proceed to Section 9.

8.6) Does your facility manage the waste subject to Benzene NESHAP in a manner other than shipping off-site?

☐ Yes, please specify: _____ ☑ No

8.7) Is the generating source of this waste a facility with Total Annual Benzene (TAB) ≥10 Mg/year? ☐ Yes ☑ No

8.8) Does the waste contain >10% water? ☐ Yes ☑ No

8.9) What is the TAB quantity for your facility? _____ Mg/Year

8.10) What is the total Benzene concentration in your waste? _____ Percent or _____ ppmw.

Supporting analysis must be attached. Do not use TCLP analytical results. Acceptable laboratory methods include 8020, 8240, 8260, 602 and 624.

Section 9 – Certification

I certify that all information (including attachments) is complete and factual and is an accurate representation of the known and suspected hazards, pertaining to the waste described herein. I authorize EQ's personnel to add supplemental information to the waste approval file, provided I am contacted and give verbal permission. I authorize EQ's personnel to obtain a sample from any waste shipment for purposes of verification and confirmation. I agree that, if EQ approves the waste described herein, all such wastes that are transported, delivered, or tendered to EQ by Generator or on Generator's behalf shall be subject to, and Generator shall be bound by, the attached Standard Terms and Conditions.

If I am an agent acting on behalf of the generator, I also certify that I have permission to sign any and all waste characterization paperwork on the generator's behalf and that I can produce such certification in writing upon request.

Generator Signature [signature] as agent for NYSDEC Printed Name Matthew L. Vetter

Company Parsons Title Agent for NYSDEC Date 10/31/18

US ecology

RE-APPROVAL NOTICE AND/OR PROFILE CHANGES

Customer Account: 006237 December 4, 2018

Fax: (585) 594-5675

ENVIRONMENTAL MANAGER
TREC ENVIRONMENTAL INC
1018 WASHINGTON ST
SPENCERPORT, NY 14559-5545

Thank you for selecting EQ as your environmental management partner. In the event that a waste stream has changed, the generator may use this form to amend and/or re-approve the waste profile.

Generator Name: USEPA REGION II/JONES & LAUGHLIN **EPA ID No.:** NYR000197608

Waste Common Name: PCB Soil
Waste Code(s): B007 PCB1

Approval No.: K180025WDI **Expiration Date:** 11/2/2019
EQ Facility Name & ID Number: Wayne Disposal, Inc. (MID048090633)

Please select one of the following options:

- ☐ Re-approval with No Profile Change
- ☐ Re-approval with Profile Change
- ☒ Profile Change

Please provide a detailed description below of the changes to the waste stream:

Please amend the profile one time only for free liquids due to incidental sources (snow) and meeting the definition under 761.60(a)(3). No other constituents of concern apply. Analysis on file is representative.
In reference to manifest 012728689FLE.

This Re-approval Notice acknowledges the acceptability of waste material(s) into the noted EQ facility(s) and ensures each facility has the appropriate permit(s) issued by federal and state regulatory agencies to properly transport, treat, and/or dispose of the waste material(s). Upon signature and submittal of this form, the waste stream will be reviewed by EQ. The expiration will be extended for one year, unless you are contacted otherwise.

I certify that all information (including attachments) is complete and factual and is an accurate representation of the known and suspected hazards, pertaining to the waste described herein. I authorize EQ to add supplemental information to the waste approval file, provided I am contacted and give verbal permission. I authorize EQ to obtain a sample from any waste shipment for purposes of verification and confirmation. I agree that, if EQ approves the waste described herein, all such wastes that are transported, delivered, or tendered to EQ by Generator or on Generator's behalf shall be subject to, and Generator shall be bound by, the Standard Terms and Conditions associated with the original Waste Profile Form. (The Standard Terms and Conditions are incorporated into the Waste Profile Form as Page 4.)

Generator Signature: [signature] as agent for NYSDEC Printed Name: Matthew L. Vetter as agent for NYSDEC

Company: Parsons - agent for NYSDEC Date: 12/4/18

Please return this form via fax (800) 592-5329 or email customer.service@usecology.com. Questions? Please call (800) 592-5489.

US ecology

NORM/TENORM WASTE ADDENDUM

PROFILE#_____

A. GENERATOR INFORMATION		B. DISPOSAL SITE
1. Generator:	J&L Steel NYSDEC Site	☐ Wayne Disposal Landfill
2. EPA ID No.:	NYR000197608	☐ Michigan Disposal Treatment Plant
3. Common Name of Material:	PCB Area A soil	
4. Material Description:	Remediation of PCB Soil	

C. Generally Exempt Unimportant Quantities of Source Material Uniformly Dispersed in Soil or other Media

1. **Complete this Section if waste is being profiled as generally exempt (< 0.05% by weight). Does the material contain? (check all that apply)**

☐ Natural, Refined, or Depleted Uranium ☐ Thorium (Th-232) ☑ Both Uranium and Thorium

2. **Source Material Sum of Fractions (SOF) Formulas:**

Natural Uranium + Thorium	Refined Uranium + Thorium	Depleted Uranium + Thorium
$\frac{Conc_{U\text{-}238}}{167\ pCi/g} + \frac{Conc_{Th\text{-}232}}{55\ pCi/g} \le 1$	$\frac{Conc_{U\text{-}Total}}{333\ pCi/g} + \frac{Conc_{Th\text{-}Total}}{110\ pCi/g} \le 1$	$\frac{Conc_{U\text{-}238}}{169\ pCi/g} + \frac{Conc_{Th\text{-}232}}{55\ pCi/g} \le 1$

Notes:
1. *Unless otherwise noted, use parent nuclide in equations*
2. *Th-232 will routinely be considered to be in equilibrium with all progeny.*
3. *Total Uranium = U-234 + U-235 + U-238.*
4. *Total Thorium = Th-232 + Th-228*
5. *Refined Uranium refers to chemical forms where the equilibrium state of the uranium decay chain has been disrupted.*
6. *Depleted Uranium contains U-235 at < 0.71% by weight*

3. **Use this space to perform source material SOF calculations:** *(if waste only contains U or Th, enter zero for other nuclide)*

1.49/167+1.13/55=.0089+.021=.0388

D. NORM/TENORM other than Source Material Dispersed in Soil or Other Media

1. Does the waste contain:	☑ Ra-226	☐ Pb-210	☐ K-40	☐ Other(s)
2. Waste Concentration (pCi/g):	5.48			
3. WDI Site Disposal Limits: (Note 1)	*50*	*260*	*(Note 2)*	*(Note 3)*

Notes:
1. MDI may receive higher concentrations for treatment or blending. All treated waste intended for disposal at WDI must meet the limits shown in D.3.
2. K-40 may not be enriched beyond its natural concentration.
3. Contact WDI Waste Approvals.

E. NRC or Agreement State Exempted Products, Devices, or Items

1. Type of exempt item(s) or product(s) _____ No. of Items: _____ ☐ Check if additional inventory information is attached.
2. The items are exempt under:
(cite regulatory reference, i.e. 10CFR30.14) _____

Notes:
1. Material must be transported in accordance with DOT Rules and Regulations.
2. The generator must provide an estimated inventory of activity, by isotope, for each container.
3. Individual packages may bear White I or Yellow II Labels as long as the maximum surface does rate on any package does not exceed 10 mrem/hr.

F. CERTIFICATION STATEMENT:

I certify that the contents of the package(s) being shipped to WDI/MDI are not licensed or regulated at the point of generation by the US Nuclear Regulatory Commission or an Agreement State, in accordance with 10 CFR 40.13 *(cite regulation or other document that confirms materials are not licensed by the NRC or an agreement state).*

Matthew L. Vetter as Agent for NYSDEC
Name / Title (please print)

Matthew L. Vetter as agent for NYSDEC 10/31/18
Signature Date

Revised 1/26/2015

V e o l i a E S T e c h n i c a l S o l u t i o n s L. L. C.

WASTESTREAM INFORMATION PROFILE

Disposal Code

|__| **Recertification**

__ **Veolia ES Location** SYRACUSE NY OFFICE SYRACUSE NY |001 | 008 |

|__| **Invoice Address** **OFFICE** **CITY** **ST**

Veolia ES TSDF requested _____ **Technology requested** _____ **Generator No.** 610224 **Generator EPA ID No.** NYR000197608

1. Generator Name BENSON MINES SITE **Generator State No.** _____

Address STATE ROUTE 3 & COUNTY ROAD 60 **State Wastestream No.** _____

City CLIFTON **State** NY **Country** US **ZIP** 13690 ____

NAICS(SIC) Code 9999 _____ _____ _____ **Source** G09 **Origin** 1 **Form** W101 **System Type** _____

---

2. Waste Name WASTEWATER **Lab or Waste Area** _____

3. Process Generating Waste

Process By-product

4. Shipping Name NON-HAZARDOUS LIQUID, n.o.s.

Hazard Class NONE **UN/NA No.** NONE **PG** ___ **RQ amt** 0 **lb** **Waste:** N **PIH:** N **IH:** N **DWW:** N **P:** N

RQ Des: 1._____ 2._____

DOT Des: 1._____ 2._____

5. Waste Codes NONE _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____

Wastewater _____ **Non Wastewater** X **Sub Category** _____ **Mix:** N **Sol:** N

---

6. Physical and chemical properties:

pH

a ___ < 2
b ___ 2 - 5
c ___ 5 - 9
d ___ 9 - 12.5
e ___ > 12.5
6.0- 8.0 exact

Specific Gravity

a ___ <.8
b ___ .8 - 1.0
c X 1.0
d ___ 1.0 - 1.2
e ___ > 1.2
_____-_____ exact

Flash Point(F)

a ___ < 80
b ___ 80 - 100
c ___ 100 - 140
d ___ 140 - 200
e X > 200
f ___ no flash _____-_____ exact

Solids

0 - 0% suspended
0 - 0% settleable
0 - 0% dissolved
0 - 0 % ash
0 - 0 % water solubility
0 - 0 BTU/lb

Free Liquid 0 - 0 %
VOC 0 - 0 %

Physical State

s ___ solid
m ___ semi-solid
l X liquid
p ___ pumpable semi-solid
f ___ flowable powder
g ___ gas
a ___ aerosol
r ___ pressurized liquid
d ___ debris per 40 CFR 268.45
h ___ sharps
q ___ pumpable liquid

Hazardous Characteristics

a ___ air reactive
w ___ water reactive
c ___ cyanide reactive
f ___ sulfide reactive
e ___ explosive
o ___ oxidizing acid
p ___ peroxide former
r ___ radioactive or NRC regulated
s ___ shock sensitive
t ___ temp sensitive
m ___ polymerization/monomer
n ___ OSHA carcinogen
i ___ infectious
h ___ inhalation hazard
Zone: _

Odor

a none X
b mild _____
c strong _____
describe _____

Halogens

Br .0 - .0 % Bromine
Cl .0 - .0 % Chlorine
F .0 - .0 % Fluorine
I .0 - .0 % Iodine

Layers: **| a** _____ **multilayered:** **b** _____ **bi-layered:** **c** X **single phase |**

	Top Layer	Second Layer	Bottom Layer	**Color**
Viscosity by Layer:	___ high(syrup)	___ high(syrup)	___ high(syrup)	CLR
	___ medium(oil)	___ medium(oil)	___ medium(oil)	___
	X low(water)	___ low(water)	___ low(water)	_____
	___ solid	___ solid	___ solid	

WIP NO. 582483

WASTESTREAM INFORMATION PROFILE

Used oil y/n _N_ **HOC < 1000 ppm** ___ **HOC > 1000 ppm** ___

---

7. Chemical Composition [M=Marine Pollutant, S=Severe Marine Pollutant, O=Ozone Depleting Substance, U=Underlying Hazardous Constituent, B=Benzene NESHAP, T=TRI Chemical, C=OSHA Carcinogen]

	Constituents	Ranges	Units	
M, T,U,	DI-N-BUTYL PHTHALATE	12.00	12.00	M
	CALCIUM	57800.00	57800.00	M
	IRON	23300.00	23300.00	M
	MANGANESE POWDER	2360.00	2360.00	M
T,U,	NAPHTHALENE	16.00	16.00	M
	POTASSIUM	5210.00	5210.00	M
	SODIUM	101000.00	101000.00	M
	WATER	100.00	100.00	%
T,	ALUMINUM POWDER, UNCOATED	1300.00	1300.00	M
	MAGNESIUM, POWDER	9050.00	9050.00	M
T,U,	O- XYLENE	2.20	2.20	M

Other:

8. Is the wastestream being imported into the USA? Yes __ No_X_
9. Does the wastestream contain PCBs regulated by 40CFR? Yes __ No_X_
   PCB Concentration _____.00 ppm
10. Is the wastestream subject to the Marine Pollutant Regulations? Yes __ No_X_
11. Is the wastestream from an industry regulated under Benzene NESHAP? Yes __ No_X_
    If yes:
    Is the wastestream subject to Notification/Control Requirements? Yes __ No_X_
    Benzene Concentration _____.00 ppm
    Does it contain >= 10% water? Yes __ NoX_
    What is the TAB at your facility? ___.00 Mg/Yr
12. Is the wastestream subject to RCRA subpart CC controls? Yes __ No_X_
    Volatile Organic Concentration _____.00 ppmw
    CC Approved Analytical Method? Yes __ No_X_
    Generator Knowledge? Yes __ No_X_
13. Is the wastestream from a CERCLA or state mandated cleanup? Yes __ No_X_

---

14. **Container Information :**

Packaging: _____ Type/Size: __ _____
_____ Type/Size: __ _____

Shipping Frequency: Units _____.00 Per Day _ Per Week _ Per Month _ Per Qtr _ Per Year _ One Time _
UOM ___ DESCRIPTION: _____

---

15. **Additional Information :**

WASTESTREAM INFORMATION PROFILE

GENERATOR CERTIFICATION

I hereby certify that all information submitted in this and all attached documents contains true and accurate descriptions of this waste. Any sample submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. All relevant information regarding known or suspected hazards in the possession of the generator has been disclosed. I authorize sampling of any waste shipment for purposes of recertification.

Name(Print or Type)	Phone	Date

Signature	Title

If approved for management, Veolia ES has all the necessary permits and licenses for the waste that has been characterized and identified by this profile.

WIP NO. 582483

Submittal 02 – Health and Safety Plan

TREC Environmental, Inc.

Site Health and Safety Plan

Former J & L Steel
Clifton, New York

Prepared September 26, 2018

1018 Washington Street
Spencerport, New York 14559
Phone: 585-594-5545
Fax 585-594-5675

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SITE SPECIFIC EMERGENCY RESPONSE AND CONTINGENCY PLAN

It is essential that site personnel be prepared in the event of an emergency. Emergencies can take many forms: illnesses or injuries, chemical exposure, fires, explosions, spills, leaks, releases of harmful contaminants or sudden changes in weather. The following outlines the general procedures for emergencies.

EMERGENCY CONTACTS/TELEPHONE NUMBERS

FIRE:	**911**
POLICE:	**911**
AMBULANCE:	**911**
HOSPITAL: Clifton Fine Hospital	**315-848-3351**
Address: 1014 Oswegatchie Trail Rd Star Lake, NY 13690	
POISON CONTROL CENTER:	**1-800-222-1222**
NATIONAL RESPONSE CENTER:	**1-800-424-8802**
CHEMTREC:	**1-800-424-9300**
TREC CORPORATE OFFICE:	**585-594-5545**
TREC PROJECT MANAGER: Keith Hambley	**585-314-6189 cell 585-594-5545**
TREC SUPERVISOR Steve Warner	**716-979-0090, cell**
CLIENT CONTACT: Parsons Jeremy Neumann	**315-558-1978**

DIRECTIONS TO MEDICAL FACILITIES

The nearest hospital to the site is the Clifton Fine Hospital located at 1014 Oswegatchie Trail Rd, Star Lake, New York. Directions from the site to the hospital are located below.

1. Head south on Adirondack Park/Adirondack Park Preserve toward NY-3 E

Clifton-Fine Hospital 1014 Oswegatchie Trail Rd, Star Lake, NY 13690

2. Turn right onto NY-3 W

3. Turn left onto Marshall Ave

4. Slight left onto Sheltons Crest Rd

5. Turn left onto Youngs Rd

Adirondack Park, Star Lake, NY 13690 to Clifton-Fine Hospital

Drive 4.5 miles, 11 min

Nearest Hospital Route

Imagery ©2018 Google, Map data ©2018 Google 2000 ft

Adirondack Park

Star Lake, NY 13690

1. Head south on Adirondack Park/Adirondack Park Preserve toward NY-3 E

367 ft

2. Turn right onto NY-3 W

1.7 mi

3. Turn left onto Marshall Ave

0.1 mi

4. Slight left onto Sheltons Crest Rd

0.3 mi

5. Turn left onto Youngs Rd

0.4 mi

6. Turn right onto Lake Rd

1.9 mi

7. Turn left

Destination will be on the left

180 ft

Clifton-Fine Hospital

1014 Oswegatchie Trail Rd, Star Lake, NY 13690

6. Turn right onto Lake Rd

7. Turn left

Destination will be on the left

Adirondack Park, Star Lake, NY 13690 to Clifton-Fine Hospital

Nearest Hospital Route

Drive 4.5 miles, 11 min

A map depicting the above described route is in the Appendices.

1.0 INTRODUCTION

TREC Environmental, Inc. (TREC) prepared this Site-specific Health and Safety Plan (HASP) in accordance with the Occupational Safety and Health Administration's (OSHA's) Hazardous Waste Operation and Emergency Response Standard (29 CFR 1910.120 and 1926.65) and other OSHA requirements for job safety and health protection, and TREC Standard Operating Procedures (SOPs). In addition, various guidance documents were also consulted in preparing this HASP including the National Institute for Occupational Safety and Health's (NIOSH's) Occupation Safety and Health Guidance Manual for Hazardous Waste Site Activities. This HASP addresses the work associated with investigation and remediation activities at former J & L Steel property located in Clifton, New York (hereafter referred to as the "Site").

The HASP will be implemented by the Site Health and Safety Officer (SHSO), designated herein, during Site work. The HASP attempts to identify all potential hazards at the Site; however, Site conditions are dynamic and new hazards may appear constantly. Personnel must remain alert to existing and potential hazards as Site conditions change and review site-specific Job Safety Analysis (JSAs) as provided in Appendix K. In the absence of a JSA, the personnel performing work must prepare a field JSA and receive clearance from the SHSO or other designated competent safety official prior to performing any task with significant risk. For lower risk activities (as deemed by the discretion of the SHSO or other designated competent safety official) where a JSA is determined to not be needed, the individual(s) conducting the activities must perform Safe Performance Self-Assessment(s) (SPSAs) prior to and during the work.

Compliance with this HASP is required for TREC personnel who enter this Site.
This HASP may also be used by contractors retained or overseen by TREC. Assistance in implementing this HASP can be obtained from the TREC Office Health and Safety Manager (OHSM). The content of this HASP may undergo revision based upon additional information made available. Any changes proposed must be reviewed and approved by the TREC OHSM or his designee and documented on a Field Change Request form.

General Site-Specific Safety Requirements:

- Copies of this HASP shall be readily accessible at all times.
- READ AND SIGN THE HEALTH AND SAFETY PLAN BEFORE ENGAGING IN SITE ACTIVITIES.
- Safety briefings will be held prior to beginning each task.
- Use the buddy system when required.
- Practice contamination avoidance, both on and off Site.
- Plan activities ahead of time.
- Do not climb over/under obstacles.
- Be alert to your own physical condition.
- Watch your co-workers for signs of fatigue, exposure, heat or cold stress, etc.
- Report all accidents, no matter how minor, immediately to the SHSO.

- Do not eat, drink, chew gum, apply cosmetics, or use tobacco products while working on Site (except in the support zone).
- Be aware of traffic, heavy equipment, and other obstacles around you.
- Do not work on-Site while under the influence of drugs or alcohol, including prescription drugs that may cause drowsiness.
- Note wind direction. Personnel shall remain upwind wherever possible during on-Site activities.
- A work/rest regimen will be initiated when ambient temperatures and protective clothing cause a stressful situation. Work will not be conducted without adequate light or without supervision.
- "Slips, trips, and falls" at the Site are associated with uneven terrain, heavy vegetation, obstacles, and slippery or icy surfaces (during the winter) and steep slopes. Extra care will be applied when working in these areas.
- Extreme cold and excessive heat can occur during the year at the Site, and appropriate clothing should be worn to prevent heat or cold stress.

1.1 SITE DESCRIPTION

The Site is located in the Town of Clifton, St Lawrence County, New York, at intersection of Route 3 and County Road 50. The Site is currently an active remediation site. Most buildings at the site have been demolished or are in the process of being demolished.

Potential contaminants that may be present at the Site, based on analytical results and historic use, may include polychlorinated biphenols (PCBs). Six area of soil contamination containing PCBs will be excavated as part of this project.

The Project Manager, Superintendent, Site Health & Safety Officer or other designated representative shall be responsible for informing all individuals assigned to or visiting the site of the contents of this plan and ensuring that each person signs the Safety Plan Acknowledgement Form in Section 10.0. By signing the Safety Plan Acknowledgement Form, individuals are recognizing the Health & Safety Hazards, known or suspected onsite and the protocols required to minimize exposure to such hazards.

1.2 SITE HEALTH & SAFETY MEETINGS

An initial "Kick-Off" Health & Safety meeting shall be held in the first day of mobilization to the site and prior to the commencement of any work activities. Mandatory attendance is required for all personnel initially assigned to the site. At the conclusion of the "kick-off" meeting, personnel are to sign the Safety Plan Acknowledgement Form in Section 10.0 indicating their attendance and understanding of the Health & Safety protocols. As additional personnel are briefed on health & safety protocols and that they also sign the Safety Plan Acknowledgement Form.

Additional health & safety meetings will be held on a daily basis throughout the duration of the project. And all site personnel will be required to "sign-off" that they attended the meeting. These meetings shall be scheduled to inform all personnel of changing site conditions, to ensure that personal protective equipment is being used properly and sufficiently stocked and to address worker health & safety concerns.

1.3 TRAINING REQUIREMENTS

TREC personnel assigned to the site have completed 40 hours training for hazardous waste site work in accordance with OSHA 29 CFR 1910.120 (e)(3) and be current with their 8-hour refresher training in accordance with OSHA 29 CFR 1910.20(e)(8). Documentation of OSHA training is all on file in the corporate offices, 1018 Washington St, Spencerport, NY 14559.

1.4 MEDICAL MONITORING REQUIREMENTS

TREC personnel assigned to the site are enrolled in a medical surveillance program meeting the requirements of OSHA 29 CFR 1910.120(f) and OSHA 29 CRF 1910.1026. Documentation of personnel being enrolled in a medical surveillance program is required prior to personnel being permitted to work on-site.

1.5 FIT TESTING REQUIREMENTS

TREC personnel assigned to the site who must wear a respirator must have successfully passed a respirator fit test within the past 12 months. Documentation of a successful respirator fit test for the appropriate type of respirator needed for work on this specific site (half-face or full-face) will be required.

1.6 HEALTH & SAFETY RISK ANALYSIS

Training Requirements

Site personnel who will perform work in areas where there exists the potential for toxic exposure will be health and safety trained prior to performing work on Site per OSHA 29 CFR 1910.120(e). In addition, all on-Site personnel who will perform work must meet the requirements of TREC' SOP 1.12 – Short Service Employee Program (Appendix G), as well as have attended Loss Prevention System (LPS) training. Training records will be maintained by the on-Site SHSO and as described in Section 5.2. Training records or all subcontractor personnel must be produced to the TREC Project Manager or SHSO prior to commencement of field activities. Copies of these records will be maintained in TREC project files.

2.0 Site-Specific Training

Training will be provided by the SHSO or other appropriate personnel designated by the PM that will specifically address the activities, procedures, monitoring, and equipment for the Site operations to Site personnel and visitors. The training will include Site and facility layout, hazards, emergency services at the Site, and will detail provisions contained within this HASP. This training will also allow field workers to clarify anything they do not understand and to reinforce their responsibilities regarding safety and operations for their particular activity. Site specific training will be documented as part of the project records. In addition, any facility Health and Safety requirements will be followed. Prior to commencing work, all personnel must complete the Daily Site Safety Checklist provided in Appendix M of this HASP.

2.1 Safety Briefings

Project personnel will be given briefings by the field team leader (FTL), SHSO, or other appropriate personnel designated by the PM on an as-needed basis to further assist them in conducting their activities safely. Safety briefings will be provided when new operations are to be conducted, changes in work practices must be implemented due to new information made available, and before work is begun at the Site. Records of safety briefings will be part of the project records.
Prior to beginning any planned subcontracted new operation activities, a Subcontractor Orientation Meeting will be held with the contractor who has been awarded the work. The purpose of the Subcontractor Orientation Meeting is to ensure that the contractor's employees are fully aware of the project scope and TREC' safety practices, and applicable Site operations.

2.2 Record Keeping Requirements

Record keeping requirements mandated by OSHA 29 CFR 1910.120 will be strictly followed. Specifically, all personnel training records, Loss/Near Loss Reports, and medical examination records will be maintained by TREC, Inc. for a period of at least 30 years after the employment termination date of each employee. The SHSO will maintain a daily written log of health and safety monitoring activities and monitoring results will become part of the project records.

3.0 GENERAL SITE HAZARDS

3.1 Lighting

Work areas must have adequate lighting for employees to see to work and identify hazards (5-foot candles minimum, comparable to a single 75-100 watt bulb). Personnel should carry flashlights in all dark areas for use in the event of a power failure. Applicable OSHA standards for lighting 29 CFR 1910.120(m) shall apply.

3.2 Electrical Power

All electrical power must have a ground fault circuit interrupter as part of the circuit. All equipment must be suitable and approved for the class of hazard. Applicable OSHA standards for electric 29 CFR 1910 Subpart S shall apply.

3.3 Lockout/Tagout

Operations where the unexpected energization or start-up of equipment or release of stored energy could cause injury to personnel will be protected by the implementation of the Lockout/Tagout program meeting the requirements of 29 CFR 1910.147.

3.4 Fall Protection

Fall accidents can result in an injury or fatality. Requirements to help prevent falls will be implemented. Elevated work where a fall potential exists will be performed using appropriate ladders and/or fall protection (i.e., body harness or lifeline). Applicable OSHA standards for fall protection 29 CFR 1910.21through 29 CFR 1910.32, and 29 CFR 1910.14 through 29 CFR 1910.07 shall apply.

3.5 Drum Handling

The movement and opening of drums will be done in accordance with 29 CFR 1910.12(j). (See Drum Handling Plan)

3.6 Cold Stress

When the temperature falls below 40 degrees F, cold stress protocols shall be followed. Employees must be supplied with adequate clothing to maintain core temperature.

3.7 Heat Stress

When the temperature exceeds 80 degrees F, and personnel are wearing personal protective clothing, a heat stress monitoring program shall be implements. Employees shall have frequent break periods and access to drinking water.

3.8 Eye Wash Protection

All operations involving the potential for eye injury, splash, etc., must have approved eye wash units locally available as per 29 CFR 1910.151(c).

3.9 Hearing Protection

When the noise level of any operation exceeds the 8 hr. TWA of 85 decibels, TREC will implement a hearing protection program meeting the requirements of 29 CFR 1910.95. Earplugs are to be worn at all times by equipment operators during operation of equipment.

3.10 Fire Protection/Fire Prevention

Operation involving the potential for fire hazards shall be conducted in a manner as to minimize the risk. Fire extinguishers shall be used or available as required. Sources of ignition shall be removed. When necessary, explosion-proof instruments and/or bonding and grounding will be used to prevent fire or explosion.

Due to the recent events from flare-ups in the soil additional precautions will need to be implemented. The area being excavated will be sprayed periodically using Bio-Solve applied using a pressure washer. The soils will also be sprayed once staged near the excavation. The rate of application shall be determined in the field as site conditions and/or PID readings dictate. At a minimum the area being excavated will be sprayed prior to each “lift” being removed and additionally and as the excavation proceeds.

Fire extinguishers will be in each piece of equipment being utilized in the excavation process. Additionally the 2,000 gallon water truck will be parked near the excavation area for potential fire-fighting operations should site conditions warrant.

3.11 Utilities

Overhead and underground utility hazards shall be identified and/or inspected prior to conducting operations involving potential contact. (UFPO – see Project Manager)

3.12 Confined Space Entry

TREC does not anticipate conducting a confined space entry during the course of this project. If needed a "Confined Space" entry permit will be completed and all applicable procedures meeting the requirements of 29 CFR 1910.146 will be implemented. A copy of the permit for reference is attach in Appendix G.

Policy:

It is the policy of TREC Environmental, Inc. to protect the health and welfare of all employees whose work assignments may require entering or working in permit-required confined spaces. Only persons with appropriate aptitudes and physical competence shall be employed in confined space work. Training of selected persons to carry out confined space work shall include:

- Emergency entry and exit procedures
- Use of appropriate respiratory protective equipment
- First aid, including Cardio-Pulmonary Resuscitation (CPR)
- Lock Out and Isolation procedures
- The use of safety equipment
- Rescue drills
- Fire protection
- Communications
- Aspects essential for maintaining the safety of the breathing environment
- Recognition of any hazards specific to the operation/activity.

Purpose:

To establish the policy and procedures regarding Management and employee response and actions to a working in confined spaces. Working in confined spaces can lead to injury or even death if adequate precautions are not taken. Only trained persons may enter or work in confined spaces.

Confined spaces can include storage tanks, process vessels, boilers, silos, storage bins, pits, and pipes, sewers, tunnels and shafts. Any place of work where the atmosphere is liable to be contaminated at any time by dust, fumes, mist, vapor, gas or other harmful substance, or is liable at any time to be oxygen deficient is defined as a confined space. When any work area is not subject to good natural ventilation, people can be readily exposed to harmful vapors. They can then suffer lack of oxygen, and collapse as a result. People entering the same space to rescue colleagues may become the next victims.

TREC Environmental, Inc. will ensure that our employees are protected from the potential hazards involved in entering confined spaces. We will make every effort to comply with the OSHA Permit-Required Confined Space Standard (CFR 1910.146) and to exceed those requirements when necessary to ensure the safety of our workers.

For the purposes of this program the following definitions will apply:

· **Confined Space** - A confined space has limited or restricted means of entry or exit, is large enough for an employee to enter and perform assigned work, and is not designed for continuous occupancy by the employee. These spaces may include, but are not limited to, underground vaults, manholes, tanks, storage bins, pit areas, vessels, and silos.

· **Permit-Required Confined Space** - A "permit-required confined space" is one that meets the definition of a confined space and has one or more of these characteristics:

(1) Contains or has the potential to contain a hazardous atmosphere
(2) Contains a material that has the potential for engulfing an entrant
(3) Has an internal configuration that might cause an entrant to be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section
(4) Contains any other recognized serious safety or health hazards.

Definitions:

A. Acceptable entry conditions means the conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit-required confined space entry can safely enter into and work within the space.

B. Attendant means an individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all attendant's duties assigned in the employer's permit space program.

C. Authorized entrant means an employee who is authorized by the employer to enter a permit space.

D. Blanking or blinding means the absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

E. Confined space means that:

• It is large enough and so configured that an employee can bodily enter and perform assigned work; and

• Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry.); and

• Is not designed for continuous employee occupancy.

F. Double block and bleed means the closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.

G. Emergency means any occurrence (including any failure of hazard control or monitoring equipment) or event internal or external to the permit space that could endanger entrants.

H. Engulfment means the surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

I. Entry means the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

J. Entry permit (permit) means the written or printed document that is provided by the employer to allow and control entry into a permit space and that contains the information specified in paragraph (g) of this section.

K. Entry supervisor means the person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

NOTE: An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this section for each role he or she fills. Also, the duties of entry supervisor may be passed from one individual to another during the course of an entry operation.

L. Hazardous atmosphere means an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

1. Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);

2. Airborne combustible dust at a concentration that meets or exceeds its LFL;

NOTE: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet or less.

3. Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;

NOTE: An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this provision.

4. Any other atmospheric condition that is immediately dangerous to life or health.
NOTE: For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information such as Material Safety Data Sheets that comply

with the Hazard Communication Standard, §1910.1200, published information and internal documents can provide guidance in establishing acceptable atmospheric conditions.

M. Host employer means any employer who arranges to have the employees of another employer (contractor) perform work for them. Our Company is the host employer for the on-site Operations Maintenance Contractor who may also be a host employer.

N. Hot work permit means the employer's written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

O. Immediately dangerous to life or health (IDLH) means any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual’s ability to escape unaided from a permit space.

NOTE: Some materials - hydrogen fluoride gas and cadmium vapor, for example - may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possible fatal collapse 12 - 72 hours after exposure. The victim "feels normal" from recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be "immediately" dangerous to life or health.

P. Inerting means the displacement of the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible.

NOTE: This procedure produces an IDLH oxygen-deficient atmosphere.

Q. Isolation means the process by which a permit space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.

R. Line breaking means the intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.

S. Non-permit confined space means a confined space that does not contain, or with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

T. Oxygen-deficient atmosphere means an atmosphere containing less than 19.5 percent oxygen by volume.

U. Oxygen-enriched atmosphere means an atmosphere containing more than 23.5 percent oxygen by volume.

V. Permit-required confined space (permit space) means a confined space that has one or more of the following characteristics:

1.Contains or has a potential to contain a hazardous atmosphere.
2.Contains a material that has the potential for engulfing an entrant;
3.Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-sections; or
4.Contains any other recognized serious safety or health hazard.

W. Permit-required confined space program (permit space program) means the employer's overall program for controlling, and, where appropriate, for protecting employees from, permit space hazards and for regulating employee entry into permit spaces.

X. Permit system means the employer's written procedure for preparing and issuing permits for entry and for returning the permit space to service following termination of entry.

Y. Prohibited condition means any condition in a permit space that is not allowed by the permit during the period when entry is authorized.

Z. Rescue service means the personnel designated to rescue employees from permit spaces.

AA. Retrieval system means the equipment (including a retrieval line, chest or full-body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from permit spaces.

AB. Testing means the process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

NOTE: Testing enables employers both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately prior to, and during, entry.

References:

American National Standards Institute "Safety Requirements for Working in Tanks and other Confined Spaces".

NIOSH "Criteria for a Recommended Standard...Working in Confined Spaces."

U.S. Department of Labor, OSHA regulations, 29 CFR 1910.146, "Permit-Required Confined Spaces."

Identification and Evaluation of Confined Spaces:

An inspection by TREC of the spaces will be conducted will be noted as the project proceeds

All Permit-Required Confined Spaces should be marked with warning signs reading:

"Danger - Permit-Required Confined Space - Authorized Entrants Only".

Procedure:

Work involving entry to a confined space must be planned. An assessment of likely hazards should be made prior to commencing the work. Precautions must be taken to avoid exposure to harmful substances or oxygen deficient atmospheres. Some thought should also be given to handling possible emergencies.

ENTRY INTO PERMIT-REQUIRED CONFINED SPACES:

Prior to entry into any permit-required confined space, the employee's supervisor will issue a permit that specifies the location, type, and duration of the work to be done, and the date. The permit will certify that all existing hazards have been evaluated by the supervisor and that necessary protective measures have been taken for the safety of workers. It will provide documentation of the atmospheric testing that has been done. It will assign entry and attendant duties to specific persons.

Before issuing an entry permit, the employee's supervisor will be responsible for the following:

· Identify all hazards and potential hazards associated with the confined space, such as the danger of explosion, asphyxiation, toxic gases/fumes, engulfment or entrapment, electrical or mechanical hazards, etc.
· Isolate the space from potential hazards, if possible, to provide for safe entry.
· Purge, inert, flush, ventilate to eliminate atmospheric hazards.
· Provide external barriers and warning signs.
· Perform pre-entry oxygen, flammable gas and toxicity air tests. All test results are to be recorded on the entry permit. If potential hazards cannot be isolated, continuous monitoring is required. If potential hazards can be isolated, periodic monitoring is required.
· Provide at least one trained attendant outside of each confined space that will be entered.
· Ensure that rescue and emergency services and equipment are in place as noted in this policy.
· Ensure that all required equipment is provided, maintained and properly used. This includes air monitoring equipment, forced air ventilation equipment, communications equipment, personal protective equipment (PPE), lighting, external barriers and warning signs, ladders, and rescue equipment.

If hazardous conditions are detected during entry, employees will immediately leave the space and the supervisor will determine the cause of the hazardous atmosphere and take corrective actions before allowing re-entry.

RESCUE & EMERGENCY SERVICES:

If proper protective measures are taken to eliminate and control any possible hazards in the confined space (i.e., ventilation, purging, monitoring, lock out/tag out, etc.), rescue operations should not be necessary. Nonetheless, TREC Environmental, Inc. will be prepared for the worst case scenario.

An attendant for the confined space will have access to a telephone and know the proper procedure for alerting the proper personnel in the event of an emergency, including the fire

department, paramedics, police, and others as necessary. The primary rescue service will be the Fire Department.

Provisions will be made and equipment provided to ensure timely extraction of an unconscious or injured worker from the confined space. Under no circumstances is the attendant to enter the space to effect rescue; rescue operations must be left to trained personnel.

The use of lifelines for every tank entry will not be practical due to the interior structures in some of the tanks. Additionally the use of man lifts will pose hazards in using lifelines, However personnel using lifts will be required to use fall protection at all times. Due to these circumstances each entry will need to be modified by the entry supervisor. The supervisor will need to take into consideration the interior configuration of each tank and the hazards associated with the potential rescue of entry personnel. Each modification should be noted on the entry permit and all personnel associated with the entry made aware.

Training:

Employees involved with permit-required confined space work will be trained to assure the knowledge, understanding, and skills necessary for the safe performance of their duties. Foremen will be trained in the identification and evaluation of confined space hazards and in the proper precautions to be taken to assure safe entry and work in confined spaces. Employees entering confined spaces will be trained in the hazards and potential hazards involved and how to protect themselves from those hazards. They will be trained to never enter a confined space until a permit is issued and they have been authorized to enter by the foreman. Attendants will be trained in their duties and responsibilities and the actions to be taken in the event of an emergency.

Contractors:

a. When TREC Environmental, Inc. arranges to have employees of another employer (contractor) perform work that involves permit space entry, the host employer shall:

i. Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the OSHA regulations;

ii. Apprise the contractor of the elements, including the hazards identified and the host employer's experience with the space, that make the space in question a permit space;

iii. Apprise the contractor of any precautions or procedures that the host employer has implemented for the protection of employees in or near permit spaces where contractor personnel will be working;

iv. Coordinate entry operations with all contractors (including on-site contractors), when any combination of host employer personnel and/or contractor personnel will be working in or near permit spaces, as required by paragraph (f-8); and

v. Debrief the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in permit spaces during entry operations.

vi. Copies of all confined space entry permits will be provided

b. In addition to complying with the permit space requirements that apply to all employers, each contractor who is retained to perform permit space entry operations shall:
i. Obtain any available information regarding permit space hazards and entry operations from the host employer;

ii. Coordinate entry operations with the host employer, when both host employer personnel and contractor personnel will be working in or near permit spaces, as required; and

iii. Inform the host employer of the permit space program that the contractor will follow and of any hazards confronted or created in permit spaces, either through a debriefing or during the entry operation.

4.0 Excavation/Trenching

Any excavation/trench greater than four feet in depth in which personnel must enter, will be designed and constructed meeting all applicable requirements of 29 CFR 1926, Subpart P.

4.1 GENERAL SAFETY REQUIREMENTS

Safety Equipment to be on site;

- Eye Wash Station as per 29 CFR 1910.151(c).
- Hearing protection. When the noise level of any operation exceeds the 8 hr. TWA of 85 decibels, TREC will implement a hearing protection program meeting the requirements of 29 CFR 1910.95

Personal Protection Equipment

A complete description of all PPE requirements is provided in Section 7.0.

The following is a list of all the known potential contaminants and hazards identified for the Site:
- PCB Impacted Soils
- Heat / cold stress and sun exposure;
- Traffic;
- Slips, trips, and falls;
- Overhead hazards including electrical and telephone lines;
- Heavy equipment (i.e., drill rig, excavator, etc.) operations;
- Flying objects and airborne particulates; and
- Biological hazards including insects, poison ivy, and thorns.

4.2 Heavy Equipment Exclusion Zone

An Exclusion Zone must be established and maintained during activities involving the movement/operation of heavy equipment. Site activities require excavation equipment, but additional heavy equipment may include: Forklifts, bobcats, delivery trucks, etc. The Exclusion Zone establishes the minimum clearance distance that must be maintained between workers

and the heavy equipment while the equipment is in operation (i.e., engaged or moving). The Exclusion Zone requirements apply to all personnel on the site, but are primarily focused on those personnel who are required to be working in the vicinity of the equipment. The Exclusion Zone is in effect when heavy equipment is moving or engaged (i.e., the movement of the arm or bucket of an excavator).

The size of the Exclusion Zone will need to be determined on a task-specific basis considering the size of heavy equipment in use and the task being performed. Prior to all heavy equipment operations, the Exclusion Zone(s) distance must be specifically identified on the JSA.

The Exclusion Zone must meet the following minimum requirements:

- A minimum distance of 10 feet from all heavy equipment and loads being moved by the equipment; and
- Greater than the swing/reach radius of any moving part on the heavy equipment (i.e., for large equipment this may mean an Exclusion Zone distance larger than 20 feet); and
- Greater than the tip-over distance of the heavy equipment.

The Exclusion Zone should be delineated using cones, fencing, barrels, tape or other measures. For certain types of wide-spread or moving/mobile equipment operations, such delineation may not be practicable around pieces of equipment or individual work areas. In such instances it is expected that the entire operation will be within a larger secure work area or that additional means will be utilized to ensure security of the work zone.

No personnel or other equipment shall be permitted enter the Exclusion Zone while the equipment is in operation/moving. A spotter (or another individual) should be assigned responsibility for enforcing the Exclusion Zone. This spotter should be positioned immediately outside the Exclusion Zone within a clear line of site of the equipment operator. The spotter must signal the operator to stop work if anyone or anything has potential to enter or compromise the Exclusion Zone. The operator should stop work if the spotter is not within the line of site. If multiple pieces of equipment are being used, each piece of equipment must have its own Exclusion Zone and spotter. If an individual must enter the Exclusion Zone, the designated spotter must signal the equipment operator to stop the equipment.

Once the equipment is no longer moving (i.e., the movement of the arm of an excavator is STOPPED), the operator must DISENGAGE THE CONTROLS AND STOP AND SIGNAL BY “SHOWING HIS HANDS”. This signal will indicate that it is safe for the personnel to enter the limits of the Exclusion Zone to perform the required activity.

When entering the limits of the Exclusion Zone, personnel must at a minimum:

- Establish eye contact with the operator and approach the heavy equipment in a manner that is in direct line of sight to the equipment operator;
- Never walk under any suspended loads or raised booms/arms of the heavy equipment; and

- Identify a travel path that is free of slip/trip/fall hazards.

Exceptions to Exclusion Zone Requirements

It is recognized that certain heavy equipment activities may require personnel to work within the limits of the Exclusion Zone specified in this policy document. Such activities may include certain excavation clearance tasks or construction tasks. However, any such activity must be pre-planned with emphasis on limiting the amount and potential exposure of any activity required within the Exclusion Zone.

4.3 FIELD ACTIVITIES

Field Activities undertaken at the Site may include, but are not limited to:

- Silt Fence Installation
- Temporary Fence Installation
- Excavation
- Backfilling
- Soil Loading

4.4 Subsurface Clearance and Excavations

Site activities will include ground disturbance such as: excavation, trenching, fence post installation, grading or other similar operations. Prior to excavating, an underground utility stakeout will be performed for the site by all utility companies in the area. Known utilities will be marked, and plans for excavating within proximity of them will be developed.

5.0 CHEMICAL HAZARDS

Previous sampling and analytical data or previous site history and investigation have indicated that potential chemical hazards, either documented or suspected, exist at the site. A list of potential chemicals with associated hazards has been included in Appendix J.

6.0 JOB SAFETY ANALYSIS (JSAs)

TREC will utilize Job Safety Analysis (JSAs) for each specific task project. TREC has developed JSAs specifically for remediation projects tasks including but not limited to soil excavation, fence installation and dewatering. JSAs are included in an Appendix to this HASP. Site specific JSAs may be developed during the course of the project or existing JSAs may be modified based on project specific tasks.

7.0 PERSONAL PROTECTIVE EQUIPMENT

Standard Protocol for Personnel Protective Equipment

The following is a brief description of the personal protective equipment, which may be required during various phases of the project.

- Respiratory protective equipment shall be NIOSH approved and use shall conform to OSHA 29 CFR 1910.134.
- Confined space entry will occur during the cleaning of frac tanks and associated PPE will follow the protocol established in appendix H
- Levels of protection listed below are guidelines for the various tasks and will be modified as conditions warrant.
- Confined space entry level of protection shall be determined by the use of air monitoring. The meter readings will dictate the level of respiratory protection require.
- Each vessel will be inspected by the entry supervisor to determine the depth of liquid / sludge in the vessels. He will be responsible to determine if the vessels can be entered safely and the proper PPE to be used.

ACTIVITY vs. LEVEL OF PROTECTION FOR THIS PROJECT

*PPE level can change as project and conditions change.

The above chart is a general guideline for PPE for the various phases of this project. The site supervisor will have the responsibility of evaluating each task and assigning the proper PPE for the personnel.

7.1 LEVEL C (Modified)

Level C protection shall be used when VOCs are >5ppm but <25ppm for five minutes in the breathing zone.

LEVEL C (Modified) PPE TO BE UTILIZED:

Full Face APR (MS HA/NOSH Approved)
TYPE OF CARTRIDGES TO BE USED: HEPA / OV/AG
Chemical-resistant clothing FABRIC TYPE: TYVEK suits
Disposable inner gloves MATERIAL TYPE: LATEX
Disposable chemical-resistant outer gloves MATERIAL TYPE: PVC / Nitrile
Boots with steel toe and shank.
Long sleeves shirts or chemical resistant suit
Safety glasses / face shield while pressure washing, only for ½ face
Hard hat
Hearing Protectors when noise above 85dBs.

7.2 LEVEL D

Level D protection will be used when:

- The atmosphere contains no known hazard and dust levels are determined to be less than 100ug/m3 per 8 hour period (TWA).
- Work functions preclude splashes, immersions or the potential for unexpected inhalation of, or contact with hazardous concentrations of chemicals

LEVEL D PPE (Minimum Work Uniform Permitted)

XX	Standard work uniform/coveralls
XX	Work boots with steel toe and shank
XX	Work gloves
XX	Safety goggles/glasses
XX	Hard hat
	Hearing protection if needed
	Face shield while pressure washing
	Long cotton underwear (OPTIONAL)

8.0 COMMUNITY AIR MONITORING & ACTION LEVELS

Parsons designated employees will be conducting the air monitoring for this project.

Action Levels:

If dust levels exceed 100ug/m3 above background levels for 15 minutes, dust suppression measures must be implemented. If dust exceeds 150ug/m3 above background levels for 15 minutes work must halt and the additional suppression measures must be implemented to reduce airborne particulates further.

If VOCs exceed 5ppm but are less than 25ppm for a duration of 5 minutes, PPE must be upgraded to Level C. For levels above 25ppm, work must cease until levels can be reduced.

9.0 SITE CONTROLS

Silt Fence

Silt fence will be installed around the work area to reduce runoff from the disturbed soils.

Soil Cover

In order to mitigate airborne VOCs, TREC will, cover soil piles with polyethylene sheeting.

10.0 Site Safety Plan Acknowledge Form

TREC ENVIRONMENTAL SERVICES
SITE SAFETY PLAN ACKNOWLEDGEMENT FORM

I have been informed and understand and will abide by all the procedures and protocols set forth in this Site Health & Safety Plan.

Name (Print)	Signature	Affiliation	Date

APPENDIX A

SDSs

Appendix B

SITE SPECIFIC WASTE HANDLING & DECONTAMINATION PLAN

In general, everything that enters the exclusion zone must either to be decontaminated or properly discarded upon exit from the exclusion zone. Prior to demobilization, contaminated equipment will be decontaminated and inspected by the Superintendent before it is moved into the clean zone.

The type of decontamination solution to be used is dependent on the type of chemical hazards. Decontamination solutions will be changed as required and collected and stored onsite for disposal.

CONTAMINATION PREVENTION

The most effective way to not get contaminated is to stay out of the contaminated materials. Personnel will not walk through areas of gross / mild contaminated areas. No personnel are to enter excavations. When handling contaminated materials care will be taken to wear appropriate PPE for the task, along proper handling procedures for the removal and storage of spent PPE.

PERSONNEL DECONTAMINATION

Personnel may become contaminated in a number of ways including:

- Contacting vapors, gases, mists or particulates in the air;
- Being splashed by materials while sampling open containers;

Even with safeguards, contamination may occur. Harmful materials can be transferred into clean areas, exposing unprotected personnel. In removing contaminated clothing, personnel may contact contaminants on clothing or inhale them. To prevent this care will be taken while the entrant is disrobing. Whenever possible the person will be assisted by another, and the suite will be peeled back to keep any potential materials off the person. Every person involved with the decontamination process will always wear appropriate gloves and the gloves will be the last item to be taken off.

Disposable suits are not intended for multiple uses. The Tyvek suits will be worn for one day and/or shift and then discarded into the appropriate disposal container.

Personnel decontamination procedures will be based on the contaminant associated with the specific vessel and the level of protection being worn by site personnel.

HEAVY EQUIPMENT DECONTAMINATION

Heavy equipment will be decontaminated by moving the equipment to the designated decon area and cleaning off the heavy contamination with a broom, shovel, etc. The equipment will then be pressure washed or wiped. The decon residuals will be collected for proper disposition. Following the decontamination and prior to exiting the decontamination zone, the Project Manager and /or Superintendent will inspect the equipment, and if properly decontaminated make note of the date, time and method.

DISPOSAL OF CONTAMINATED MATERIALS

Drums will be used for the storage of soils and that are removed and rinse waters. Drums will be inspected daily for the following:

- Exterior defects
- Drum seal inspection
- Staging area inspection

All materials and equipment used for decontamination must be disposed of properly. Clothing, tools, buckets and all other equipment that is contaminated must be properly packaged and stored onsite until disposal arrangements are finalized. . These materials will be discarded into a drum.

EMERGENCY DECONTAMINATION

Personnel with medical problems or injuries may also require decontamination. There is the possibility that the decontamination may aggravate or cause more serious health effects. If prompt lifesaving, first aid and medical treatment is required, decontamination procedures will be omitted. In either case, a member of the site team will accompany contaminated personnel to the medical facility to advise on matters involving decontamination

Appendix C
Personnel Responsibility During Emergencies.

The project manager/superintendent, as the site administrator for the project, has primary responsibility for responding to and correcting any emergency situation. The onsite Project Manager or Superintendent will:

- Take appropriate measures to protect personnel including withdrawal from the exclusion zone, total evacuation and securing of the site or upgrading or downgrading the level of protective clothing and respiratory protection.
- Take appropriate measure to protect the public and the environment including isolating and securing the site, preventing run-off to surface waters and ending or controlling the emergency to the extent possible.
- Ensure that the appropriate Federal, State and Local agencies are informed and emergency response plans are coordinated. In the event of a fire or explosion, the local fire department should be summoned immediately. In the event of an air release of toxic material, the local authorities should be informed in order to assess the need for evacuation. In the event of a spill, sanitary districts and drinking water systems may need to be alerted.
- Determine the cause of the incident and make recommendations to prevent recurrence.
- Ensure that all required reports have been prepared.

MEDICAL EMERGENCIES

Any person who becomes ill or injured in the exclusion zone must be decontaminated to the maximum extent possible. If the injury or illness is minor, full decontamination should be completed and if possible, first aid administered prior to transport. If the patient's condition is serious, at least partial decontamination should be completed (i.e., complete disrobing of the victim and redressing in clean coveralls or wrapping in a blanket). First aid should be administered while awaiting an ambulance or paramedics. All injuries, illnesses and accidents must be reported to the Project Manager and Superintendent.

FIRE OR EXPLOSION

In the event of a fire or explosion, the local fire department should be summoned immediately. Upon their arrival, the project manager/superintendent will advise the fire commander of the location and nature of the fire and the location and identification of all hazardous materials onsite.

SPILL OR LEAKS

In the event of a spill or leak, site personnel will locate the source of the spillage and stop the flow, if it can be done safely, and begin containment and recovery of the spilled material.

EVACUATION ROUTES AND RESOURCES

Evacuation routes have been established by work area locations for the site. Evacuation should be conducted immediately, without regard for equipment under conditions of extreme emergency.

- Evacuation notification will be a continuous blast on an air horn, vehicle horn or by verbal communication via radio.
- Keep upwind of smoke, vapors or spill location.
- In the event that a site evacuation is necessary, all personnel are to:

  *Escape the emergency situation;
  *Decontaminate to the maximum extent practical; and
  *Meet at TREC's command post or some other pre-arranged location.

EMERGENCY EQUIPMENT AVAILABLE ONSITE

COMMUNICATION EQUIPMENT

	PUBLIC TELEPHONES
	PRIVATE TELEPHONES
XXX	CELLULAR TELEPHONES
XXX	TWO-WAY RADIO (WALKIE TALKIE)
	EMERGENCY ALARMS/HORNS

MEDICAL EQUIPMENT

XXX	FIRST AID KITS
	STRETCHER
XXX	EYE WASH STATION
	SAFETY SHOWER
	BLANKETS

FIRE FIGHTING EQUIPMENT

XXX	FIRE EXTINGUISHER TYPES: Combination type ABC
	OTHER:

SPILL/LEAK EQUIPMENT

XXX	ABSORBENT BOOM PADS
XXX	DRY ABSORBENT

Appendix D

EROSION, SEDIMENT AND STORM WATER MANAGEMENT PLAN

GENERAL

Standard soil conservation practices will be incorporated into this project to mitigate soil erosion damage, off-site sediment migration and water pollution from erosion. These practices combine vegetative and structural measures, many of which can be permanent in nature and become part of the completed project. Other measures will be temporary and serve only during the construction stage.

TEMPORARY EROSION CONTROL MEASURES

Temporary erosion and sedimentation control measures and facilities will be utilized during construction. They will be installed and will be maintained until they are either no longer needed or until such time as permanent measures are installed and become effective. At a minimum, the following temporary measures will be used as necessary:

- Silt fencing
- Straw/hay bales
- Temporary vegetation/mulching
- Cautious placement and protection of stockpiles
- Diversion berms
- Drainage channels
- Rip rap and/or armoring

SILT FENCING

Construction and regarding activities may temporarily enhance surface water flows. Silt fencing will be the primary sediment control measure used. Prior to on site work, silt fences will be installed along the perimeter of all construction areas. The orientation of the fencing will be adjusted as necessary as the work proceeds to accommodate changing site conditions.

Intermediate fencing will be utilized up gradient of the perimeter fencing to help lower surface water runoff velocities and reduce the volume of sediment to perimeter fencing. Stockpiles will also be surrounded with silt fencing.

As sediment collects, the silt fences will be cleaned as necessary to maintain their integrity. All perimeter silt fences will remain in place until construction activities in an area are completed and vegetative cover has been established. Silt fences will be installed in accordance with the typical details presented in Appendix E.

STRAW AND/OR HAY BALES

Straw and/or hay bales may be used to intercept sediment laden storm water runoff from small drainage areas and may be used as a check dam in drainage channels during construction. The use of either hay or straw will be based on the availability of material at the time of construction.

Bales will be placed up gradient of the final barrier to reduce flow velocities and sediment loading where higher velocities are anticipated.

As with silt fencing, sediment will be removed as necessary from behind the bales. Bales that have become laden with sediment or that have lost their structural integrity or effectiveness due to the weather will be replaced. Bales will be installed in accordance with the typical details presented in Appendix E.

TEMPORARY VEGETATION AND MULCHING

Areas where activities will not occur or resume for an extended period of time (greater than 90 days or as required) will be seeded with a quick germinating variety of grass or covered with a layer of mulch to control fugitive dust and erosion. Soil/fill stockpiles that will not be utilized for an extended period of time will also be vegetated or covered.

CAUTIOUS PLACEMENT AND PROTECTION OF STOCKPILES

Construction activities may produce stockpiles of soil materials. Careful placement and construction of stockpiles will be required to control erosion. Stockpiles will be placed no closer than thirty feet from a stream, roadside, steep slopes and parcel boundaries. Additionally, stockpiles will be graded and compacted as necessary for positive surface water runoff and dust control.

PERMANENT EROSION CONTROL MEASURES DURING SITE WORK

Permanent erosion and sedimentation control measures will be utilized where practical during construction for long-term erosion protection. Examples of permanent erosion control measures include:

- Incorporating minimum slopes where practical and filling low areas where water could pond to promote positive runoff and limit erosion potential.

- Re-vegetating all areas of the site disturbed by construction activities.

- Limiting runoff flow velocities to the extent practical.

BEST CONSTRUCTION MANAGEMENT PRACTISES

The following general construction practices will be followed to further mitigate erosion and sedimentation problems during site development activities:

- Clearing and grading only as much area as is necessary to accommodate the construction needs to minimize disturbance of areas subject to erosion (i.e., phasing the work).

- Covering exposed or disturbed areas of the sire as quickly as practical upon completion of construction activities.

- All erosion and sediment control measures should be installed prior to disturbing the site sub grade.

- Both on-site and off-site tracking of soil by vehicles should be minimized by utilizing routine entry/exit routes.

All erosion and sedimentation controls described in this plan will be inspected by TREC within 48 hours of heavy rainfall event (greater than .5 inches) and repaired or modified as necessary to effectively control erosion or turbidity problems. Inspection will include areas under construction, stockpile areas, erosion control devices (i.e., silt fences, hay bales, etc.) and location where vehicles enter and leave the site.

Of inspections indicate problems, corrective measures will be implemented within 48 hours.

STANDARD AND SPECIFICATIONS FOR STRAW BALE DIKE

Definition

A temporary barrier of straw or similar material used to intercept sediment laden runoff from small drainage areas of disturbed soil.

Purpose

The purpose of a bale dike is to reduce runoff velocity and effect deposition of the transported sediment load. Straw bale dikes have an estimated design life of three (3) months.

Conditions Where Practice Applies

The straw bale dike is used where:

1. No other practice is feasible.
2. There is no concentration of water in a channel or other drainage way above the barrier.
3. Erosion would occur in the form of sheet erosion.
4. Length of slope above the straw bale dike does not exceed these limits.

Constructed Slope	Percent Slope	Slope Length (ft.)
2:1	50	25
2 -1/2:1	40	50
3:1	33	75
3-1/2:1	30	100
4:1	25	125

Where slope gradient changes through the drainage area, steepness refers to the steepest slope section contributing to the straw bale dike.

The practice may also be used for a single family lot if the slope is less than 15 percent. The contributing drainage area in this instance shall be less than one acre and the length of slope above the dike shall be less than 200 feet.

Design Criteria

A design is not required. All bales shall be placed on the contour with cut edge of bale adhering to the ground. See Figure 5A.8 on page 5A.18 or details.

Appendix E

Excavation, Trenching, and Shoring Plan

TREC Environmental, Inc. has the following Competent Person personnel;

Stephen Stockmaster, Steve Warner, Jim Agar, Kurt Ballerstein, Keith Hambley

Definitions:

Aluminum hydraulic shoring means an engineered shoring system comprised of aluminum hydraulic cylinders (cross braces), used in conjunction with vertical rails (uprights) or horizontal rails (wailers). Such a system is designed specifically to support the sidewalls of an excavation and prevent cave-ins.

Benching means a method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near-vertical surfaces between levels.

Cave-in means the separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure and immobilize a person.

Competent person means one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions that are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. All competent persons must complete the 4-hour Physical Plant trenching and shoring class, successfully pass the exam, and be certified for successful completion of the class. A competent person should have and be able to demonstrate the following:

Training, experience, and knowledge of:
- soil analysis,
- use of protective systems, and
- requirements of 29 CFR 1926 Subpart P.

Ability to detect:
- conditions that could result in cave-ins,
- failures in protective systems,
- hazardous atmospheres, and
- other hazards including those associated with confined spaces.
- Authority to take prompt corrective measures to eliminate existing and predictable hazards and to stop work when required.

Excavation means any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal.

Registered professional engineer means a person who is registered as a professional engineer.

Shield (shield system) means a structure that is able to withstand the forces imposed on it by a cave-in and thereby protect employees with the structure. Shields can be permanent structure or can be designed to be portable and moved along as work progresses. Also known as trench box or trench shield.

Shoring (shoring system) means a structure such as a metal hydraulic, mechanical or timber shoring system that supports the sides of an excavation and which is designed to prevent cave-ins.

Sloping (sloping system) means a method of protecting employees from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation so as to prevent cave-ins. The angle of incline varies with differences in such factors as the soil type, environmental conditions of exposure, and application of surcharge loads.

Trench (trench excavation) means a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench is not greater than 15 feet. If forms or other structures are installed or constructed in an excavation as to reduce the dimension measured from the forms or structure to the side of the excavation to 15 feet or less, the excavation is also considered to be a trench.

General Requirements:

All excavations shall be made in accordance with the rules, regulations, requirements, and guidelines set forth in 29 CFR 1926.650, .651, and .652; the Occupational Safety and Health Administration's standard on Excavations, except where otherwise noted below.

Procedures:

A competent person shall be placed in charge of all excavations. Underground utilities must be located and marked before excavation begins. Employees are not allowed in the excavation while heavy equipment is digging.

Inspections:

The competent person shall conduct inspections:

- Daily and before the start of each shift by using the DAILY EXCAVATION

CHECKLIST found at the end of this chapter

- As dictated by the work being done in the trench.
- After every rain storm, after other events that could increase hazards, such as snowstorm, windstorm, thaw, earthquake, dramatic change in weather, etc.
- When fissures, tension cracks, sloughing, undercutting, water seepage, bulging at the bottom, or other similar conditions occur.
- When there is a change in the size, location, or placement of the spoil pile.
- When there is any indication of change or movement in adjacent structures.

(For excavations 4 feet or greater in depth, a trench inspection form shall be filled out for each inspection.)

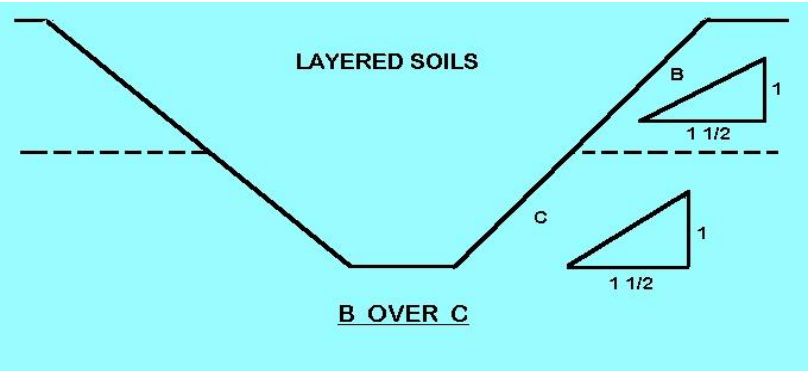
Soil Types:

Type A - Most stable: clay, silty clay, and hard pan (resists penetration). No soil is Type A if it is fissured, is subject to vibration of any type, has previously been disturbed, or has seeping water.

Type B - Medium stability: silt, sandy loam, medium clay and unstable dry rock; previously disturbed soils unless otherwise classified as Type C; soils that meet the requirements of Type A soil but are fissured or subject to vibration.

Type C - Least stable: gravel, loamy sand, soft clay, submerged soil or dense, heavy unstable rock, and soil from which water is freely seeping.

Layered geological strata (where soils are configured in layers) - The soil must be
classified on the basis of the soil classification of the weakest soil layer. Each layer
may be classified individually if a more stable layer lies below a less stable layer, i.e. where a Type C soil rests on top of stable rock.



Testing Methods

The competent person in charge of the excavation shall be responsible for determining whether the soil is Type B or C. The competent person shall use a visual test coupled with one or more manual tests.

Visual test

In addition to checking the items on the trench inspection form, the competent person should perform a visual test to evaluate the conditions around the site. In a visual test, the entire excavation site is observed, including the soil adjacent to the site and the soil being excavated. The competent person also checks for any signs of vibration.

During the visual test, the competent person should check for crack-line openings along the failure zone that would indicate tension cracks, look for existing utilities that indicate that the soil has been previously disturbed, and observe the open side of the excavation for indications of layered geologic structuring.

This person should also look for signs of bulging, boiling, or sloughing, as well as for signs of surface water seeping from the sides of the excavation or from the water table.

In addition, the area adjacent to the excavation should be checked for signs of foundations or other intrusions into the failure zone, and the evaluator should check for surcharging and the spoil distance from the edge of the excavation.

Manual tests

Thumb penetration test- Attempt to press the thumb firmly into the soil in question.
If the thumb penetrates no further than the length of the nail, it is probably Type B soil. If the thumb penetrates the full length of the thumb, it is Type C. It should be noted that the thumb penetration test is the least accurate testing method.

Dry strength test- Take a sample of dry soil. If it crumbles freely or with moderate pressure into individual grains it is considered granular (Type C). Dry soil that falls into clumps that subsequently break into smaller clumps (and the smaller clumps can only be broken with difficulty) it is probably clay in combination with gravel, sand, or silt (Type B).

Plasticity or Wet Thread Test- Take a moist sample of the soil. Mold it into a ball and then attempt to roll it into a thin thread approximately 1/8 inch in diameter by two inches in length. If the soil sample does not break when held by one end, it may be considered Type B.

A pocket penetrometer, shearvane, or torvane may also be used to determine the unconfined compression strength of soils.

Spoil

Temporary spoil shall be placed no closer than 2 feet from the surface edge of the excavation, measured from the nearest base of the spoil to the cut. This distance should not be measured from the crown of the spoil deposit. This distance requirement ensures that loose rock or soil from the temporary spoil will not fall on employees in the trench.

Spoil should be placed so that it channels rainwater and other run-off water away from the excavation. Spoil should be placed so that it cannot accidentally run, slide, or fall back into the excavation.

Permanent spoil should be placed some distance from the excavation.

Surface Crossing of Trenches

Surface crossing of trenches should not be made unless absolutely necessary. However, if necessary, they are only permitted under the following conditions:

Vehicle crossings must be designed by and installed under the supervision of a registered professional engineer.

Walkways or bridges must: have a minimum clear width of 20 inches, be fitted with standard rails, and extend a minimum of 24 inches past the surface edge of the trench.

Ingress and Egress

Trenches 4 feet or more in depth shall be provided with a fixed means of egress.

Spacing between ladders or other means of egress must be such that a worker will not have to travel more than 25 feet laterally to the nearest means of egress.

Ladders must be secured and extend a minimum of 36 inches above the landing.

Metal ladders should be used with caution, particularly when electric utilities are present.

Appendix F
Short Service Personnel

The objective of this policy and procedure is to ensure that TREC and Subcontractor short service employees are identified, appropriately supervised, trained, and managed in order to prevent accidents such as personal injury, injury to others, environmental damage, or property damage.

A TREC employee or a TREC subcontractor employee with less than six (6) months continuous service in the same job type or less than six (6) months continuous service with his/her current employer is a Short Service Employee (SSE).

SSEs shall not exceed 50% of TREC's workforce at any job site without prior written approval from the Office Manager (OM) and, when required by client contract or policy, approval from the designated client representative.

B. An initial employee orientation is required before the SSE can perform any field work. Orientation must be conducted by the OM or the designated supervisor of the SSE.

The initial orientation shall at a minimum communicate the following information:

- Even though risks do exist:

— Accidents and injuries are preventable.
— Each worker has a personal responsibility for his or her safety and the safety of others both on and off the job.
— No business objective is so important that it will be pursued at the sacrifice of safety.
— Safe conduct is a condition of employment.
— Work is done well only if it is done safely.
— TREC employees are expected to have the best safety performance.

- Overview of TREC's Safety Procedures and Practices
- General requirements for Personal Protective Equipment
- Injury reporting and medical follow-up procedures
- Requirements regarding participation in safety meetings, Safe Performance Self Assessments (SPSAs), pre-job Job Safety Analyses (JSAs) and the Loss Prevention Observation (LPO) / TREC Peer Observation process
- Requirements of this SSE Policy

Other pre-assignment training (or verification of prior training) is also typically required and will be determined by the OM and Supervisor of the SSE. Examples of this additional training include OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) training, one-one-one Safety and Procedures Review with the Office Health and Safety Manager (OHSM), client-specific training program requirements (i.e., LPS®, railroad worker safety, etc.), and job skills training requirements specific to immediate job tasks (i.e., various field procedures training, equipment usage, etc.).
Medical clearance and drug testing clearance are also required prior to the performance of field work on some sites.

Project and Site-Specific Orientation and Training

Many TREC projects have different requirements that are client-specific or site-specific in nature. It is the responsibility of the Project Principal (PP) (or Project Manager (PM) if delegated this responsibility by the PP) to ensure that the SSE assigned to his/her projects is provided orientation and training with respect to these client and/or site-specific requirements. Minimum site-specific orientation shall include operations overview, review of the site-specific HASP, emergency action plan, facility sign-in and sign-out, hazard identification and reporting, MSDS information and H2S if applicable. In addition, any restrictions on communications with non TREC personnel, site access or operation of site equipment (both TREC and Client owned) should be reviewed.

Additional SSE Training

While classified as an SSE, it is the employee's responsibility to actively seek out and participate in available training opportunities. The SSE will utilize the attached SSE Form to track the completion of training and other experience gained while an SSE. Specific training that is recommended to be completed within the first six (6) months of employment in order for the employee to graduate from SSE status is listed on the SSE Form. Individuals completing the training are required to sign-off on each type of training.

C. Notifications and Responsibilities
The following individuals have responsibilities for notification under this policy.
Office Manager (OM) and SSE Supervisor: Have the responsibility of notifying the PP when a SSE employee is assigned to his/her project.

SSE: TREC employees who are SSEs are required to identify themselves as such to the TREC PM prior to reporting to the job Site and to provide the PM with an up-to-date copy of his/her TREC SSE Training and Assignments Documentation Form. SSEs are required to wear company- supplied fluorescent green colored arm bands (or other project-specific distinct identification) when in the field in order to be easily identifiable.

Project Principals (PPs) and Project Managers (PMs): PPs are responsible for notifying the PM when a SSE employee is assigned to his/her project and for ensuring that the requirements of this SSE Policy are adhered to on their projects. When required by Client contract or policy, the TREC PP (or PM if delegated this authority by the PP) shall provide applicable notice to the client's designated representative regarding SSE's being assigned to field work.

The notice should be completed in advance using any applicable client SSE notification forms and shall be acknowledged / approved by the client representative prior to the SSE commencing work.
The TREC PM shall notify the field manager / supervisor who will be responsible for field mentoring/training of the SSE on their project and for making sure everyone on the job site is

aware that SSEs are present. All personnel are expected to help the SSE and to explain potential hazards before each job.

Mentor

The PP (or PM if delegated this authority by the PP) must designate an onsite supervisor for the SSE. An SSE may only work under the direct on-site supervision of the designated supervisor who, as one of his or her duties, serves as a mentor/trainer in safety for the SSE. The onsite supervisor or mentor must provide close supervision and not allow the SSE to perform any task in which the SSE has not been properly trained. The onsite supervisor will review with the SSE any hazards associated with the task and review all emergency equipment and procedures. The mentor must actively work with and engage the SSE on a daily basis to provide mentoring and monitoring of the SSE with respect to safe work practices.

At the completion of each field assignment, the onsite supervisor/mentor will complete the applicable section of the employee's SSE form to document the work experience and provide feedback to the Project Manager as well as the OM and Project Principal regarding the SSE's performance and capabilities.

Short Service Employee Policy Exceptions

Any exception to this Short Service Employee Policy must be approved in writing by the OM and PP, and, when required by client contract or policy, by the designated client representative. An exception to the onsite supervisor / mentor requirement and 50 percent SSE limitation may be granted for activities typically performed by one TREC employee (e.g., field work oversight, field inspections, etc.). To be eligible for an exception, the employee must have had training and demonstrated prior experience in the specific work area. In addition, the PM shall also provide additional communications during the course of each day to review safety requirements and work progress to ensure work is being performed safely and in accordance with expectations.

An exception to the 50% SSE limitation may be granted for work that requires increased staffing levels by TREC or TREC subcontractors (e.g., construction projects). The exception request must be submitted in writing, using a form similar to the attached TREC SSE Exception Form, by the contractor, outlining SSE expectations limitations, types of work to be performed, and mitigative measures that will be taken to minimize risks associated with the increased utilization of SSEs. The exception request must be approved by the OM and, when required by client contract or policy, approval from the designated client representative.

Completion

To be removed from SSE status, the OM and the SSE's Supervisor must be convinced that the SSE has a working knowledge of both TREC and any applicable client Safety Policies and has demonstrated safe work practices and behavior. In addition, the SSE must have completed all required initial SSE training (as documented in his/her SSE Form) and have performed all activities without a serious loss incident (i.e., property damage, OSHA-Recordable injury). At that time, if the OM and Supervisor are convinced of the SSE's capabilities, the OM may remove the employee from the TREC SSE process by completing and signing the applicable

section of the employee's SSE Form. The signed form will then be forwarded to Human Resources to be included in the employee's personnel file. If the SSE has been actively working on a client site under client-specific SSE requirements, the PM may need to obtain approval from the client representative as well.

Subcontractors

All subcontractors who supply field personnel to TREC job sites must implement a policy that meets or exceeds the expectations described above as well as any additional requirements that may be required on a client or site-specific basis.

Appendix G
Confined space entry Permit

TREC Environmental Inc.
1018 Washington Street
Spencerport, NY 14559
(585) 595-5545

Confined Space Entry Permit

Permit Number _____ Date _____

Location & Description of Confined Space:

_____

_____

Purpose of Entry:

_____

_____

Scheduled Start _____ a.m. p.m.
Day / Date / Time

Scheduled Finish _____ a.m. p.m.
Day / Date / Time

è **Employee(s) in charge of entry:** _____

Entrants:

_____

_____

Attendants:

_____

_____

è **Pre-Entry Authorization**: _____

{Check those items below which are applicable to your confined space permit.}

TYPES OF HAZARDS

- ☐ Oxygen-Deficient Atmosphere
- ☐ Oxygen-Enriched Atmosphere
- ☐ Welding/Cutting
- ☐ Engulfment
- ☐ Toxic Atmosphere
- ☐ Flammable Atmosphere
- ☐ Energized Electrical Equipment
- ☐ Potentially Flammable
- ☐ Hazardous Chemical

SAFETY PRECAUTIONS

- ☐ SCBA / Suplied Air Line
- ☐ Air Purifing Respirator
- ☐ Protective Suits
- ☐ Protective Gloves
- ☐ Ventilation
- ☐ Retrieval Tripod
- ☐ Lifelines
- ☐ Lockout/Tagout
- ☐ Fire Extinguishers
- ☐ Barricade Job Area
- ☐ Signs Posted
- ☐ Lighting
- ☐ Ground Fault Interrupter

ENVIRONMENTAL CONDITIONS

	Initial	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
Time of Reading												
Oxygen %												
Lower Explosive Limit %												
Toxic Atmoshere / CO												

Instrument Used:_____ **Calbration Date :**_____

Employee Conducting Safety Checks & **SIGNATURE**: _____

Remarks :

_____

_____

_____

ENTRY AUTHORIZATION	ENTRY CANCELLATION
All actions and/or conditions for safe entry have been performed.	Entry has been completed and all entrants have exited permit space.
Person in Charge of Entry _____ PLEASE PRINT	Person in Charge of Entry _____ PLEASE PRINT

IN CASE OF EMERGENCY CALL 911
{CFR 1910.146 (f)(11)}

Appendix H

JSAs

JOB SAFETY ANALYSIS	DATE 8-4-2010, 5/2/2102,7/2/2012,1082015	NEW x REVISED	PAGE 1 of 1

JSA TYPE CATEGORY	WORK TYPE	WORK ACTIVITY (Description)
All Work Locations	**Assessment and Remediation**	**General Site Activities**

DEVELOPMENT TEAM	POSITION / TITLE	REVIEWED BY:	POSITION / TITLE
KH, SS,PW	Contractor	Keith Hambley Steve Stockmaster	President VP

REQUIRED PERSONAL PROTECTIVE EQUIPMENT	RECOMMENDED PROTECTIVE EQUIPMENT
☒ SAFETY GLASSES X HARD HAT ☒ SAFETY SHOES Steel Toes ☒ PPE CLOTHING Highly visible clothing such as Orange coveralls, reflective safety vest, long sleeve shirts, . ☒ GLOVES Leather or Cold Weather	☒ GLOVES (KEVLAR< Nitrile) ☒ FACE SHIELD ☒ HEARING PROTECTION

[1]JOB STEPS	[2]POTENTIAL HAZARDS	[3]CRITICAL ACTIONS
A. Review "General Site Activities" JSA		
B. Work Zone		
A. Travel To and Arrive Onsite 1. Complete JSA/HASP/safety checklist/tailgate meeting ***Note:*** *Identify and locate the* ***Emergency Stop*** *switch for the fuel delivery system at all active retail sites.*	**1a**. Workers being struck/ injured and work vehicles/ property damage being caused by traffic **1b**. Potential to cause a fire/ explosion by use of cell phones and other electronic equipment **1c**. Overhead hazards	**1a**. Park in a secure area where vehicle is out of traffic pattern so that tailgate safety meeting can be performed safely. Be extra cautious when parked near active roadways do to flying debris or other material flying off of roadway. **1b**. All personal electronic devices (e.g., cell phones) are not to be used on site or in designated work areas **unless inside of a work vehicle or a designated safe area is established**. Ensure that 2- 20 lb fire extinguishers are brought to and made available to site personnel surrounding hazards. **1c**. Inspect work area for any overhead hazards including overhead utilities and overhead trees and vegetation. ➢ A visual inspection of overhead tree branches and vegetation should be conducted prior to starting a job task. ➢ Suspicious or dead braches will need to be removed prior to performing the job task. Working in a wooded area during high winds should be avoided and re-evaluate conditions after a storm.
2. Establish/set up site control (traffic control)	**2a**. Personal injury from contact with vehicles; property damage caused by being hit with a vehicle **2b**. Personal injury to pedestrians if hit by (contact by) vehicles **2c**. Electrocution and/ or property damage by contacting overhead wires or structures ***Note:*** *If electrical utilities must be de-energized and locked and tagged out of service, a thorough evaluation must be conducted of the work area to ensure that all electrical service that is required to be de-energized has been de-energized and that no one remains exposed to hazardous electrical energy.* **2d**. Parked vehicles/ equipment may roll and cause injury and/or property damage. Parked vehicles should have wheel chocks and the chocks should never be connected via rope or other means.	**2a**. Wear highly visible clothing such as orange reflective traffic vests or clothing. ➢ Utilize cones/barricades/safety fence to establish work zones as indicated in the "Traffic Control Program" posted in the HASP. ➢ Cone/flag height must be at least 36" tall. **2b**. Establish access points in the work zone to keep pedestrians and unintentional traffic out. ➢ Inform facility personnel of work (restricted) area and do not permit unauthorized individuals (i.e., those not properly trained or wearing appropriate PPE) access to the exclusion zone. **2c**. A spotter must be utilized when vehicles, including construction vehicles, are backing or moving onsite to ensure a safe pathway. Prior to any vehicle movement, a discussion must be held with each designated spotter so that they are aware of their responsibilities, hand signals that must be used for directing equipment operators, and ensure that they are aware of any unique site conditions or concerns. ➢ Prior to moving any vehicle, all racks, doors, and toolboxes must be closed to prevent contact with objects and to prevent items from falling out in transport. ➢ If there is no spotter, the driver must get out and walk around the vehicle prior to backing. ➢ Spotters must look up to ensure that there are no overhead wires or structures such as canopies that can be struck and ensure that they can be safely cleared by the operating equipment. ➢ Look down to identify unusual depressions, holes, or debris that may interfere with backing. ➢ Observe fixed objects or parked, unoccupied vehicles. ➢ Back slowly using rear view mirrors frequently. ➢ If backing vision is obscured, stop the vehicle every few feet to exit and recheck the backing route. ➢ Remain constantly alert at all times while backing a vehicle for the potential for other vehicles or pedestrians to appear unexpectedly in the path of travel.

		➢ Vehicle tailgate must be in up/closed position when vehicle is in motion. **2d**. When parked and unhooked from a vehicle, trailers must have a wheel chock placed in front of and behind each rear wheel.
3. Remove/load equipment from vehicle	**3a**. Personal injury due to back or other strains **3b**. Personal injury due to falls while exiting vehicles **3c**. Personal injury due to equipment shift	**3a**. Utilize proper lifting procedure (keep your back straight) when loading coolers and/or equipment back into truck; bend down at the knees and lift with your legs rather than bending and/or lifting with your back. ➢ Utilize material handling devices when possible to move equipment (e.g., lift gates, pallet jacks, dollies, etc.). ➢ If necessary, utilize a ramp for loading and unloading wheeled devices, ensuring the ramp is properly supported prior to use. ➢ Use mechanical means or assistance for items weighing >50 lbs. **3b**. Maintain three points of contact when exiting vehicle cab or when exiting truck beds. **3c**. Ensure all equipment is properly secured and stored (e.g., tie downs, adjustable straps, tool box, tool cabinet, etc.) during non-use and transportation. ➢ Wear appropriate gloves (leather) when securing or removing equipment. During removal of equipment be cautious of pinch points that may have been created due to shifting equipment or equipment that may be secured or stored together
4. Exposure	**4a**. Weather related issues **4b**. Cold stress related injury **4c**. Heat stress related injury **4d**. Severe weather **4e**. Personal injury or illness due to exposure to site contaminants	**4a**. Crew should understand and be able to recognize the signs and/or symptoms of cold and hot weather related illnesses. ➢ Personnel should dress appropriately for ambient temperatures which would include but not be limited to dry layered clothing. ➢ Applying sunscreen to exposed skin is strongly recommended during sunny weather conditions (all seasons) to mitigate sun exposure. **4b**. For cold weather, work schedules should be adjusted to provide sufficient break periods in a heated area. **4c**. For hot weather, work schedules may need to be adjusted to provide time intervals for replenishing fluids and which is free of contamination. **4d**. Avoid exposure to severe weather. ➢ Pay attention to severe weather alerts and take appropriate precautions to secure life and property when severe weather occurs in work area. ➢ Take precautions with approaching thunderstorms and lighting. Discontinue all work until 30 minutes after severe weather has passed. ➢ In case severe weather such as tornados, hailstorms, or strong winds, take cover and make every effort to protect life. ***Note:*** *When operating equipment or machinery indoors that is fueled by gasoline, propane, or other hydrocarbon fuels, the emissions must be exhausted to the outside and carbon monoxide (CO) levels must be monitored during indoor activities. Levels of CO that exceeds 35 ppm will require operations to cease and staff to evacuate from the work area.* **4e**. Review and understand action levels noted in the HASP. ➢ Monitor (evaluate) breathing zone of workers with PID. ➢ Monitor (evaluate) any enclosure with a PID. ➢ Ensure that Level C PPE is available for potential upgrade.
B. Biological Hazards 1. Exposure	**1a**. Injury or illness caused by exposure to bio-hazards **1b**. Personal injury or illness caused by exposure to poisonous plants **1c**. Personal injury or illness due to exposure to insects **1d**. Personal injury or illness due to encounters with animals	**1a**. Wear appropriate PPE (e.g., eye protection, long pants, nitrile sampling gloves, shirt with sleeves, steel-toed boots). **1b**. Conduct a visual inspection of work area to identify any Biological hazards. Do not touch or contact poisonous plants, such as poison ivy and poison oak. ➢ Wash hands and arms immediately with soap and water if skin contacts the plants. ➢ Wear long pants with socks pulled over legs to prevent skin contact with plants and insects. **1c**. Spray any wasp/hornet nests with an insect repellent from a safe distance recommended by the product's manufacturer. Consider using the services of a pest control agent if site conditions warrant. ➢ Ensure that long sleeve shirts and pants are worn at all times to prevent contact with ticks. Using insect repellent with DEET is strongly recommended. Do not spray your skin directly. If conditions warrant, don a Tyvek suit. ➢ Visually inspect and carefully open any outside enclosures that insects and small animals could potentially enter.

C. Traverse Site ***D. Equipment inspection / refueling***	**1a**. Personal injury due to slips, trips, and falls 1d. Designate a location for equipment refueling and daily service inspections.	**1a**. Maintain all equipment and tools in designated areas and out of pathways. ➢ Look for changes in elevation and grade when walking on uneven terrain. ➢ Scan your walking path for obstructions, debris, slip, trip, and fall hazards. ➢ If applicable, replace manhole covers securely to prevent tripping and vehicle accidents. ➢ If ice and slick conditions are present, use salt or sand to add traction to prevent slips. ➢ Do not traverse through standing water/puddles. ➢ Snow can be moved away from walkways if it poses a slip hazard. Place temporary ramps over hoses or cords leading from water source or power source to designated work zone. 1d. Daily inspection of equipment should occur prior to the start of the work day. Consult site supervisor of any discrepincies. Have pads available and sorbent material readily available during refueling operations. Let equipment cool down prior to refueling. Stay on the upwind side of refueling to prevent inhalation of vapors.
D.		

JSA Title: **Excavation Activities**

Date Developed: 2/23/05	
Latest Revised Date: 5/24/2016, 5/11/2017	
Initiated/Changed by: Steve Stockmaster, V.P., Keith Hambley President	
Approved by: Keith Hambley, President	

Please complete the below if this JSA is being modified for SITE-SPECIFIC reasons.	
Date Form Completed:	**Work Location: New York Operations**
This JSA has been fully reviewed with all staff members and all activity job steps, hazards, work practices, and PPE are clearly understood and have been implemented. All necessary revisions have been written on this JSA.	

REQUIRED PPE: Gloves: nitrile, Kevlar, leather, antivibration (for jackhammer activities); Hard Hat; Hearing Protection: if site activities raise the noise level to 85 dB; PPE Clothing: highly visible clothing such as orange coveralls or reflective safety vest; Safety Glasses; Safety Shoes: steel-toed; OTHER - Respirator: may be required if conditions or work area air quality exceeds applicable HASP action levels

REQUIRED AND/OR RECOMMENDED TOOLS AND EQUIPMENT: Lockout/tagout kit, PID, LEL meter, Hotwork Permit, Small shovel, Sample jar/container, Spill response kit/spill pad - used under hyraulic equipment when work activities occur on a permeable surface such as grass or gravel

Activity/Sequence of Job Tasks	Hazards	Eliminate – Control – Protect **Risk Control Measures**
A. Mobilization 1. Mobilize to trench/ excavation location, establish work zone for staff and equipment	**1a**. Contact, cuts, or a fall that could result from the contact with equipment **1b**. Damage equipment that could from excavation equipment operating to close to the edge of the excavation	**1a**. Check excavation locations for underground and overhead utilities follow GES' *Excavation Protocol* or client-specific protocol. ➢ Observe equipment set up, ensuring no contact with overhead obstacles. ➢ The excavator must be positioned on level terrain prior to any excavation activities. ➢ Do not position outriggers on landscaping and verify that they are not directly above an underground utility if on grass. ➢ Proper equipment set up and leveling is required. ➢ Remind everyone never to leave hand tools on/near equipment. **1b**. If excavator needs to work inside the opened excavation, insure that correct side slope and access ramp are made. ➢ Excavator shall not be left unattended inside opened excavation. ***Note:*** *If the mark out locations are not visible (i.e. covered by snow, debris, vehicles, washed away/faded, etc.), stop work and contact the project manager or senior office manager.*
B. Open Concrete/Asphalt 1. Open/cut concrete/asphalt at trench/excavation location	**1a**. body injury from contact, fall from improper body positioning **1b.** Explosion/fire during refueling resulting from the ignition of flammable vapors **1c**. Fire, explosion that could result from the ignition of flammable vapors	**1a**. Wear PPE (e.g., safety glasses, ear muffs, work gloves, Level D clothing). ➢ Proper use of equipment (e.g., concrete saw, chop saw, etc.). ➢ Make sure all kill switches, blade guards are functioning properly and correctly positioned. ➢ During cutting activities be aware of flying debris. ➢ Perform wet cuts when possible to reduce the amount of dust and sparks generated during the cut. ➢ Equipment must be turned off and allowed to cool prior to refueling. ➢ Always fuel in a clear area away from debris. ➢ If your fuel container has no spout, use a funnel. ➢ Wipe the saw clean of any spilled fuel after fueling. ➢ Never smoke while fueling. ***Note:*** *Watch for the formation of ice during wet cuts in cold weather.* **1b**. Complete a Hotwork Permit when completing cuts within 35 feet of any vapor source. ***Note:*** *Air monitoring must take place throughout the cutting procedure if the possibility of flammable vapors exists.*
2. Breaking concrete or asphalt with a jackhammer	**2a**. Back injury from improper lifting **2b**. soft tissue injury that could result from vibration, Hearing loss from excessive noise, Eye injury from particulate **2c**. If pneumatic jackhammer is in use, injury from loose hosing	**2a**. Use proper lifting techniques. When lifting bend at legs and keep your back straight. ➢ While using the jackhammer, stand with feet shoulder width apart and balanced. **DO NOT** muscle the jack hammer around; let it do the work. **2b**. Wear leather or vibration-absorbing gloves, ear plugs, eye protection (due to flying debris), and a hard hat. ➢ Use shovels to push debris out of way. Follow manufacturer's operating procedures for equipment. ➢ Have a stable stance; feet shoulder width apart, hold jackhammer lightly and balanced. ➢ Do not wear excessively loose, baggy clothing, or jewelry. ➢ Take breaks (a 10 minute break every hour of operation) during operation of equipment (e.g., jack hammer) to prevent vibration/repetitive motion injuries. ➢ If jackhammer use is anticipated to last greater than 1 cumulative hour in a day, establish an exclusion zone to keep unauthorized personnel/bystanders 20 feet away, to reduce their exposure to noise. **2c**. Make sure Chicago style fittings are secured with the safety pin and whip checks, and the air hose has no rips or tears; also secure the hose so there is no tripping hazards present. ***Note:*** *Electric and air powered jack hammers are similar. For electric jackhammers, make sure the cord is secure and no cuts or tears are in the extension cord; it must be a GFCI extension cord.*

3. Hand clear known utility locations to assure no underground improvements	**3a**.Muscle injury that could result from improper clearing technique	**3a**. Hand clear slowly. ➢ Do not force through; soil may contact/break underground lines ("soft dig" technologies are recommended). ➢ Hand clear cautiously and use a balanced stance with feet shoulder width apart to avoid back, neck, and wrist strain. ***Note:*** *If any evidence of* ***peastone or non-native material*** *is observed during handclearing, drilling, excavation, or any subsurface activity, all subsurface work must stop and the project manager and/or the senior office manager must be contacted immediately.*
C. Begin Excavating Soil 1. Excavating soil, community air monitoring	**1a**. Body injury from the contact with or caught by machinery **1b**. Exposure to site contaminants **1c**. Fire or explosion from the ignition of a flammable atmosphere inside excavation **1d**. Trench collapse, flooding, damaged property/equipment	**1a**. Stay at least a 20 feet radius of center of moving equipment and at least 5 feet away from moving or rotating parts (e.g., excavator bucket, equipment tracks/wheels, vehicle drive shaft, etc.). **1b**. Monitor air in work area in the breathing zone of workers and third party nearby accessed areas for elevated vapors during digging activities as required by the H&S plan. ➢ Record any air monitoring data as required for the project's H&S Plan. ➢ If visible airborne soil (particulate) results within the immediate work area, measures must be taken to limit or control emissions. The measures could include, but not be limited to wetting the area, using surfactant, etc. ➢ In addition, if off-site migration results or is possible, a community air monitoring program may be necessary. **GES corporate HSSE must be contacted if a program is required.** **1c**. Monitor excavation with an LEL meter. ➢ If combustible gas levels exceed meter levels of 20 % of the LEL, digging activities should be halted and excavation and vapor control measures implemented that would include but not be limited to foam, surfactant, or similar material application. **1d**. Excavated soils should be properly stored on site. ➢ Typically soil is stored on poly and covered with poly. ➢ Keep soils and equipment at least 2 feet back from the excavation/trench. ➢ If excavator needs to work inside the opened excavation, insure that correct side slope and access ramp are made. ➢ Excavator shall not be left unattended inside opened excavation. ➢ Ensure that any structures that may be supported by soil being removed (e.g., curbing, buildings, etc.) are properly supported or braced. ***Note:*** *If any drums are filled with soil or any material, the drum can only be filled a maximum of two-thirds (2/3) full.*
2. Site security/traffic control	**2a**. Trip and fall from walking or working on uneven surfaces **2b**.Falls from improper ladder use **2c**. Body injury from trench collapse **2d**. Personal injury or property damage due to the improper positioning of site vehicles (i.e., excavation machinery and dump trucks)	**2a**. Access to the trench/excavation shall be restricted if deeper than 4 feet. ➢ If work scope requires personnel to enter a trench/excavation greater than 4 feet, specific approval must be obtained from corporate H&S prior to initiating field activities. ➢ Corporate H&S will verify that appropriate protective equipment will be installed (e.g., trench box, appropriate benching/sloping angles, etc.) to prevent a collapse of soil and to meet OSHA requirements. ➢ Under **NO** circumstances will a GES employee and/or sub-contractor be allowed to enter an excavation greater than 4 feet in depth without the prior corporate H&S approval. **2b**. Ladders shall be placed in the trench/excavation if the trench/excavation is 4 feet deep. These shall be arranged so that no point in the excavation is greater than 25 feet away from one ladder. ➢ Ladders shall be pitched at a 4:1 ratio and secured at the top and bottom. **2c**. No personnel shall be permitted to enter a trench/excavation with the presence of standing water/product at the bottom. ➢ Constantly monitor for the signs of weakening sidewalls, evacuate the area if an unstable condition develops. **2d**. Tri-axle vehicles (dump trucks) should be loaded from the side of the truck. ➢ The excavator operator will be required to indicate where the truck should be positioned and to provide final approval to the truck's spotter as to where the truck is positioned. ➢ A spotter must be utilized when vehicles, including construction vehicles, are backing or moving onsite to ensure a safe pathway. ➢ After a dump truck has completed dumping activities the dump body should be completely lowered and secured prior to moving forward. ***Note:*** *The excavator operator should stop the work if he can not safely see or reach the loading area.* ***Note****: Prior to any vehicle movement, a discussion must be held with each designated spotter so that they are aware of their responsibilities, hand signals that must be used for directing equipment operators, location in which to stand and ensure that they are aware of any unique site conditions or concerns. Spotters must look up to ensure that there are no overhead wires or structures such as canopies that can be struck and ensure that they can be safely cleared by the operating equipment. Look down to identify unusual depressions, holes, or debris that may interfere with backing. Observe fixed objects or parked, unoccupied vehicles.*
D. Working in a Trench/ Excavation 1. Backfill trench/excavation	**2a**. Body injury from contact with fill material **2b**. Injury from contact with machinery	**2a**. Personnel are not permitted in trenches/excavations during the backfill process. ➢ Remove all tools and equipment from the trench/excavation prior to replacing soils/pea gravel. **2b**. Stay at least a 20 feet radius of center of moving equipment and at least 5 feet away from moving or rotating parts (e.g., excavator bucket, equipment tracks/wheels, vehicle drive shaft, etc.).

Job Safety Analysis (JSA)

JSA Title: **Backfilled Soil Compaction**

Date Developed: 10/4/07	
Latest Revised Date: 5/23/2016, 5/11/2017	
Initiated/Changed by: Steve Stockmaster, V.P.	
Approved by: Keith Hambley, President	

Please complete the below if this JSA is being modified for SITE-SPECIFIC reasons.	
Date Form Completed:	**Work Location: New York Operations**
This JSA has been fully reviewed with all staff members and all activity job steps, hazards, work practices, and PPE are clearly understood and have been implemented. All necessary revisions have been written on this JSA.	

REQUIRED PPE: Air Purifying Respirator: for comfort while generating dust wear a dust mask or an air purifying respirator with a HEPA filter. Gloves: nitrile, leather. Hard Hat: if working in an area with low overhead clearance. Hearing Protection: if site activities raise the noise level to 85 dB. PPE Clothing: highly visible clothing such as orange coveralls or reflective safety vest; Tyvek or Saranex for cleaning activities or splash hazards. Safety Glasses. Safety Shoes: steel-toed

REQUIRED AND/OR RECOMMENDED TOOLS AND EQUIPMENT: Lockout/tagout kit

Activity/Sequence of Job Tasks	**What** would be the result of exposure?	**Risk Control Measures**
Please ensure that all necessary JSAs associated with your work scope have been identified and reviewed.		
A. Using Compaction Equipment 1. Inspect any equipment used for compaction prior to use or following repairs	**1a**. Injury to eyes, body, or hearing loss due to pinch points, flying materials or loud noises while operating equipment	**1a**. Test emergency shutdown switches and guards to assure proper functionality. ➢ Use PPE that includes leather work gloves, safety glasses, hearing protection, and if there are overhead hazards or other site conditions that warrant it, a hardhat. ➢ Read and follow manufacturer's operating recommendations.
2. Place tamper / compactor within an excavation or other area that requires soil compaction ***Note**: Be aware that there may be elevated levels of gasoline or product vapors in excavations.* ***Note:** Soil compaction equipment should not be used on sloped surfaces.*	**2a.** Bodily injury due to ergonomic potentials relating to operating equipment **2b.** Hearing loss due to overexposure to excessive noise **2c**. Back injury due to handling / maneuvering plate (whacker) tamper into position **2e**. Back injury due to handling / maneuvering walk behind compactor	**2a**. Wear leather or vibration-absorbing gloves, safety glasses, hearing protection, and a hard hat. ➢ Follow manufacturer's operating procedures for equipment. ➢ Have a stable stance; feet shoulder width apart, hold compactor lightly and balanced. ➢ Take breaks (a 10 minute break every hour of operation) during operation of equipment to prevent vibration/repetitive motion injuries and possible heat related issues. **2b.** Wear hearing protection with a Noise Reduction Rating (NRR) that reduces exposure below 85 dBa. ➢ Ensure non-operators of equipment maintain a 15 foot distance to minimize noise exposure. **2c**. Use two individuals when placing the tamper into the excavation or work area. ➢ Use proper lifting and carrying techniques. Bend at your knees and lift with your legs while keeping your back straight. ➢ Maintain a good grip and keep your feet square and balanced. ➢ Do not attempt to "muscle" equipment around ➢ **NEVER** attempt to jump the tamper into an excavation. **2e**. Place compactor into excavation or other area by driving it into the location. ➢ Construct and use a low grade ramp for placement into and excavation. ➢ Never try to drive or drop the compactor into an excavation from an elevated area.
3. Compact soil using a tamper / compaction device	**3a**. Injury due to ergonomic potentials relating to operating equipment (excessive vibration) **3b.** Adverse health effects due to overexposure to excessive noise	**3a**. Wear leather or vibration-absorbing gloves, eye protection, hearing protection, and a hard hat. ➢ Use shovels to push debris out of way. ➢ Follow manufacturer's operating procedures for equipment. ➢ Have a stable stance; feet shoulder width apart, hold compactor lightly and balanced. ➢ Take breaks (a 10 minute break every hour of operation) during operation of equipment to prevent vibration/repetitive motion injuries. **3b.** Wear hearing protection with a Noise Reduction Rating (NRR) that reduces exposure below 90 dBa. ➢ Ensure non-operators of equipment maintain a 15 foot distance to minimize noise exposure.

	3c. Back injury or other bodily injury from operating or getting caught on whacker tamper **3d**. Back injury from improper maneuvering of walk behind compactor **3e**. Pinch or smash fingers between sidewall and handles	**3c**. Maintain a good grip and keep your feet square and balanced; do not attempt to "muscle" equipment around. ➢ Allow the device to perform the work. ➢ Do not try to force or muscle it into an area. ➢ Do not wear excessively loose/baggy clothing or jewelry. ➢ Get assistance to move it out of the trench **3d.** Stand to one side of the handle controls. ➢ Allow the device to perform the work. ➢ Do not try to force or muscle it into an area. ➢ Get assistance to move it out of the trench **3e**. Be aware of arm and handle location and the proximity from the side wall of the excavation or onsite structures. ➢ Attempt to maintain one (1) foot clearance from the sidewall or other onsite structures at all times.
On-site edits:		

Job Safety Analysis (JSA)

JSA Title: **Covering/Uncovering Soil Piles with Tarps - Manually**

Date Developed: 11/30/05	**Please complete the below if this JSA is being modified for SITE-SPECIFIC reasons.**
Latest Revised Date:5/24/2016, 5/12/2017	**Revision #:** / **Work Location: New York Operations**
Initiated/Changed by: Steve Warner, Operator, Jim Agar, Driller	**This JSA has been fully reviewed with all staff members and all activity job steps, hazards, work practices, and PPE are clearly understood and have been implemented. All necessary revisions have been written on this JSA.**
Approved by: Keith Hambley, President (TREC),	

REQUIRED PPE: Safety Glasses, Gloves: nitrile, Kevlar (Level II), leather. Hard Hat, PPE Clothing: Long sleeve, highly visible shirt and coveralls, Class II reflective safety vest. Safety Shoes: steel toed-PR (ASTM F-2413), rubber booties while walking on contaminated soil.

REQUIRED AND/OR RECOMMENDED TOOLS AND EQUIPMENT: Tarps. Plastic zip ties. Closed cutting tool. Rope.

Activity/Sequence of Job Tasks	Potential Hazards	Risk Control Measures
Please ensure that all necessary JSAs associated with your work scope have been identified and reviewed.		
A. Cover Soil Piles with a Tarp 1. Inspect the soil pile	**1a**. Fractures and contusions to the arms and hands due to slipping and falling while walking in area of soil pile. **1b**. Cut / puncture to the feet due to contact of sharp debris in soil-glass, rebar, etc.	**1a**. Walk around the soil pile and look for uneven areas that may create a tripping hazard. ➢ Look at the pitch of the soil pile and select a path with a gradual elevation change or adjust pile with excavator. ➢ Don nitrile gloves over Kevlar level 2 cut resistant gloves. **1b**. Prior to accessing the soil pile; inspect for sharp debris, and use leather or Kevlar gloves if contact with hands is required. ➢ Wear steel toed boots with puncture protection. Don nitrile gloves over Kevlar level 2 cut resistant gloves.
2. Adjust/cover the soil pile	**2a**. muscles and / or joint strains due to handling tarp. **2b**. Fractures or contusions from slipping tripping and falling while traversing soil pile.	**2a.** Utilize equipment (excavator, skid-steer, shovel) to even out the pile to avoid any valleys/holes. ➢ Avoid twisting and bending your body out of alignment while dragging the tarp into place over the soil pile. Do not attempt to control a tarp that has become airborne with a gust of wind! ➢ Let it go immediately. This can easily pick you up and cause serious physical harm. ➢ Don PPE prior to handling tarp (safety glasses, Kevlar level 2 cut resistant gloves, hi-visible clothing, steel-toe boots) **2b**. Inspect pathway prior to walking or around soil pile area. Be aware of slip/trip/fall hazards while walking on the pile. ➢ While walking on top of the tarp, keep a low center of gravity to avoid loosing your balance or slipping. ***Note:*** *If the tarp is wet (e.g., rain, snow, dew, etc.) do not walk on it.*
3. Secure the tarps	**3a**. Back or muscle strain due to placing heavy objects on tarp to secure to ground.	**3a**. Use equipment to prevent back injuries lift with your legs keeping your back straight and do not twist your back while lifting, carrying, and placing the item that is used to secure the tarps. ➢ To minimize the number of heavy objects required to secure the tarps, zip ties can be used to tie the gaps together, forming one large tarp; equipment should be used whenever possible to place weights on tarps.
B. Uncover the Pile 1. Inspect the soil pile	**1a**. Fractures or contusions from slipping tripping and falling while traversing soil pile.	**1a**. Walk around the soil pile and look for uneven areas that may create a tripping hazard. ➢ Look at the pitch of the soil pile and select a path with a gradual elevation change or adjust pile with excavator.

2. Remove the tarps manually ***Note:*** *This guidance is only permitted when removing tarps 10' x 10' in size or less.*	**2a**. Injury to muscles / joints due to handling of tarp and removing objects that were used to secure tarp. **2b**. Cuts to hands / arms or body due to cutting tool use **2c**. Fractures or contusions to arms or body due to debris falling from tarp during tarp removal. **2d**. Muscle strains to shoulder or back from removal of tarp over soil pile in heavy winds.	**2a**. Refer to A.2a and 2b above. Inspect tarp for any standing water, debris, or material sticking up through from the soil pile. If any of these (or other potential resistance items) is not present, then the tarp may be removed manually. ➢ Prior to removing the tarp or any physical activity, warm up and/or stretch. ➢ When pulling the tarp, have your legs shoulder width apart with your knees slightly bent. Maintain good balance. ➢ Pull the tarp toward your chest with both arms without twisting your torso. ➢ Do not pull excessively hard on the tarps at any time; if the tarp does not move with the initial tug, inspect the perimeter of the tarp for snags or water that may have collected. ➢ **Again stop pulling if resistance is encountered and re-inspect the tarp surface and perimeter for obstructions** ➢ While removing the securing objects, remember to use lifting techniques that requires staff to use their legs, and keep their back straight; use equipment whenever possible to assist in the removal process. ➢ Don PPE prior to handling tarp (safety glasses, leather gloves, hi-visible clothing, steel-toe boots) **2b**. While cutting plastic zip ties, from the bottom up, rolling/folding tarp as you go, ensure cuts are made away from your body. ➢ Use an approved self-retracting knife or approved cutting tool for traps and don Kevlar gloves. **2c**. Inspect tarp prior to removal for sampling or other purposes to ensure there are no rocks or other material that were used to secure the tarp from rolling onto the individual. ➢ Any materials discovered during the inspection should be removed prior to removing the tarp. **2d**. During high winds (greater than 15 mph) use additional staff or mechanical means (excavation equipment/vehicles) to remove tarps. ➢ Pull and fold tarp upwind so that it does not become a sail and cause a greater hazard. ➢ Conduct thorough SPSA prior to beginning tarp removal. ➢ The approached taken to remove the tarp must be added to this JSA prior to beginning the task.
On-site edits:		

Core Safety Expectations

1. ***Always follow Fall Protection standards when working at elevated heights.***
2. ***Always follow Written Permit procedures.***
3. ***Always follow Lock Out/Tag Out (LOTO) procedures.***
4. ***Always follow Critical Devise Defeat procedures.***
5. ***Always follow written PPE Requirements for the work being performed.***

Job Safety Analysis (JSA)

JSA Title: **Heavy Equipment Operation**

Date Developed: 5/1/2014	**Please complete the below if this JSA is being modified for SITE-SPECIFIC reasons.**
Latest Revised Date: 5/1/2014; **9/4/2014, 5/23/2016, 5/11/2017**	**Revision #:3** / **Work Location:** New York Operations
Initiated/Changed by: Keith Hambley (Trec Ops), Chris Sanson (GES CM/Field Supervisor), Justin Domago (GES PM). Steve Warner, Operator TREC.	**This JSA has been fully reviewed with all staff members and all activity job steps, hazards, work practices, and PPE are clearly understood and have been implemented. All necessary revisions have been written on this JSA.**
Approved by: Keith Hambley, President, Steve Stockmaster, Sr.,VP	

REQUIRED PPE: Gloves: nitrile, Kevlar (Level II), leather. Hard Hat. Hearing Protection: if site activities raise the noise level to 85 dB. PPE Clothing: Long sleeve highly visible clothing such as orange coveralls, class II safety vest. Safety Glasses. Safety Shoes: steel-toed (ASTM F-2413) with Puncture Resistant Rating.

REQUIRED AND/OR RECOMMENDED TOOLS AND EQUIPMENT:

Activity/Sequence of Job Tasks List all tasks required to perform a job in the sequence they are carried out.	**POTENTIAL HAZARDS**	Eliminate – Control – Protect **Risk Control Measures**
Please ensure that all necessary JSAs associated with your work scope have been identified and reviewed.		
A. Equipment Inspection 1. Inspect heavy equipment ***Note:*** *Complete Construction Activities Inspection Form.*	**1a.** Leg/ arm/ hand injury (fracture or contusion) that could result from tripping and falling while walking around the equipment **1b.** Cuts to the hands that could result from testing switches and levers. **1c**. Blunt force injury to arms/ legs/ torso that could result being struck by equipment	**1a.** Inspect equipment for leaks, damaged components, integrity of tracks/tires prior to the start of work. Visually inspect walkway around skid steer prior to inspection to evaluate ground surface for trip hazards such as tools, uneven pavement, rocks. Clear pathway before traversing. **1b.** Check the operation of all safety/kill switches and safety equipment. Inspect levers and switches for burrs. Wear cut resistant gloves and leather gloves when inspecting equipment. **1c.** All personnel operating heavy equipment must have been previously approved. ➢ Heavy Equipment must be operated per the manufacturer's requirements and will not make any modifications to the equipment. ➢ Confirm that back up alarms work during inspection.
B. Driving and Operating Activities 1. Heavy machinery operation	**1a**. Blunt force injury (fractures or contusions) to arms/ torso/ legs that could result from heavy equipment contact with objects/ personnel **1b**. Amputation/ cuts that could result to the hands, arms or legs from placement of body parts under moving equipment parts **1c**.Burns from a fire/explosion that could result from flammable fuel vapor with a hot engine	**1a**. Unauthorized personnel must not approach within 15 feet of an operating piece of equipment at any time. ➢ Operator should wear seat belt while seated and observe blind spot locations prior to starting/moving equipment. Test brakes, shut off or kill switch, steering and other controls. ➢ The load being carried must not interfere with the operator's line of sight. ➢ Spotters will be used when the heavy equipment is operating in tight quarters/ going around corners. Ensure hand signals are communicated prior to using spotter. ➢ Drive straight up and straight down slopes. Back down inclines when bucket is loaded, go forward up include when bucket is empty. Avoid turns on slope and do not drive on slope exceeding 20% incline. ➢ Set parking brake and turn off engine when not in use. **1b**. Do not place any part of your body between vehicle parts (i.e., tailgate and bed of dump truck, stabilizing arms, etc.). **1c**. Equipment must be turned off and allow to cool before refueling ➢ An ABC-rated fire extinguisher must be 10 feet from the equipment being refueled.

	(ignition source).	
2. Damage to utilities	**2**. Electrocution/ shock/ burns that could result from contact with energized electrical overhead lines	**2**. Perform an SPSA to identify overhead electrical power lines. ➢ Do not approach within 10-feet of an overhead electric power line. ➢ Locate all sources of electricity to site parking lights, air compressor, vacuum, car wash, ID sign, and de-energize lines by using locks and tags or a tag at a minimum. Notify all affected employees on-site are notified of the de-energized condition.
3. Elevated loads	**3a**. Contusions to the head or body that could result from material/ equipment falling from skid loader	**3a**. Ensure that loads are secure and will not fall during movement of the heavy equipment. ➢ Never stand/ walk below elevated loads. ➢ Maintain a 15-foot distance away from all associated equipment (counterweight swing radius, mechanical superstructure radius, vehicle travel lanes). ➢ Use a spotter when moving loads. Not needed to moving soil across the site on a planned and approved route for machinery.
4. Backing equipment	**4a**. Blunt force injury (fractures or contusions) to arms/ legs/ torso that could result from heavy equipment striking personnel.	**4a**. Always, use a spotter when backing up, unless a designated work area has been established and deemed clear of obstacles / personnel. ➢ Utilize a spotter when entering/exiting heavily trafficked areas/roadways. ➢ While loading vehicles, employ the use of a spotter to protect personnel working around heavy equipment. ➢ Keep a distance of 15 feet away from the vehicle while acting as a spotter. ➢ Keep eye contact with the operator at all times. ➢ Discuss any hand or verbal signals with the operator prior to moving the vehicle.
5. Traversing the site	**5a.** Blunt force injury to arms/ legs/ torso that could result from equipment flipping over caused by uneven terrain **5b.** Puncture, crushing injury to arms, legs, body, face from braches and sticks along path **5c.** Blunt force injury to arms/ legs/ torso that could result from equipment hitting onsite staff or third parties.	**5a.** Plan your path and take the most even and level path to prevent the machinery from tipping over. ➢ Refer to the operators manual for guidance on slopes that the heavy equipment can travel across safely **5b.** Walk the planned travel path prior to traversing the path with the equipment and inspect for branches that could hit operator. ➢ Be sure to trim any braches and remove any sticks from the path of the machine or operator. **5c.** Drive with caution, using controlled speeds that would allow the vehicle to stop quickly if needed. ➢ Take the time to plan a route and be aware of potential personnel that could be present near or on that route.
On-site edits:		

Job Safety Analysis (JSA)

JSA Title: **Skid Steer/Skid Loading Equipment Operations**

Date Developed: 8-18-2014	
Latest Revised Date: 9-2-2014, 9/4/2014, 10/9/2015, 5/11/2017	
Initiated/Changed by: Steve Stockmaster, VP. Steve Warner, Operator	
Approved by: Keith Hambley-President	

Please complete the below if this JSA is being modified for SITE-SPECIFIC reasons.	
Revision #:	**Work Location: New York Operations**
This JSA has been fully reviewed with all staff members and all activity job steps, hazards, work practices, and PPE are clearly understood and have been implemented. All necessary revisions have been written on this JSA.	

REQUIRED PPE: Gloves: nitrile, Kevlar (Level II), leather. Hard Hat. Hearing Protection: if site activities raise the noise level to 85 dB. PPE Clothing: Long sleeve highly visible clothing such as orange coveralls, class II reflective safety vest. Safety Glasses. Safety Shoes: steel-toed (ASTM F-2413) with puncture resistance (PR) inserts or insoles.

REQUIRED AND/OR RECOMMENDED TOOLS AND EQUIPMENT: Need items listed here, including fuel can, fire extinguisher, etc

Activity/Sequence of Job Tasks List all tasks required to perform a job in the sequence they are carried out.	**POTENTIAL HAZARDS**	Eliminate – Control – Protect **Risk Control Measures**
Please ensure that all necessary JSAs associated with your work scope have been identified and reviewed.		
A. Skid Loading Equipment Inspection 1. Inspect heavy equipment	**1a**. Leg/ arm/ hand injury (fracture or contusion) that could result from tripping and falling while walking around the equipment **1b.** A wet bucket or broom attachment is a very slippery surface.	**1a**. Inspect equipment for leaks, damaged components, integrity of tracks/tires prior to the start of work. Visually inspect walkway around skid steer prior to inspection to evaluate ground surface for trip hazards such as tools, uneven pavement, rocks. Clear pathway before traversing. ➢ **1b**. Inspect Attachments prior to entry of the cab and dry them or add some sand for traction to remove the slip hazard. ➢ Always use three points of contact when entering or exiting the equipment.
B. Driving and Operating Activities 1. Skid Steer use	**1a**. Blunt force injury (fractures or contusions) to arms/ torso/ legs that could result from skid loader contact with objects/ personnel **1b**. Amputation/ cuts that could result to the hands, arms or legs from placement of body parts under moving equipment parts **1c**.Burns from a fire/explosion that could result from flammable fuel vapor with a hot engine while fueling.	**1a**. Unauthorized personnel must not approach within 15 feet of an operating skid loader at any time. ➢ Operator should wear seat belt while seated and observe blind spot locations prior to starting/moving equipment. Test brakes, shut off or kill switch, steering and other controls. ➢ The load being carried must not interfere with the operator's line of sight. ➢ Spotters will **be always** used when the skid loader is operating in tight quarters/ going around corners. Ensure hand signals are communicated prior to using spotter. ➢ Drive straight up and straight down slopes. Back down inclines when bucket is loaded, go forward up include when bucket is empty. Avoid turns on slope and do not drive on slope exceeding 20% incline. ➢ Set parking brake and turn off engine when not in use. **1b**. Do not place any part of your body between the loader arms and machine. Never service a running machine. Turn off the machine and remove the keys. **1c**. Equipment must be turned off and allow to cool before refueling ➢ An ABC-rated fire extinguisher must be 10 feet from the equipment being refueled.
	1d. Electrocution/ shock/ burns that could result from contact with energized electrical overhead lines	**1d**. Identify overhead electrical power lines. ➢ Do not approach within 10-feet of an overhead electric power line. ➢ Use spotter at all times ➢ Locate all sources of electricity to site parking lights, air compressor, vacuum, car wash, ID sign, and de-energize lines by using locks and tags or a tag at a minimum. ➢ Notify all employees on-site of the de-energized condition.

.	**1e**. Contusions to the head or body that could result from material/equipment falling from skid loader.	**1e**. Ensure that loads are secure and will not fall during movement of the skid loader. ➢ Never stand/walk below elevated loads. ➢ Use a spotter when moving loads. ➢ Maintain a 15-foot distance away from all associated equipment (counterweight swing radius, mechanical superstructure radius, vehicle travel lanes).
2. Backing skid steer	**2a**.Blunt force injury (fractures or contusions) to arms/legs/ torso that could result from skid loader striking personnel.	**2**. Never backup skid steer without using a spotter. ➢ Utilize a spotter when entering/exiting heavily trafficked areas/roadways. ➢ While loading vehicles, employ the use of a spotter to protect personnel working around heavy equipment. ➢ Keep a distance of 15 feet away from the skid steer while acting as a spotter. ➢ Keep eye contact with the operator at all times. ➢ Discuss any hand or verbal signals with the operator prior to moving the vehicle.
On-site edits:		

Core Safety Expectations

1. ***Always follow Fall Protection standards when working at elevated heights.***
2. ***Always follow Written Permit procedures.***
3. ***Always follow Lock Out/Tag Out (LOTO) procedures.***
4. ***Always follow Critical Devise Defeat procedures.***
5. ***Always follow written PPE Requirements for the work being performed.***

MATERIAL SAFETY DATA SHEET

(POLYCHLORINATED BIPHENYLS)

COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients Name: polychlorinated biphenyls (PCBs)

HAZARD IDENTIFICATION

Reports of Carcinogenicity: YES

HEALTH HAZARDS ACUTE AND CHRONIC

- **Eyes**: Moderately irritating to eye tissues.
- **Skin**: Can be absorbed through intact skin, may cause de-fatting, potential for chloracne.
- **Inhalation**: Possible liver injury.
- **Ingestion**: Slightly toxic; reasonably anticipated to be carcinogenic.

EFFECTS OF OVER-EXPOSURE

Can cause dermatological symptoms; however, these are reversible upon removal of exposure source.

FIRST AID MEASURES

- **Eyes**: Irrigate immediately with copious quantities of running water for at least 15 minutes if liquid or solid PCBs get into them.
- **Skin:** Contaminated clothing should be removed and the skin washed thoroughly with soap and water. Hot PCBs may cause thermal burns.
- **Inhalation**: Remove to fresh air; if skin rash or respiratory irritation persists, consult a physician (if electrical equipment arcs over, PCBs may decompose to produce hydrochloric acid).
- **Ingestion**: Consult a physician. Do not induce vomiting or give any oily laxatives. (If large amounts are ingested, gastric lavage is suggested).

FIRE FIGHTING MEASURES: Flash Point: >141 ^{o}C (285.8 ^{o}F)

EXTINGUISHING MEDIA: PCBs are fire-resistant compounds.

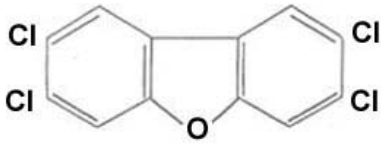
FIRE-FIGHTING PROCEDURES

Standard fire-fighting wearing apparel and self-contained breathing apparatus should be worn when fighting fires that involve possible exposure to chemical combustion products. Fire fighting equipment should be thoroughly cleaned and decontaminated after use.

UNUSUAL FIRE/EXPLOSION HAZARD

If a PCB transformer is involved in a fire-related incident, the owner of the transformer is required to report the incident. Consult and follow appropriate federal, provincial and local regulations.

***Note**: When askarel liquid becomes involved in a fire, toxic by-products of combustion are typically produced including polychlorinated dibenzofurans and polychlorinated dibenzodioxins, both known carcinogens. The structures of these chemical species are as follows:*

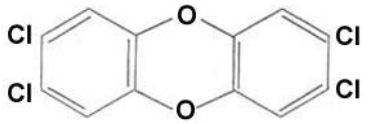


TCDF

$C_{12}H_{8-n}Cl_nO$

$n = 4 - 8$

2,3,7,8-tetrachlorodibenzofuran



TCDD

$C_{12}H_{8-n}Cl_nO_2$

$n = 4 - 8$

2,3,7,8-tetrachloro-dibenzo-p-dioxin

***Note**: 2,3,7,8-tetrachloro-dibenzo-p-dioxin is one of the most potent teratogenic, mutagenic and carcinogenic agents known to man.*

SPILL RELEASE PROCEDURES

Cleanup & disposal of liquid PCBs are strictly regulated by the federal government. Ventilate area. Contain spill/leak. Remove spill by means of absorptive material. Spill clean-up personnel should use proper protective clothing. All wastes and residues containing PCBs should be collected, containerized, marked and disposed of in the manner prescribed by applicable federal, provincial and local laws.

HANDLING AND STORAGE PRECAUTIONS

Care should be taken to prevent entry into the environment through spills, leakage, use, vaporization, or disposal of liquid. Avoid prolonged breathing of vapours or mists. Avoid contact with eyes or prolonged contact with skin. Comply with all federal, provincial and local regulations.

OTHER PRECAUTIONS

Federal regulations require PCBs, PCB items, storage areas, transformer vaults, and transport vehicles to be appropriately labelled.

RESPIRATORY PROTECTION

Use OHSA approved equipment when airborne exposure limits are exceeded. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical splash goggles. The respirator use limitations specified by the manufacturer must be observed.

VENTILATION

Provide natural or mechanical ventilation to control exposure levels below airborne exposure levels.

PROTECTIVE GLOVES: Wear appropriate chemical resistant gloves to prevent skin contact.

EYE PROTECTION: Wear chemical splash goggles and have eye baths available.

OTHER PROTECTIVE EQUIPMENT

Wear appropriate protective clothing. Provide a safety shower at any location where skin contact can occur.

WORK HYGIENIC PRACTICES

Wash thoroughly after handling. Supplemental safety and health : none

PHYSICAL/CHEMICAL PROPERTIES

- **Vapour pressure:** (mm Hg @100 ^{o}F) 0.005 - 0.00006
- **Viscosity:** (CENTISTOKES) 3.6 - 540
- **Stability indicator/materials to avoid:** Yes
- **Stability Condition to Avoid:** PCBs are very stable, fire-resistant compounds.

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, carbon dioxide, hydrogen chloride, phenolics, aldehydes, furans, dioxins

WASTE DISPOSAL METHODS

Consult the applicable PCB regulations prior to any disposal of PCBs or PCB-contaminated items.

Certificate of Completion

This is to certify that

steven warner

Has completed

HAZWOPER 8 hr Annual Refresher

Completion Date: 05/19/2018

Course Duration: 8.0

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This is your pocket card which may be used for proof of completion of your training. This training is intended to provide supervisor awareness for recognizing and preventing hazards on a construction site. Workers must receive additional training as required for the specific hazards of their job or *federal, state, and local requirements.*

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(FOLD)

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877.881.2235

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ISHM

This certifies that the person named below successfully completed a

steven warner

HAZWOPER 8 hr Annual Refresher

Matthew Lumian
Trainer Name

05/19/2018
Completed

Certificate of Completion

This is to certify that

Shane Favo

Has completed

HAZWOPER 8 hr Annual Refresher

Completion Date: 04/13/2018

Course Duration: 8.0

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(CUT HERE)

This is your pocket card which may be used for proof of completion of your training. This training is intended to provide supervisor awareness for recognizing and preventing hazards on a construction site. Workers must receive additional training as required for the specific hazards at their job or federal, state, and local requirements.

(FOLD)

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safety@oshacampus.com
877.381.2235

360training.com

This certifies that the person named below successfully completed a

Shane Favo

HAZWOPER 8 hr Annual Refresher

Matthew Luman

04/13/2018

Lu Engineers

ENVIRONMENTAL • TRANSPORTATION • CIVIL

is pleased to present this certificate of completion to:

Jim Agar

who has successfully completed

Eight (8) Hours of Refresher Training for
Hazardous Waste Operations

as required by OSHA 29CFR 1910.120

March 16, 2018

Steven A. Campbell
Instructor

Lu Engineers

ENVIRONMENTAL • TRANSPORTATION • CIVIL

is pleased to present this certificate of completion to:

Stephen Stockmaster

who has successfully completed

Eight (8) Hours of Refresher Training for
Hazardous Waste Operations

as required by OSHA 29CFR 1910.120

March 16, 2018

Steven A. Campbell
Instructor

Lu Engineers

ENVIRONMENTAL • TRANSPORTATION • CIVIL

is pleased to present this certificate of completion to:

Keith Hambley

who has successfully completed

Eight (8) Hours of Refresher Training for
Hazardous Waste Operations

as required by OSHA 29CFR 1910.120

March 16, 2018

Steven A. Campbell
Instructor

Day 1 Kickoff Meeting – Former J&L Steel Site

Date: 10/25/18
Project: NYSDEC Former J&L Steel Site
Location: Route 3, Star Lake, NY

- Introductions
  - Health and Safety Responsibilities by Role

- Parsons Safety Expectations
  - OWN Zero
  - Stop Work Policy

- Overview of Scope of Work (J&L)
  - Mobilization
  - Access Improvements
    - Excavations
    - Backfilling
  - Restoration
  - Demobilization

- General Site Policies (Jeremy)
    - No cell phone while driving
    - No speeding
    - No smoking except within designated areas (>100' from wellhead)
    - Honk horn prior to backup and parking for egress
    - Fit for Duty

- Review of PSHEP and SSHEP
  - Review of Hazards + Heat Stress
  - Review of Activity Hazard Analysis
  - Review of Emergency Response/Dash Card
    - Muster Points
  - Emergency Signals (3 long horn blows)
  - Hospital Routes

- Review of Safety Metrics Reporting
  - Tailgate Meetings
  - Inspections
  - Pauses/Stop Work (Take 5)
  - EBS Observations (Parsons to Enter)
  - Safety Suggestions
  - Recognitions
  - Incidents (Equipment Damage, Near Miss, Injury)
  - Site Orientations

- Review of Schedule (Group)

PARSONS SITE SAFETY ORIENTATION

Project: NYSDEC FORMER J&L STEEL SITE
Location: Route 3, Star Lake, NY

Parsons Contacts:

Field Supervisor:	Jeremy Neumann	(315) 558-1978
Project Manager:	Matt Vetter	(315) 552-9742
Program Manager:	Tom Drachenberg	(315) 484-3217
SHE Representative:	Darrell Pruitt	(812) 605-2108

- Review of Overall Site Operations (currently)
- Personnel on-site (currently)
- Respect for the on-site activities
- NYSDEC Personnel on-site

- **OWN Zero**
- **Stop Work Authority**
- **Take 5**

- Park Vehicle for Easy Egress (Back into Spots)
- Honk Horn before Backing Up
- Drive Slowly On-Site
- 360 Walk Around Prior to Leaving
- Always wear your Seatbelt
- No cell phones while Driving
- Smoke only in designated areas (>100 feet from the excavation)
- Fit for Duty – No drugs or alcohol on-site or under the influence
- Sign In/Sign Out
- PPE (Hard Hat, Safety Glasses, Safety Toe, Long Sleeve/Pants FRC, Hearing Protection)
- Blind Spots when Approaching Equipment – Make eye contact with Operator
- Do Not Approach the Drill Rig Floor without Permission from Supervisor or Operator
- Overhead Hazards
- Uneven Ground
- Spills
- Inhalation Hazards – Do not approach excavations without monitoring air
- Weather Shutdown (30 min from last lightning or thunder)
- Hot Work
- Do Not Enter Excavations
- Pinch Points
- Line-of-Fire
- Chemicals on-site – Know where the Safety Data Sheets (SDSs) are located
- Incident Reporting/Near Misses/Hazard IDs
- Established Muster Area
- Emergency Response/DASH Card/Hospital Routes
- Emergency Signal – 3 Long Horn Blasts
- WorkCare for First Aid Cases 1-888-449-7787 (report to Parsons Field Supervisor)

PARSONS

Activity Hazards Analysis Training Record

JOB NUMBER 447415

AHA NUMBER NA- From TREC's PSHEP

JOB LOCATION J&L Steel

DATE: 10-31-18

NAME OF TRAINER: Jeremy Neumann

SUBJECTS COVERED: Excavation Activities, Mobilization, Begin Excavating Soil, Site Security & Traffic control Community Air monitoring

TRAINING AIDS USED: Demolition contractor being used as example

ATTENDEES (PLEASE SIGN NAME LEGIBLY)

J. Neumann

X

X

(Use additional sheets if necessary)

Employee Meeting Sign-In Sheet

Safety Meeting Presenter: Jeremy Jeremy Neumann Date: 10-24-18

Current Weather Conditions:

Temperature (°F) = 40 Wind Direction = NW Wind Speed = 5-10

(Clear) - (Sunny) – Cloudy – Rain - Snow Forecast = _____

Current Site Conditions (circle as appropriate):

(Dry) - Wet - Muddy - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: No ☐ Yes ☒ - explain below:

1st Day

2. Safe and/or At-Risk Observations from Previous Day Activities: NA

3. Activities Taking Place Today: Excavation Stakeout, Decon Pad Construction

3. Anticipated Hazards: Slips trips & Falls, Exposed rebar near decon pad Heavy machinery & backup issues

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards: Full Level D PPE, Buddy system,

5. Additional Safety Topic or Comments: _____

Employee Meeting Sign-In Sheet

10-24-18

PRINTED NAME	SIGNATURE	COMPANY	
Jeremy Neumann		Parsons	
Shane FAVO		TREC	
OWEN LITTLEFIELD		THEW	
STEVE WARNER		TREC	

Employee Meeting Sign-In Sheet

Safety Meeting Presenter: ~~Jeremy Neiman~~ Jeremy Neumann Date: 10-25-16

Current Weather Conditions:

Temperature (°F) = 29 Wind Direction = NA Wind Speed = NA

Clear - Sunny – Cloudy – Rain - Snow Forecast = Rain 30-50%

Current Site Conditions (circle as appropriate):

Dry - Wet - Muddy - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: No ☒ Yes ☐ - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities: Lots of superficial steel debris & stone. Unsecure footing. Must be vigilant.

3. Activities Taking Place Today: Site clearing w/excavator, soil excavation GPR on 2 Areas

3. Anticipated Hazards: Excavation clear areas must be maintained. Chemical exposure to PCB's,

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards: Work zone & exclusion zone must be maintained

5. Additional Safety Topic or Comments: Cold Stress

10-05-18

Employee Meeting Sign-In Sheet

PRINTED NAME	SIGNATURE	COMPANY	
Jeremy Neumann		Parsons	
Shane Fago		TREC	
Steve Warner		TREC	

Employee Meeting Sign-In Sheet

Safety Meeting Presenter: Jeremy Neumann Date: 11-26-18

Current Weather Conditions:

Temperature (°F) = 21 Wind Direction = NA Wind Speed = NA

(Clear) - Sunny – Cloudy – Rain - Snow Forecast = Clear

Current Site Conditions (circle as appropriate):

(Dry) - Wet - Muddy - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: No ☒ Yes ☐ - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities: Crew worked safely Limited hazard exposure,

3. Activities Taking Place Today: Excavation, payloading, air monitoring, soil stockpiling

3. Anticipated Hazards: Overhead danger w/ buckets, backover injuries cold stress,

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards: Exclusion areas around excavation, only personnel on site are in machines

5. Additional Safety Topic or Comments: Fuel handling hazards

10-26-18

Employee Meeting Sign-In Sheet

PRINTED NAME	SIGNATURE	COMPANY	
Jeremy Neumann		Parsons	
Steve Warner		TREC	
Shane Favo		TREC	
STEVE WARNER		TREC	
Shane Favo		TREC	

Employee Meeting Sign-In Sheet

Safety Meeting Presenter: Jeremy Neumann Date: 10-27-18

Current Weather Conditions:

Temperature (°F) = 35 Wind Direction = SE Wind Speed = 5-10

Clear - Sunny – (Cloudy) – Rain - Snow Forecast = Rain at noon

Current Site Conditions (circle as appropriate):

(Dry) - Wet - Muddy - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: No ☒ Yes ☐ - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities: None

3. Activities Taking Place Today: Excavation & soil stockpiling in Area "A"
Air monitoring

3. Anticipated Hazards: Crush & backover hazards. Chemical exposure.

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards: PPE, Exclusion zones
Buddy system

5. Additional Safety Topic or Comments: Hearing protection

10-27-18

Employee Meeting Sign-In Sheet

PRINTED NAME	SIGNATURE	COMPANY	
Jeremy Neumann		Parsons	
Shane Favo		TREC	
Steve Warner		TREC	
			10-30-18
Jeremy Neumann		Parsons	
Shane Favo		TREC	10-30-18
Steve Warner		TREC	10-30-18

Employee Meeting Sign-In Sheet

Safety Meeting Presenter: Jeremy Neumann Date: 10-29-18

Current Weather Conditions:

Temperature (°F) = 41 Wind Direction = — Wind Speed = —

Clear - Sunny – Cloudy – (Rain) - Snow Forecast = Rain

Current Site Conditions (circle as appropriate):

Dry - (Wet) - (Muddy) - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: No X Yes ☐ - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities: Mud may be dangerous

3. Activities Taking Place Today: Excavation ; payloading, maybe trucking air monitoring

3. Anticipated Hazards: Slick footing, unstable subsurface,

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards: Exclusion area

5. Additional Safety Topic or Comments: Rain

10-29-18

Employee Meeting Sign-In Sheet

PRINTED NAME	SIGNATURE	COMPANY	
Jeremy Neumann		Parsons	
Steve Warner		TREC	
Shane Ford		TREC	

Employee Meeting Sign-In Sheet

Safety Meeting Presenter: Jeremy Neumann Date: 10-30-18

Current Weather Conditions:

Temperature (°F) = 31 Wind Direction = NA Wind Speed = NA

Clear - Sunny – (Cloudy) – Rain - (Snow) Forecast = Cloudy

Current Site Conditions (circle as appropriate):

Dry - Wet - (Muddy) - Frozen - Snow Covered - Other (describe) Light Snow overnight

1. Incidents or Injuries to report from Previous Day Activities: No [X] Yes [ ] - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities: Good use of exclusion area & buddy system in excavations

3. Activities Taking Place Today: Excavation of soil & stockpiling. Air monitoring

3. Anticipated Hazards: Wet, slick conditions, machine conflict on access roads,

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards: Caution tape

5. Additional Safety Topic or Comments: Cold stress

Employee Meeting Sign-In Sheet

Safety Meeting Presenter: Jeremy Neumann Date: 10-31-18

Current Weather Conditions:

Temperature (°F) = 35 Wind Direction = W/NW Wind Speed = 0-5

Clear - Sunny – (Cloudy) – Rain - Snow Forecast = Cloudy

Current Site Conditions (circle as appropriate):

Dry - Wet - (Muddy) - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: No ☒ Yes ☐ - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities: Some traffic conflicts with demo contractor, but resolved

3. Activities Taking Place Today: Excavation, soil stockpiling, air monitoring

3. Anticipated Hazards: Backup hazard, fatigue

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards: exclusion area

5. Additional Safety Topic or Comments: Slips trips & falls

Employee Meeting Sign-In Sheet

Safety Meeting Presenter: Jeremy Neumann Date: 11-1-16

Current Weather Conditions:

Temperature (°F) = 40 Wind Direction = NA Wind Speed = NA

Clear - Sunny - Cloudy - Rain - Snow Forecast = Cloudy / chance of Light Rain

Current Site Conditions (circle as appropriate):

Dry - Wet - Muddy - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: No X Yes ☐ - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities: Side wall stability a concern when RED removed overburden from area "B". Resolved by benching back 10'

3. Activities Taking Place Today: Excavation Area "B", soil stockpiling, air monitoring, soil sampling

3. Anticipated Hazards: slips trips & falls, backing

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards: Level D PPE soil sampling

5. Additional Safety Topic or Comments: NA

Employee Meeting Sign-In Sheet

Safety Meeting Presenter: Jeremy Neumann Date: 11-2-18

Current Weather Conditions:

Temperature (°F) = 41 Wind Direction = NA Wind Speed = NA

Clear - Sunny – Cloudy - (Rain) - Snow Forecast = Rain

Current Site Conditions (circle as appropriate):

Dry - (Wet) - Muddy - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: No ☒ Yes ☐ - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities: None

3. Activities Taking Place Today: Excavation, soil stockpiling, air monitoring

3. Anticipated Hazards: Traffic, slippery surfaces

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards: Footwear, buddy system

5. Additional Safety Topic or Comments: Water issues

Employee Meeting Sign-In Sheet

Safety Meeting Presenter: Jeremy Neumann Date: 11-5-18

Current Weather Conditions:

Temperature (°F) = 35 Wind Direction = SE Wind Speed = 10-15

Clear - Sunny - Cloudy – Rain - Snow Forecast = Cloudy w/ Lt. rain

Current Site Conditions (circle as appropriate):

Dry - Wet - Muddy - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: No ☒ Yes ☐ - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities: Good use of spotter on backup & loading activities

3. Activities Taking Place Today: Excavation, stockpiling, air monitoring

3. Anticipated Hazards: Traffic conflict w/ other contractors, slick surfaces

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards: Spotters in high traffic/conflict areas

5. Additional Safety Topic or Comments: Asbestos exposure from nearby demolition activities

		Signatures →
Shane	sfavo86@gmail.com	
Steve	Swarner@trecenv.com	

Employee Meeting Sign-In Sheet

	PRINTED NAME	SIGNATURE	COMPANY	
10-31-18	Jeremy Neumann		PARSONS	
	Shane Favo		TREC	
	Steve Warner		TREC	
11-1-18	Jeremy Neumann		PARSONS	
	Shane Favo		TREC	
	Steve Warner		TREC	
11-2-18	Jeremy Neumann		PARSONS	
	Shane Favo		TREC	
	Steve Warner		TREC	
11-5-18	Jeremy Neumann		PARSONS	
	Shane Favo		TREC	
	Steve Warner		TREC	

11-8-18 Daily Site Safety Meeting

Cloudy 35°

0800

- [ ] No issues from yesterday
- [ ] Good use of team work regarding backfill & placement
- [ ] Lots of traffic concerns w/ Demo contractor trucking
  Maintain clear line of sight & use spotters around blind corners
- [ ] Adjacent asbestos removal of concern but mitigated by mist machine & monitoring done by ATL
- [ ] Backfilling excavations all day

Jeremy Neumann
Shane Favo
Steve Warner

Safety Meeting Sign-in Sheet

Safety Meeting Presenter: Jeremy Neumann Date: 11-12-18

Current Weather Conditions:
Temperature (°F) = 32 Wind Direction = SW Wind Speed = 0-5

(Clear) (Sunny) – Cloudy – Rain - Snow Forecast = Sun

Current Site Conditions (circle as ~~appropriate~~):
Dry - (Wet) (Muddy) - Frozen - (Snow Covered) Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: No X Yes - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities:
None

3. Activities Taking Place Today:
Hauling Backfill from stockpile to Area *

3. Anticipated Hazards:
Traffic, Truck backup, Slick footing

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards:
Spotter on site for close vehicle interaction

5. Additional Safety Topic or Comments:
Wet conditions & associated hazards

Steve Warner _____ TREC
Shane Favo _____ TREC
Jeremy Neumann _____ Parsons

Safety Meeting Sign-in Sheet

Safety Meeting Presenter: Jeremy Neumann Date: 11-26-18

Current Weather Conditions:
Temperature (°F) = 35 Wind Direction = NA Wind Speed = NA

Clear - Sunny - (Cloudy) - Rain - Snow Forecast = Rain @ noon

Current Site Conditions (circle as ~~appropriate~~):
Dry - (Wet) - (Muddy) - Frozen - (Snow Covered) - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: (No) Yes - explain below:

2. Safe and/or At-Risk Observations from Previous Day Activities:
Slippery edges around construction water areas "A1"

3. Activities Taking Place Today:
Pump A1 construction water ; excavate contaminated soils

3. Anticipated Hazards:
Cold stress, slips trips & falls, pinch points

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards:
Buddy System, Level D PPE

5. Additional Safety Topic or Comments:
Traffic safety,

Submittal 03 – Community Air Monitoring Plan

TrakPro Version 4.70 ASCII Data File

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530141710
Test ID:	1
Test Abbreviation:	MANUAL_001
Start Date:	10/27/2018
Start Time:	9:05:06
Duration (dd:hh:mm:ss):	0:00:48:00
Log Interval (mm:ss):	1:00
Number of points:	48
Notes:	

Statistics		
	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.007
	Minimum:	0.004
	Time of Minimum:	9:07:06
	Date of Minimum:	10/27/2018
	Maximum:	0.086
	Time of Maximum:	9:06:06
	Date of Maximum:	10/27/2018

Calibration		
	Sensor:	AEROSOL
	Cal. date	9/18/2018

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
10/27/2018	9:06:06	0.086
10/27/2018	9:07:06	0.004
10/27/2018	9:08:06	0.005
10/27/2018	9:09:06	0.004
10/27/2018	9:10:06	0.004
10/27/2018	9:11:06	0.004
10/27/2018	9:12:06	0.004
10/27/2018	9:13:06	0.005
10/27/2018	9:14:06	0.005
10/27/2018	9:15:06	0.004
10/27/2018	9:16:06	0.004
10/27/2018	9:17:06	0.004
10/27/2018	9:18:06	0.004
10/27/2018	9:19:06	0.004
10/27/2018	9:20:06	0.004
10/27/2018	9:21:06	0.004
10/27/2018	9:22:06	0.005
10/27/2018	9:23:06	0.005

10/27/2018	9:24:06	0.004
10/27/2018	9:25:06	0.005
10/27/2018	9:26:06	0.004
10/27/2018	9:27:06	0.004
10/27/2018	9:28:06	0.005
10/27/2018	9:29:06	0.004
10/27/2018	9:30:06	0.004
10/27/2018	9:31:06	0.004
10/27/2018	9:32:06	0.004
10/27/2018	9:33:06	0.004
10/27/2018	9:34:06	0.005
10/27/2018	9:35:06	0.005
10/27/2018	9:36:06	0.005
10/27/2018	9:37:06	0.012
10/27/2018	9:38:06	0.008
10/27/2018	9:39:06	0.005
10/27/2018	9:40:06	0.007
10/27/2018	9:41:06	0.006
10/27/2018	9:42:06	0.006
10/27/2018	9:43:06	0.005
10/27/2018	9:44:06	0.005
10/27/2018	9:45:06	0.005
10/27/2018	9:46:06	0.006
10/27/2018	9:47:06	0.007
10/27/2018	9:48:06	0.005
10/27/2018	9:49:06	0.006
10/27/2018	9:50:06	0.007
10/27/2018	9:51:06	0.006
10/27/2018	9:52:06	0.005
10/27/2018	9:53:06	0.005

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530141710
Test ID:	2
Test Abbreviation:	MANUAL_002
Start Date:	10/29/2018
Start Time:	8:51:28
Duration (dd:hh:mm:ss):	0:02:21:00
Log Interval (mm:ss):	1:00
Number of points:	141
Notes:	

Statistics		
	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.004
	Minimum:	0.001

Time of Minimum:		10:50:28
Date of Minimum:		10/29/2018
Maximum:		0.041
Time of Maximum:		8:52:28
Date of Maximum:		10/29/2018
Calibration	Sensor:	AEROSOL
	Cal. date	9/18/2018

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
10/29/2018	8:52:28	0.041
10/29/2018	8:53:28	0.008
10/29/2018	8:54:28	0.008
10/29/2018	8:55:28	0.008
10/29/2018	8:56:28	0.008
10/29/2018	8:57:28	0.008
10/29/2018	8:58:28	0.007
10/29/2018	8:59:28	0.007
10/29/2018	9:00:28	0.007
10/29/2018	9:01:28	0.008
10/29/2018	9:02:28	0.007
10/29/2018	9:03:28	0.007
10/29/2018	9:04:28	0.007
10/29/2018	9:05:28	0.008
10/29/2018	9:06:28	0.007
10/29/2018	9:07:28	0.007
10/29/2018	9:08:28	0.006
10/29/2018	9:09:28	0.007
10/29/2018	9:10:28	0.007
10/29/2018	9:11:28	0.006
10/29/2018	9:12:28	0.006
10/29/2018	9:13:28	0.006
10/29/2018	9:14:28	0.006
10/29/2018	9:15:28	0.006
10/29/2018	9:16:28	0.006
10/29/2018	9:17:28	0.006
10/29/2018	9:18:28	0.006
10/29/2018	9:19:28	0.005
10/29/2018	9:20:28	0.006
10/29/2018	9:21:28	0.006
10/29/2018	9:22:28	0.006
10/29/2018	9:23:28	0.005
10/29/2018	9:24:28	0.008
10/29/2018	9:25:28	0.01
10/29/2018	9:26:28	0.006
10/29/2018	9:27:28	0.01

10/29/2018	9:28:28	0.007
10/29/2018	9:29:28	0.017
10/29/2018	9:30:28	0.005
10/29/2018	9:31:28	0.005
10/29/2018	9:32:28	0.004
10/29/2018	9:33:28	0.004
10/29/2018	9:34:28	0.004
10/29/2018	9:35:28	0.003
10/29/2018	9:36:28	0.003
10/29/2018	9:37:28	0.003
10/29/2018	9:38:28	0.003
10/29/2018	9:39:28	0.003
10/29/2018	9:40:28	0.003
10/29/2018	9:41:28	0.003
10/29/2018	9:42:28	0.003
10/29/2018	9:43:28	0.003
10/29/2018	9:44:28	0.003
10/29/2018	9:45:28	0.003
10/29/2018	9:46:28	0.003
10/29/2018	9:47:28	0.003
10/29/2018	9:48:28	0.006
10/29/2018	9:49:28	0.003
10/29/2018	9:50:28	0.003
10/29/2018	9:51:28	0.003
10/29/2018	9:52:28	0.003
10/29/2018	9:53:28	0.003
10/29/2018	9:54:28	0.003
10/29/2018	9:55:28	0.003
10/29/2018	9:56:28	0.003
10/29/2018	9:57:28	0.003
10/29/2018	9:58:28	0.003
10/29/2018	9:59:28	0.003
10/29/2018	10:00:28	0.003
10/29/2018	10:01:28	0.003
10/29/2018	10:02:28	0.003
10/29/2018	10:03:28	0.003
10/29/2018	10:04:28	0.003
10/29/2018	10:05:28	0.003
10/29/2018	10:06:28	0.003
10/29/2018	10:07:28	0.003
10/29/2018	10:08:28	0.003
10/29/2018	10:09:28	0.003
10/29/2018	10:10:28	0.003
10/29/2018	10:11:28	0.003
10/29/2018	10:12:28	0.003
10/29/2018	10:13:28	0.004
10/29/2018	10:14:28	0.004

10/29/2018	10:15:28	0.004
10/29/2018	10:16:28	0.003
10/29/2018	10:17:28	0.004
10/29/2018	10:18:28	0.003
10/29/2018	10:19:28	0.003
10/29/2018	10:20:28	0.003
10/29/2018	10:21:28	0.003
10/29/2018	10:22:28	0.003
10/29/2018	10:23:28	0.003
10/29/2018	10:24:28	0.003
10/29/2018	10:25:28	0.003
10/29/2018	10:26:28	0.003
10/29/2018	10:27:28	0.003
10/29/2018	10:28:28	0.003
10/29/2018	10:29:28	0.003
10/29/2018	10:30:28	0.003
10/29/2018	10:31:28	0.007
10/29/2018	10:32:28	0.003
10/29/2018	10:33:28	0.003
10/29/2018	10:34:28	0.005
10/29/2018	10:35:28	0.003
10/29/2018	10:36:28	0.004
10/29/2018	10:37:28	0.004
10/29/2018	10:38:28	0.004
10/29/2018	10:39:28	0.004
10/29/2018	10:40:28	0.004
10/29/2018	10:41:28	0.004
10/29/2018	10:42:28	0.003
10/29/2018	10:43:28	0.002
10/29/2018	10:44:28	0.002
10/29/2018	10:45:28	0.003
10/29/2018	10:46:28	0.002
10/29/2018	10:47:28	0.002
10/29/2018	10:48:28	0.002
10/29/2018	10:49:28	0.002
10/29/2018	10:50:28	0.001
10/29/2018	10:51:28	0.001
10/29/2018	10:52:28	0.001
10/29/2018	10:53:28	0.001
10/29/2018	10:54:28	0.001
10/29/2018	10:55:28	0.001
10/29/2018	10:56:28	0.001
10/29/2018	10:57:28	0.001
10/29/2018	10:58:28	0.001
10/29/2018	10:59:28	0.001
10/29/2018	11:00:28	0.001
10/29/2018	11:01:28	0.001

10/29/2018	11:02:28	0.001
10/29/2018	11:03:28	0.001
10/29/2018	11:04:28	0.001
10/29/2018	11:05:28	0.001
10/29/2018	11:06:28	0.001
10/29/2018	11:07:28	0.001
10/29/2018	11:08:28	0.001
10/29/2018	11:09:28	0.001
10/29/2018	11:10:28	0.001
10/29/2018	11:11:28	0.001
10/29/2018	11:12:28	0.001

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530141710
Test ID:	3
Test Abbreviation:	MANUAL_003
Start Date:	10/29/2018
Start Time:	12:03:14
Duration (dd:hh:mm:ss):	0:03:31:00
Log Interval (mm:ss):	1:00
Number of points:	211
Notes:	

Statistics		
	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.003
	Minimum:	0.002
	Time of Minimum:	12:05:14
	Date of Minimum:	10/29/2018
	Maximum:	0.047
	Time of Maximum:	12:04:14
	Date of Maximum:	10/29/2018

Calibration		
	Sensor:	AEROSOL
	Cal. date	9/18/2018

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
10/29/2018	12:04:14	0.047
10/29/2018	12:05:14	0.002
10/29/2018	12:06:14	0.002
10/29/2018	12:07:14	0.002
10/29/2018	12:08:14	0.002
10/29/2018	12:09:14	0.002
10/29/2018	12:10:14	0.002
10/29/2018	12:11:14	0.003

10/29/2018	12:12:14	0.002
10/29/2018	12:13:14	0.002
10/29/2018	12:14:14	0.003
10/29/2018	12:15:14	0.002
10/29/2018	12:16:14	0.002
10/29/2018	12:17:14	0.003
10/29/2018	12:18:14	0.003
10/29/2018	12:19:14	0.003
10/29/2018	12:20:14	0.002
10/29/2018	12:21:14	0.003
10/29/2018	12:22:14	0.003
10/29/2018	12:23:14	0.002
10/29/2018	12:24:14	0.002
10/29/2018	12:25:14	0.002
10/29/2018	12:26:14	0.003
10/29/2018	12:27:14	0.002
10/29/2018	12:28:14	0.002
10/29/2018	12:29:14	0.002
10/29/2018	12:30:14	0.002
10/29/2018	12:31:14	0.002
10/29/2018	12:32:14	0.002
10/29/2018	12:33:14	0.002
10/29/2018	12:34:14	0.002
10/29/2018	12:35:14	0.003
10/29/2018	12:36:14	0.003
10/29/2018	12:37:14	0.002
10/29/2018	12:38:14	0.002
10/29/2018	12:39:14	0.003
10/29/2018	12:40:14	0.003
10/29/2018	12:41:14	0.003
10/29/2018	12:42:14	0.004
10/29/2018	12:43:14	0.004
10/29/2018	12:44:14	0.003
10/29/2018	12:45:14	0.002
10/29/2018	12:46:14	0.003
10/29/2018	12:47:14	0.003
10/29/2018	12:48:14	0.003
10/29/2018	12:49:14	0.003
10/29/2018	12:50:14	0.003
10/29/2018	12:51:14	0.002
10/29/2018	12:52:14	0.002
10/29/2018	12:53:14	0.002
10/29/2018	12:54:14	0.002
10/29/2018	12:55:14	0.002
10/29/2018	12:56:14	0.002
10/29/2018	12:57:14	0.002
10/29/2018	12:58:14	0.002

10/29/2018	12:59:14	0.003
10/29/2018	13:00:14	0.002
10/29/2018	13:01:14	0.002
10/29/2018	13:02:14	0.002
10/29/2018	13:03:14	0.003
10/29/2018	13:04:14	0.003
10/29/2018	13:05:14	0.003
10/29/2018	13:06:14	0.003
10/29/2018	13:07:14	0.002
10/29/2018	13:08:14	0.002
10/29/2018	13:09:14	0.002
10/29/2018	13:10:14	0.003
10/29/2018	13:11:14	0.003
10/29/2018	13:12:14	0.003
10/29/2018	13:13:14	0.003
10/29/2018	13:14:14	0.003
10/29/2018	13:15:14	0.003
10/29/2018	13:16:14	0.003
10/29/2018	13:17:14	0.003
10/29/2018	13:18:14	0.003
10/29/2018	13:19:14	0.003
10/29/2018	13:20:14	0.003
10/29/2018	13:21:14	0.003
10/29/2018	13:22:14	0.003
10/29/2018	13:23:14	0.003
10/29/2018	13:24:14	0.003
10/29/2018	13:25:14	0.003
10/29/2018	13:26:14	0.003
10/29/2018	13:27:14	0.003
10/29/2018	13:28:14	0.003
10/29/2018	13:29:14	0.003
10/29/2018	13:30:14	0.003
10/29/2018	13:31:14	0.003
10/29/2018	13:32:14	0.003
10/29/2018	13:33:14	0.007
10/29/2018	13:34:14	0.003
10/29/2018	13:35:14	0.003
10/29/2018	13:36:14	0.003
10/29/2018	13:37:14	0.003
10/29/2018	13:38:14	0.003
10/29/2018	13:39:14	0.003
10/29/2018	13:40:14	0.003
10/29/2018	13:41:14	0.003
10/29/2018	13:42:14	0.003
10/29/2018	13:43:14	0.003
10/29/2018	13:44:14	0.003
10/29/2018	13:45:14	0.003

10/29/2018	13:46:14	0.003
10/29/2018	13:47:14	0.003
10/29/2018	13:48:14	0.003
10/29/2018	13:49:14	0.003
10/29/2018	13:50:14	0.003
10/29/2018	13:51:14	0.003
10/29/2018	13:52:14	0.003
10/29/2018	13:53:14	0.003
10/29/2018	13:54:14	0.004
10/29/2018	13:55:14	0.004
10/29/2018	13:56:14	0.004
10/29/2018	13:57:14	0.004
10/29/2018	13:58:14	0.004
10/29/2018	13:59:14	0.004
10/29/2018	14:00:14	0.004
10/29/2018	14:01:14	0.004
10/29/2018	14:02:14	0.004
10/29/2018	14:03:14	0.004
10/29/2018	14:04:14	0.003
10/29/2018	14:05:14	0.003
10/29/2018	14:06:14	0.004
10/29/2018	14:07:14	0.004
10/29/2018	14:08:14	0.004
10/29/2018	14:09:14	0.003
10/29/2018	14:10:14	0.004
10/29/2018	14:11:14	0.004
10/29/2018	14:12:14	0.004
10/29/2018	14:13:14	0.004
10/29/2018	14:14:14	0.004
10/29/2018	14:15:14	0.004
10/29/2018	14:16:14	0.004
10/29/2018	14:17:14	0.005
10/29/2018	14:18:14	0.006
10/29/2018	14:19:14	0.004
10/29/2018	14:20:14	0.003
10/29/2018	14:21:14	0.004
10/29/2018	14:22:14	0.003
10/29/2018	14:23:14	0.003
10/29/2018	14:24:14	0.003
10/29/2018	14:25:14	0.003
10/29/2018	14:26:14	0.003
10/29/2018	14:27:14	0.002
10/29/2018	14:28:14	0.002
10/29/2018	14:29:14	0.002
10/29/2018	14:30:14	0.002
10/29/2018	14:31:14	0.002
10/29/2018	14:32:14	0.002

10/29/2018	14:33:14	0.002
10/29/2018	14:34:14	0.002
10/29/2018	14:35:14	0.002
10/29/2018	14:36:14	0.002
10/29/2018	14:37:14	0.002
10/29/2018	14:38:14	0.002
10/29/2018	14:39:14	0.002
10/29/2018	14:40:14	0.002
10/29/2018	14:41:14	0.003
10/29/2018	14:42:14	0.002
10/29/2018	14:43:14	0.002
10/29/2018	14:44:14	0.002
10/29/2018	14:45:14	0.002
10/29/2018	14:46:14	0.002
10/29/2018	14:47:14	0.002
10/29/2018	14:48:14	0.002
10/29/2018	14:49:14	0.003
10/29/2018	14:50:14	0.003
10/29/2018	14:51:14	0.003
10/29/2018	14:52:14	0.003
10/29/2018	14:53:14	0.003
10/29/2018	14:54:14	0.003
10/29/2018	14:55:14	0.003
10/29/2018	14:56:14	0.003
10/29/2018	14:57:14	0.003
10/29/2018	14:58:14	0.003
10/29/2018	14:59:14	0.003
10/29/2018	15:00:14	0.003
10/29/2018	15:01:14	0.003
10/29/2018	15:02:14	0.003
10/29/2018	15:03:14	0.003
10/29/2018	15:04:14	0.003
10/29/2018	15:05:14	0.003
10/29/2018	15:06:14	0.003
10/29/2018	15:07:14	0.003
10/29/2018	15:08:14	0.003
10/29/2018	15:09:14	0.003
10/29/2018	15:10:14	0.003
10/29/2018	15:11:14	0.003
10/29/2018	15:12:14	0.003
10/29/2018	15:13:14	0.003
10/29/2018	15:14:14	0.003
10/29/2018	15:15:14	0.003
10/29/2018	15:16:14	0.003
10/29/2018	15:17:14	0.003
10/29/2018	15:18:14	0.003
10/29/2018	15:19:14	0.003

10/29/2018	15:20:14	0.003
10/29/2018	15:21:14	0.003
10/29/2018	15:22:14	0.002
10/29/2018	15:23:14	0.002
10/29/2018	15:24:14	0.003
10/29/2018	15:25:14	0.003
10/29/2018	15:26:14	0.002
10/29/2018	15:27:14	0.002
10/29/2018	15:28:14	0.003
10/29/2018	15:29:14	0.003
10/29/2018	15:30:14	0.003
10/29/2018	15:31:14	0.002
10/29/2018	15:32:14	0.002
10/29/2018	15:33:14	0.002
10/29/2018	15:34:14	0.022

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530141710
Test ID:	4
Test Abbreviation:	MANUAL_004
Start Date:	10/30/2018
Start Time:	8:19:20
Duration (dd:hh:mm:ss):	0:04:59:00
Log Interval (mm:ss):	1:00
Number of points:	299
Notes:	

Statistics	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.011
	Minimum:	0
	Time of Minimum:	11:12:20
	Date of Minimum:	10/30/2018
	Maximum:	3.03
	Time of Maximum:	12:23:20
	Date of Maximum:	10/30/2018

Calibration	Sensor:	AEROSOL
	Cal. date	9/18/2018

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
10/30/2018	8:20:20	0.019
10/30/2018	8:21:20	0.005
10/30/2018	8:22:20	0.005
10/30/2018	8:23:20	0.005

10/30/2018	8:24:20	0.005
10/30/2018	8:25:20	0.005
10/30/2018	8:26:20	0.005
10/30/2018	8:27:20	0.005
10/30/2018	8:28:20	0.005
10/30/2018	8:29:20	0.005
10/30/2018	8:30:20	0.005
10/30/2018	8:31:20	0.005
10/30/2018	8:32:20	0.004
10/30/2018	8:33:20	0.005
10/30/2018	8:34:20	0.004
10/30/2018	8:35:20	0.004
10/30/2018	8:36:20	0.004
10/30/2018	8:37:20	0.004
10/30/2018	8:38:20	0.004
10/30/2018	8:39:20	0.004
10/30/2018	8:40:20	0.004
10/30/2018	8:41:20	0.004
10/30/2018	8:42:20	0.004
10/30/2018	8:43:20	0.004
10/30/2018	8:44:20	0.004
10/30/2018	8:45:20	0.004
10/30/2018	8:46:20	0.004
10/30/2018	8:47:20	0.003
10/30/2018	8:48:20	0.003
10/30/2018	8:49:20	0.003
10/30/2018	8:50:20	0.004
10/30/2018	8:51:20	0.004
10/30/2018	8:52:20	0.004
10/30/2018	8:53:20	0.003
10/30/2018	8:54:20	0.004
10/30/2018	8:55:20	0.003
10/30/2018	8:56:20	0.003
10/30/2018	8:57:20	0.003
10/30/2018	8:58:20	0.003
10/30/2018	8:59:20	0.003
10/30/2018	9:00:20	0.003
10/30/2018	9:01:20	0.003
10/30/2018	9:02:20	0.003
10/30/2018	9:03:20	0.003
10/30/2018	9:04:20	0.003
10/30/2018	9:05:20	0.003
10/30/2018	9:06:20	0.003
10/30/2018	9:07:20	0.003
10/30/2018	9:08:20	0.003
10/30/2018	9:09:20	0.003
10/30/2018	9:10:20	0.003

10/30/2018	9:11:20	0.003
10/30/2018	9:12:20	0.002
10/30/2018	9:13:20	0.002
10/30/2018	9:14:20	0.002
10/30/2018	9:15:20	0.002
10/30/2018	9:16:20	0.002
10/30/2018	9:17:20	0.002
10/30/2018	9:18:20	0.002
10/30/2018	9:19:20	0.003
10/30/2018	9:20:20	0.003
10/30/2018	9:21:20	0.002
10/30/2018	9:22:20	0.002
10/30/2018	9:23:20	0.002
10/30/2018	9:24:20	0.002
10/30/2018	9:25:20	0.002
10/30/2018	9:26:20	0.002
10/30/2018	9:27:20	0.002
10/30/2018	9:28:20	0.002
10/30/2018	9:29:20	0.002
10/30/2018	9:30:20	0.002
10/30/2018	9:31:20	0.002
10/30/2018	9:32:20	0.002
10/30/2018	9:33:20	0.002
10/30/2018	9:34:20	0.002
10/30/2018	9:35:20	0.002
10/30/2018	9:36:20	0.002
10/30/2018	9:37:20	0.002
10/30/2018	9:38:20	0.002
10/30/2018	9:39:20	0.002
10/30/2018	9:40:20	0.002
10/30/2018	9:41:20	0.002
10/30/2018	9:42:20	0.002
10/30/2018	9:43:20	0.002
10/30/2018	9:44:20	0.002
10/30/2018	9:45:20	0.002
10/30/2018	9:46:20	0.002
10/30/2018	9:47:20	0.002
10/30/2018	9:48:20	0.002
10/30/2018	9:49:20	0.002
10/30/2018	9:50:20	0.002
10/30/2018	9:51:20	0.001
10/30/2018	9:52:20	0.001
10/30/2018	9:53:20	0.001
10/30/2018	9:54:20	0.001
10/30/2018	9:55:20	0.001
10/30/2018	9:56:20	0.001
10/30/2018	9:57:20	0.002

10/30/2018	9:58:20	0.002
10/30/2018	9:59:20	0.002
10/30/2018	10:00:20	0.002
10/30/2018	10:01:20	0.002
10/30/2018	10:02:20	0.001
10/30/2018	10:03:20	0.001
10/30/2018	10:04:20	0.001
10/30/2018	10:05:20	0.001
10/30/2018	10:06:20	0.001
10/30/2018	10:07:20	0.002
10/30/2018	10:08:20	0.001
10/30/2018	10:09:20	0.001
10/30/2018	10:10:20	0.001
10/30/2018	10:11:20	0.001
10/30/2018	10:12:20	0.001
10/30/2018	10:13:20	0.001
10/30/2018	10:14:20	0.001
10/30/2018	10:15:20	0.001
10/30/2018	10:16:20	0.001
10/30/2018	10:17:20	0.001
10/30/2018	10:18:20	0.001
10/30/2018	10:19:20	0.001
10/30/2018	10:20:20	0.001
10/30/2018	10:21:20	0.001
10/30/2018	10:22:20	0.001
10/30/2018	10:23:20	0.002
10/30/2018	10:24:20	0.001
10/30/2018	10:25:20	0.001
10/30/2018	10:26:20	0.001
10/30/2018	10:27:20	0.001
10/30/2018	10:28:20	0.001
10/30/2018	10:29:20	0.001
10/30/2018	10:30:20	0.001
10/30/2018	10:31:20	0.001
10/30/2018	10:32:20	0.001
10/30/2018	10:33:20	0.001
10/30/2018	10:34:20	0.001
10/30/2018	10:35:20	0.001
10/30/2018	10:36:20	0.001
10/30/2018	10:37:20	0.001
10/30/2018	10:38:20	0.001
10/30/2018	10:39:20	0.001
10/30/2018	10:40:20	0.001
10/30/2018	10:41:20	0.001
10/30/2018	10:42:20	0.001
10/30/2018	10:43:20	0.001
10/30/2018	10:44:20	0.001

10/30/2018	10:45:20	0.001
10/30/2018	10:46:20	0.001
10/30/2018	10:47:20	0.001
10/30/2018	10:48:20	0.001
10/30/2018	10:49:20	0.001
10/30/2018	10:50:20	0.001
10/30/2018	10:51:20	0.001
10/30/2018	10:52:20	0.001
10/30/2018	10:53:20	0.001
10/30/2018	10:54:20	0.001
10/30/2018	10:55:20	0.001
10/30/2018	10:56:20	0.001
10/30/2018	10:57:20	0.001
10/30/2018	10:58:20	0.001
10/30/2018	10:59:20	0.001
10/30/2018	11:00:20	0.001
10/30/2018	11:01:20	0.001
10/30/2018	11:02:20	0.001
10/30/2018	11:03:20	0.001
10/30/2018	11:04:20	0.001
10/30/2018	11:05:20	0.001
10/30/2018	11:06:20	0.001
10/30/2018	11:07:20	0.001
10/30/2018	11:08:20	0.001
10/30/2018	11:09:20	0.001
10/30/2018	11:10:20	0.001
10/30/2018	11:11:20	0.001
10/30/2018	11:12:20	0
10/30/2018	11:13:20	0.001
10/30/2018	11:14:20	0.001
10/30/2018	11:15:20	0.001
10/30/2018	11:16:20	0.001
10/30/2018	11:17:20	0.001
10/30/2018	11:18:20	0
10/30/2018	11:19:20	0
10/30/2018	11:20:20	0
10/30/2018	11:21:20	0
10/30/2018	11:22:20	0
10/30/2018	11:23:20	0
10/30/2018	11:24:20	0.001
10/30/2018	11:25:20	0.001
10/30/2018	11:26:20	0
10/30/2018	11:27:20	0.001
10/30/2018	11:28:20	0
10/30/2018	11:29:20	0
10/30/2018	11:30:20	0
10/30/2018	11:31:20	0

10/30/2018	11:32:20	0
10/30/2018	11:33:20	0
10/30/2018	11:34:20	0
10/30/2018	11:35:20	0.001
10/30/2018	11:36:20	0
10/30/2018	11:37:20	0.001
10/30/2018	11:38:20	0
10/30/2018	11:39:20	0
10/30/2018	11:40:20	0
10/30/2018	11:41:20	0
10/30/2018	11:42:20	0
10/30/2018	11:43:20	0
10/30/2018	11:44:20	0
10/30/2018	11:45:20	0
10/30/2018	11:46:20	0
10/30/2018	11:47:20	0.001
10/30/2018	11:48:20	0
10/30/2018	11:49:20	0
10/30/2018	11:50:20	0
10/30/2018	11:51:20	0
10/30/2018	11:52:20	0
10/30/2018	11:53:20	0
10/30/2018	11:54:20	0
10/30/2018	11:55:20	0
10/30/2018	11:56:20	0
10/30/2018	11:57:20	0
10/30/2018	11:58:20	0
10/30/2018	11:59:20	0
10/30/2018	12:00:20	0
10/30/2018	12:01:20	0
10/30/2018	12:02:20	0.001
10/30/2018	12:03:20	0.001
10/30/2018	12:04:20	0.001
10/30/2018	12:05:20	0
10/30/2018	12:06:20	0
10/30/2018	12:07:20	0
10/30/2018	12:08:20	0
10/30/2018	12:09:20	0
10/30/2018	12:10:20	0
10/30/2018	12:11:20	0
10/30/2018	12:12:20	0
10/30/2018	12:13:20	0
10/30/2018	12:14:20	0
10/30/2018	12:15:20	0
10/30/2018	12:16:20	0
10/30/2018	12:17:20	0
10/30/2018	12:18:20	0

10/30/2018	12:19:20	0
10/30/2018	12:20:20	0
10/30/2018	12:21:20	0
10/30/2018	12:22:20	0.001
10/30/2018	12:23:20	3.03
10/30/2018	12:24:20	0
10/30/2018	12:25:20	0
10/30/2018	12:26:20	0
10/30/2018	12:27:20	0.001
10/30/2018	12:28:20	0
10/30/2018	12:29:20	0
10/30/2018	12:30:20	0
10/30/2018	12:31:20	0
10/30/2018	12:32:20	0
10/30/2018	12:33:20	0
10/30/2018	12:34:20	0
10/30/2018	12:35:20	0
10/30/2018	12:36:20	0
10/30/2018	12:37:20	0
10/30/2018	12:38:20	0
10/30/2018	12:39:20	0
10/30/2018	12:40:20	0
10/30/2018	12:41:20	0
10/30/2018	12:42:20	0
10/30/2018	12:43:20	0
10/30/2018	12:44:20	0
10/30/2018	12:45:20	0
10/30/2018	12:46:20	0
10/30/2018	12:47:20	0
10/30/2018	12:48:20	0
10/30/2018	12:49:20	0
10/30/2018	12:50:20	0
10/30/2018	12:51:20	0
10/30/2018	12:52:20	0
10/30/2018	12:53:20	0
10/30/2018	12:54:20	0
10/30/2018	12:55:20	0
10/30/2018	12:56:20	0.001
10/30/2018	12:57:20	0.001
10/30/2018	12:58:20	0.001
10/30/2018	12:59:20	0.001
10/30/2018	13:00:20	0.001
10/30/2018	13:01:20	0.001
10/30/2018	13:02:20	0
10/30/2018	13:03:20	0
10/30/2018	13:04:20	0
10/30/2018	13:05:20	0

10/30/2018	13:06:20	0
10/30/2018	13:07:20	0
10/30/2018	13:08:20	0
10/30/2018	13:09:20	0
10/30/2018	13:10:20	0.001
10/30/2018	13:11:20	0
10/30/2018	13:12:20	0
10/30/2018	13:13:20	0
10/30/2018	13:14:20	0
10/30/2018	13:15:20	0
10/30/2018	13:16:20	0
10/30/2018	13:17:20	0
10/30/2018	13:18:20	0

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530141710
Test ID:	5
Test Abbreviation:	MANUAL_005
Start Date:	10/31/2018
Start Time:	8:10:10
Duration (dd:hh:mm:ss):	0:03:28:00
Log Interval (mm:ss):	1:00
Number of points:	208
Notes:	

Statistics	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.006
	Minimum:	0.004
	Time of Minimum:	8:11:10
	Date of Minimum:	10/31/2018
	Maximum:	0.034
	Time of Maximum:	8:25:10
	Date of Maximum:	10/31/2018

Calibration	Sensor:	AEROSOL
	Cal. date	9/18/2018

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
10/31/2018	8:11:10	0.004
10/31/2018	8:12:10	0.004
10/31/2018	8:13:10	0.004
10/31/2018	8:14:10	0.004
10/31/2018	8:15:10	0.004
10/31/2018	8:16:10	0.007

10/31/2018	8:17:10	0.005
10/31/2018	8:18:10	0.004
10/31/2018	8:19:10	0.006
10/31/2018	8:20:10	0.004
10/31/2018	8:21:10	0.006
10/31/2018	8:22:10	0.005
10/31/2018	8:23:10	0.029
10/31/2018	8:24:10	0.009
10/31/2018	8:25:10	0.034
10/31/2018	8:26:10	0.007
10/31/2018	8:27:10	0.01
10/31/2018	8:28:10	0.004
10/31/2018	8:29:10	0.005
10/31/2018	8:30:10	0.016
10/31/2018	8:31:10	0.007
10/31/2018	8:32:10	0.005
10/31/2018	8:33:10	0.005
10/31/2018	8:34:10	0.005
10/31/2018	8:35:10	0.004
10/31/2018	8:36:10	0.005
10/31/2018	8:37:10	0.005
10/31/2018	8:38:10	0.004
10/31/2018	8:39:10	0.004
10/31/2018	8:40:10	0.004
10/31/2018	8:41:10	0.004
10/31/2018	8:42:10	0.004
10/31/2018	8:43:10	0.004
10/31/2018	8:44:10	0.006
10/31/2018	8:45:10	0.004
10/31/2018	8:46:10	0.004
10/31/2018	8:47:10	0.004
10/31/2018	8:48:10	0.004
10/31/2018	8:49:10	0.004
10/31/2018	8:50:10	0.004
10/31/2018	8:51:10	0.004
10/31/2018	8:52:10	0.004
10/31/2018	8:53:10	0.004
10/31/2018	8:54:10	0.004
10/31/2018	8:55:10	0.004
10/31/2018	8:56:10	0.004
10/31/2018	8:57:10	0.005
10/31/2018	8:58:10	0.004
10/31/2018	8:59:10	0.004
10/31/2018	9:00:10	0.005
10/31/2018	9:01:10	0.005
10/31/2018	9:02:10	0.005
10/31/2018	9:03:10	0.004

10/31/2018	9:04:10	0.009
10/31/2018	9:05:10	0.005
10/31/2018	9:06:10	0.005
10/31/2018	9:07:10	0.004
10/31/2018	9:08:10	0.004
10/31/2018	9:09:10	0.005
10/31/2018	9:10:10	0.004
10/31/2018	9:11:10	0.004
10/31/2018	9:12:10	0.006
10/31/2018	9:13:10	0.004
10/31/2018	9:14:10	0.005
10/31/2018	9:15:10	0.004
10/31/2018	9:16:10	0.004
10/31/2018	9:17:10	0.004
10/31/2018	9:18:10	0.005
10/31/2018	9:19:10	0.005
10/31/2018	9:20:10	0.004
10/31/2018	9:21:10	0.004
10/31/2018	9:22:10	0.004
10/31/2018	9:23:10	0.004
10/31/2018	9:24:10	0.004
10/31/2018	9:25:10	0.004
10/31/2018	9:26:10	0.004
10/31/2018	9:27:10	0.004
10/31/2018	9:28:10	0.004
10/31/2018	9:29:10	0.004
10/31/2018	9:30:10	0.004
10/31/2018	9:31:10	0.004
10/31/2018	9:32:10	0.004
10/31/2018	9:33:10	0.004
10/31/2018	9:34:10	0.004
10/31/2018	9:35:10	0.004
10/31/2018	9:36:10	0.004
10/31/2018	9:37:10	0.004
10/31/2018	9:38:10	0.004
10/31/2018	9:39:10	0.004
10/31/2018	9:40:10	0.015
10/31/2018	9:41:10	0.009
10/31/2018	9:42:10	0.004
10/31/2018	9:43:10	0.004
10/31/2018	9:44:10	0.004
10/31/2018	9:45:10	0.004
10/31/2018	9:46:10	0.004
10/31/2018	9:47:10	0.004
10/31/2018	9:48:10	0.004
10/31/2018	9:49:10	0.004
10/31/2018	9:50:10	0.004

10/31/2018	9:51:10	0.004
10/31/2018	9:52:10	0.004
10/31/2018	9:53:10	0.004
10/31/2018	9:54:10	0.004
10/31/2018	9:55:10	0.005
10/31/2018	9:56:10	0.005
10/31/2018	9:57:10	0.005
10/31/2018	9:58:10	0.005
10/31/2018	9:59:10	0.006
10/31/2018	10:00:10	0.005
10/31/2018	10:01:10	0.005
10/31/2018	10:02:10	0.005
10/31/2018	10:03:10	0.005
10/31/2018	10:04:10	0.005
10/31/2018	10:05:10	0.005
10/31/2018	10:06:10	0.005
10/31/2018	10:07:10	0.005
10/31/2018	10:08:10	0.006
10/31/2018	10:09:10	0.006
10/31/2018	10:10:10	0.006
10/31/2018	10:11:10	0.006
10/31/2018	10:12:10	0.006
10/31/2018	10:13:10	0.006
10/31/2018	10:14:10	0.006
10/31/2018	10:15:10	0.006
10/31/2018	10:16:10	0.006
10/31/2018	10:17:10	0.006
10/31/2018	10:18:10	0.006
10/31/2018	10:19:10	0.007
10/31/2018	10:20:10	0.007
10/31/2018	10:21:10	0.007
10/31/2018	10:22:10	0.007
10/31/2018	10:23:10	0.007
10/31/2018	10:24:10	0.007
10/31/2018	10:25:10	0.007
10/31/2018	10:26:10	0.007
10/31/2018	10:27:10	0.007
10/31/2018	10:28:10	0.007
10/31/2018	10:29:10	0.007
10/31/2018	10:30:10	0.007
10/31/2018	10:31:10	0.007
10/31/2018	10:32:10	0.007
10/31/2018	10:33:10	0.007
10/31/2018	10:34:10	0.007
10/31/2018	10:35:10	0.007
10/31/2018	10:36:10	0.007
10/31/2018	10:37:10	0.008

10/31/2018	10:38:10	0.007
10/31/2018	10:39:10	0.007
10/31/2018	10:40:10	0.008
10/31/2018	10:41:10	0.007
10/31/2018	10:42:10	0.008
10/31/2018	10:43:10	0.007
10/31/2018	10:44:10	0.008
10/31/2018	10:45:10	0.008
10/31/2018	10:46:10	0.008
10/31/2018	10:47:10	0.008
10/31/2018	10:48:10	0.008
10/31/2018	10:49:10	0.008
10/31/2018	10:50:10	0.008
10/31/2018	10:51:10	0.008
10/31/2018	10:52:10	0.008
10/31/2018	10:53:10	0.008
10/31/2018	10:54:10	0.008
10/31/2018	10:55:10	0.008
10/31/2018	10:56:10	0.008
10/31/2018	10:57:10	0.008
10/31/2018	10:58:10	0.008
10/31/2018	10:59:10	0.008
10/31/2018	11:00:10	0.008
10/31/2018	11:01:10	0.008
10/31/2018	11:02:10	0.008
10/31/2018	11:03:10	0.008
10/31/2018	11:04:10	0.008
10/31/2018	11:05:10	0.008
10/31/2018	11:06:10	0.008
10/31/2018	11:07:10	0.008
10/31/2018	11:08:10	0.008
10/31/2018	11:09:10	0.008
10/31/2018	11:10:10	0.008
10/31/2018	11:11:10	0.008
10/31/2018	11:12:10	0.008
10/31/2018	11:13:10	0.008
10/31/2018	11:14:10	0.008
10/31/2018	11:15:10	0.008
10/31/2018	11:16:10	0.008
10/31/2018	11:17:10	0.008
10/31/2018	11:18:10	0.009
10/31/2018	11:19:10	0.009
10/31/2018	11:20:10	0.009
10/31/2018	11:21:10	0.009
10/31/2018	11:22:10	0.008
10/31/2018	11:23:10	0.008
10/31/2018	11:24:10	0.008

10/31/2018	11:25:10	0.008
10/31/2018	11:26:10	0.009
10/31/2018	11:27:10	0.008
10/31/2018	11:28:10	0.008
10/31/2018	11:29:10	0.008
10/31/2018	11:30:10	0.008
10/31/2018	11:31:10	0.008
10/31/2018	11:32:10	0.008
10/31/2018	11:33:10	0.009
10/31/2018	11:34:10	0.008
10/31/2018	11:35:10	0.008
10/31/2018	11:36:10	0.008
10/31/2018	11:37:10	0.008
10/31/2018	11:38:10	0.008

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530141710
Test ID:	6
Test Abbreviation:	MANUAL_006
Start Date:	10/31/2018
Start Time:	15:04:14
Duration (dd:hh:mm:ss):	0:00:27:00
Log Interval (mm:ss):	1:00
Number of points:	27
Notes:	

Statistics		
	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.018
	Minimum:	0.016
	Time of Minimum:	15:24:14
	Date of Minimum:	10/31/2018
	Maximum:	0.019
	Time of Maximum:	15:05:14
	Date of Maximum:	10/31/2018

Calibration		
	Sensor:	AEROSOL
	Cal. date	9/18/2018

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
10/31/2018	15:05:14	0.019
10/31/2018	15:06:14	0.019
10/31/2018	15:07:14	0.019
10/31/2018	15:08:14	0.019
10/31/2018	15:09:14	0.019

10/31/2018	15:10:14	0.019
10/31/2018	15:11:14	0.019
10/31/2018	15:12:14	0.019
10/31/2018	15:13:14	0.018
10/31/2018	15:14:14	0.018
10/31/2018	15:15:14	0.018
10/31/2018	15:16:14	0.018
10/31/2018	15:17:14	0.018
10/31/2018	15:18:14	0.017
10/31/2018	15:19:14	0.018
10/31/2018	15:20:14	0.018
10/31/2018	15:21:14	0.017
10/31/2018	15:22:14	0.017
10/31/2018	15:23:14	0.017
10/31/2018	15:24:14	0.016
10/31/2018	15:25:14	0.017
10/31/2018	15:26:14	0.017
10/31/2018	15:27:14	0.017
10/31/2018	15:28:14	0.017
10/31/2018	15:29:14	0.017
10/31/2018	15:30:14	0.017
10/31/2018	15:31:14	0.016

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530141710
Test ID:	7
Test Abbreviation:	MANUAL_007
Start Date:	11/1/2018
Start Time:	8:12:23
Duration (dd:hh:mm:ss):	0:07:40:00
Log Interval (mm:ss):	1:00
Number of points:	368
Notes:	

Statistics		
	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.009
	Minimum:	0
	Time of Minimum:	15:12:55
	Date of Minimum:	11/1/2018
	Maximum:	0.851
	Time of Maximum:	8:13:23
	Date of Maximum:	11/1/2018

Calibration		
	Sensor:	AEROSOL
	Cal. date	9/18/2018

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
11/1/2018	8:13:23	0.851
11/1/2018	8:14:23	0.142
11/1/2018	8:15:23	0.027
11/1/2018	8:16:23	0.026
11/1/2018	8:17:23	0.02
11/1/2018	8:18:23	0.018
11/1/2018	8:19:23	0.018
11/1/2018	8:20:23	0.02
11/1/2018	8:21:23	0.025
11/1/2018	8:22:23	0.024
11/1/2018	8:23:23	0.025
11/1/2018	8:24:23	0.026
11/1/2018	8:25:23	0.026
11/1/2018	8:26:23	0.024
11/1/2018	8:27:23	0.023
11/1/2018	8:28:23	0.022
11/1/2018	8:29:23	0.022
11/1/2018	8:30:23	0.023
11/1/2018	8:31:23	0.022
11/1/2018	8:32:23	0.024
11/1/2018	8:33:23	0.023
11/1/2018	8:34:23	0.022
11/1/2018	8:35:23	0.022
11/1/2018	8:36:23	0.022
11/1/2018	8:37:23	0.02
11/1/2018	8:38:23	0.019
11/1/2018	8:39:23	0.019
11/1/2018	8:40:23	0.018
11/1/2018	8:41:23	0.02
11/1/2018	8:42:23	0.019
11/1/2018	8:43:23	0.016
11/1/2018	8:44:23	0.017
11/1/2018	8:45:23	0.018
11/1/2018	8:46:23	0.018
11/1/2018	8:47:23	0.018
11/1/2018	8:48:23	0.019
11/1/2018	8:49:23	0.02
11/1/2018	8:50:23	0.019
11/1/2018	8:51:23	0.018
11/1/2018	8:52:23	0.017
11/1/2018	8:53:23	0.016
11/1/2018	8:54:23	0.015
11/1/2018	8:55:23	0.014
11/1/2018	8:56:23	0.014

11/1/2018	8:57:23	0.014
11/1/2018	8:58:23	0.014
11/1/2018	8:59:23	0.013
11/1/2018	9:00:23	0.012
11/1/2018	9:01:23	0.01
11/1/2018	9:02:23	0.01
11/1/2018	9:03:23	0.012
11/1/2018	9:04:23	0.014
11/1/2018	9:05:23	0.037
11/1/2018	9:06:23	0.018
11/1/2018	9:07:23	0.016
11/1/2018	9:08:23	0.013
11/1/2018	9:09:23	0.009
11/1/2018	9:10:23	0.008
11/1/2018	9:11:23	0.008
11/1/2018	9:12:23	0.008
11/1/2018	9:13:23	0.007
11/1/2018	9:14:23	0.007
11/1/2018	9:15:23	0.007
11/1/2018	9:16:23	0.007
11/1/2018	9:17:23	0.007
11/1/2018	9:18:23	0.007
11/1/2018	9:19:23	0.008
11/1/2018	9:20:23	0.007
11/1/2018	9:21:23	0.007
11/1/2018	9:22:23	0.007
11/1/2018	9:23:23	0.006
11/1/2018	9:24:23	0.008
11/1/2018	9:25:23	0.007
11/1/2018	9:26:23	0.006
11/1/2018	9:27:23	0.006
11/1/2018	9:28:23	0.006
11/1/2018	9:29:23	0.006
11/1/2018	9:30:23	0.007
11/1/2018	9:31:23	0.006
11/1/2018	9:32:23	0.007
11/1/2018	9:33:23	0.007
11/1/2018	9:34:23	0.008
11/1/2018	9:35:23	0.008
11/1/2018	9:36:23	0.007
11/1/2018	9:37:23	0.006
11/1/2018	9:38:23	0.007
11/1/2018	9:39:23	0.007
11/1/2018	9:40:23	0.007
11/1/2018	9:41:23	0.006
11/1/2018	9:42:23	0.007
11/1/2018	9:43:23	0.009

11/1/2018	9:44:23	0.008
11/1/2018	9:45:23	0.006
11/1/2018	9:46:23	0.009
11/1/2018	9:47:23	0.006
11/1/2018	9:48:23	0.006
11/1/2018	9:49:23	0.006
11/1/2018	9:50:23	0.005
11/1/2018	9:51:23	0.005
11/1/2018	9:52:23	0.006
11/1/2018	9:53:23	0.007
11/1/2018	9:54:23	0.006
11/1/2018	9:55:23	0.006
11/1/2018	9:56:23	0.006
11/1/2018	9:57:23	0.006
11/1/2018	9:58:23	0.006
11/1/2018	9:59:23	0.006
11/1/2018	10:00:23	0.006
11/1/2018	10:01:23	0.006
11/1/2018	10:02:23	0.006
11/1/2018	10:03:23	0.006
11/1/2018	10:04:23	0.006
11/1/2018	10:05:23	0.005
11/1/2018	10:06:23	0.009
11/1/2018	10:07:23	0.007
11/1/2018	10:08:23	0.006
11/1/2018	10:09:23	0.005
11/1/2018	10:10:23	0.005
11/1/2018	10:11:23	0.005
11/1/2018	10:12:23	0.01
11/1/2018	10:13:23	0.017
11/1/2018	10:14:23	0.014
11/1/2018	10:15:23	0.01
11/1/2018	10:16:23	0.006
11/1/2018	10:17:23	0.005
11/1/2018	10:18:23	0.009
11/1/2018	10:19:23	0.007
11/1/2018	10:20:23	0.006
11/1/2018	10:21:23	0.008
11/1/2018	10:22:23	0.006
11/1/2018	10:23:23	0.006
11/1/2018	10:24:23	0.009
11/1/2018	10:25:23	0.006
11/1/2018	10:26:23	0.006
11/1/2018	10:27:23	0.008
11/1/2018	10:28:23	0.02
11/1/2018	10:29:23	0.022
11/1/2018	10:30:23	0.018

11/1/2018	10:31:23	0.009
11/1/2018	10:32:23	0.006
11/1/2018	10:33:23	0.005
11/1/2018	10:34:23	0.01
11/1/2018	10:35:23	0.005
11/1/2018	10:36:23	0.004
11/1/2018	10:37:23	0.005
11/1/2018	10:38:23	0.005
11/1/2018	10:39:23	0.005
11/1/2018	10:40:23	0.005
11/1/2018	10:41:23	0.005
11/1/2018	10:42:23	0.004
11/1/2018	10:43:23	0.004
11/1/2018	10:44:23	0.005
11/1/2018	10:45:23	0.005
11/1/2018	10:46:23	0.004
11/1/2018	10:47:23	0.004
11/1/2018	10:48:23	0.004
11/1/2018	10:49:23	0.005
11/1/2018	10:50:23	0.004
11/1/2018	10:51:23	0.005
11/1/2018	10:52:23	0.005
11/1/2018	10:53:23	0.005
11/1/2018	10:54:23	0.005
11/1/2018	10:55:23	0.005
11/1/2018	10:56:23	0.005
11/1/2018	10:57:23	0.004
11/1/2018	10:58:23	0.004
11/1/2018	10:59:23	0.004
11/1/2018	11:00:23	0.005
11/1/2018	11:01:23	0.005
11/1/2018	11:02:23	0.004
11/1/2018	11:03:23	0.004
11/1/2018	11:04:23	0.004
11/1/2018	11:05:23	0.004
11/1/2018	11:06:23	0.004
11/1/2018	11:07:23	0.005
11/1/2018	11:08:23	0.005
11/1/2018	11:09:23	0.005
11/1/2018	11:10:23	0.005
11/1/2018	11:11:23	0.005
11/1/2018	11:12:23	0.005
11/1/2018	11:13:23	0.005
11/1/2018	11:14:23	0.005
11/1/2018	11:15:23	0.005
11/1/2018	11:16:23	0.005
11/1/2018	11:17:23	0.005

11/1/2018	11:18:23	0.005
11/1/2018	11:19:23	0.005
11/1/2018	11:20:23	0.005
11/1/2018	11:21:23	0.005
11/1/2018	11:22:23	0.005
11/1/2018	11:23:23	0.004
11/1/2018	11:24:23	0.005
11/1/2018	11:25:23	0.004
11/1/2018	11:26:23	0.005
11/1/2018	11:27:23	0.005
11/1/2018	11:28:23	0.005
11/1/2018	11:29:23	0.005
11/1/2018	11:30:23	0.005
11/1/2018	11:31:23	0.006
11/1/2018	11:32:23	0.006
11/1/2018	11:33:23	0.005
11/1/2018	11:34:23	0.005
11/1/2018	11:35:23	0.005
11/1/2018	11:36:23	0.005
11/1/2018	11:37:23	0.005
11/1/2018	11:38:23	0.005
11/1/2018	11:39:23	0.005
11/1/2018	11:40:23	0.005
11/1/2018	11:41:23	0.005
11/1/2018	11:42:23	0.005
11/1/2018	11:43:23	0.005
11/1/2018	11:44:23	0.004
11/1/2018	11:45:23	0.005
11/1/2018	11:46:23	0.004
11/1/2018	11:47:23	0.004
11/1/2018	11:48:23	0.004
11/1/2018	11:49:23	0.004
11/1/2018	11:50:23	0.004
11/1/2018	11:51:23	0.004
11/1/2018	11:52:23	0.005
11/1/2018	11:53:23	0.005
11/1/2018	11:54:23	0.004
11/1/2018	11:55:23	0.004
11/1/2018	11:56:23	0.005
11/1/2018	11:57:23	0.004
11/1/2018	11:58:23	0.004
11/1/2018	11:59:23	0.004
11/1/2018	12:00:23	0.004
11/1/2018	12:01:23	0.004
11/1/2018	12:02:23	0.004
11/1/2018	12:03:23	0.004
11/1/2018	12:04:23	0.004

11/1/2018	12:05:23	0.004
11/1/2018	12:06:23	0.006
11/1/2018	12:07:23	0.007
11/1/2018	12:08:23	0.009
11/1/2018	12:09:23	0.007
11/1/2018	12:10:23	0.006
11/1/2018	12:11:23	0.004
11/1/2018	12:12:23	0.004
11/1/2018	12:13:23	0.004
11/1/2018	12:14:23	0.004
11/1/2018	12:15:23	0.004
11/1/2018	12:16:23	0.004
11/1/2018	12:17:23	0.005
11/1/2018	12:18:23	0.006
11/1/2018	12:19:23	0.004
11/1/2018	12:20:23	0.004
11/1/2018	12:21:23	0.004
11/1/2018	12:22:23	0.004
11/1/2018	12:23:23	0.003
11/1/2018	12:24:23	0.004
11/1/2018	12:25:23	0.004
11/1/2018	12:26:23	0.004
11/1/2018	12:27:23	0.004
11/1/2018	12:28:23	0.004
11/1/2018	12:29:23	0.004
11/1/2018	12:30:23	0.003
11/1/2018	12:31:23	0.003
11/1/2018	12:32:23	0.004
11/1/2018	12:33:23	0.003
11/1/2018	12:34:23	0.003
11/1/2018	12:35:23	0.003
11/1/2018	12:36:23	0.004
11/1/2018	12:37:23	0.003
11/1/2018	12:38:23	0.004
11/1/2018	12:39:23	0.003
11/1/2018	12:40:23	0.003
11/1/2018	12:41:23	0.004
11/1/2018	12:42:23	0.003
11/1/2018	12:43:23	0.004
11/1/2018	12:44:23	0.004
11/1/2018	12:45:23	0.004
11/1/2018	12:46:23	0.004
11/1/2018	12:47:23	0.003
11/1/2018	12:48:23	0.003
11/1/2018	12:49:23	0.004
11/1/2018	12:50:23	0.005
11/1/2018	12:51:23	0.003

11/1/2018	12:52:23	0.003
11/1/2018	12:53:23	0.004
11/1/2018	12:54:23	0.006
11/1/2018	12:55:23	0.005
11/1/2018	12:56:23	0.003
11/1/2018	12:57:23	0.004
11/1/2018	12:58:23	0.003
11/1/2018	12:59:23	0.003
11/1/2018	13:00:23	0.003
11/1/2018	13:01:23	0.004
11/1/2018	13:02:23	0.003
11/1/2018	13:03:23	0.005
11/1/2018	13:04:23	0.005
11/1/2018	13:05:23	0.003
11/1/2018	13:06:23	0.002
11/1/2018	13:07:23	0.002
11/1/2018	13:08:23	0.002
11/1/2018	13:09:23	0.002
11/1/2018	13:10:23	0.002
11/1/2018	13:11:23	0.002
11/1/2018	13:12:23	0.002
11/1/2018	13:13:23	0.002
11/1/2018	13:14:23	0.002
11/1/2018	13:15:23	0.002
11/1/2018	13:16:23	0.002
11/1/2018	13:17:23	0.003
11/1/2018	13:18:23	0.003
11/1/2018	13:19:23	0.002
11/1/2018	13:20:23	0.002
11/1/2018	13:21:23	0.002
11/1/2018	13:22:23	0.002
11/1/2018	13:23:23	0.002
11/1/2018	13:24:23	0.002
11/1/2018	13:25:23	0.001
11/1/2018	13:26:23	0.001
11/1/2018	13:27:23	0.005
11/1/2018	13:28:23	0.002
11/1/2018	13:29:23	0.001
11/1/2018	13:30:23	0.001
11/1/2018	13:31:23	0.001
11/1/2018	13:32:23	0.001
11/1/2018	13:33:23	0.001
11/1/2018	13:34:23	0.002
11/1/2018	13:35:23	0.001
11/1/2018	13:36:23	0.001
11/1/2018	13:37:23	0.001
11/1/2018	13:38:23	0.001

11/1/2018	13:39:23	0.001
11/1/2018	15:12:55	0
11/1/2018	15:13:23	0.004
11/1/2018	15:14:23	0.004
11/1/2018	15:15:23	0.004
11/1/2018	15:16:23	0.004
11/1/2018	15:17:23	0.003
11/1/2018	15:18:23	0.001
11/1/2018	15:19:23	0.002
11/1/2018	15:20:23	0.002
11/1/2018	15:21:23	0.001
11/1/2018	15:22:23	0.001
11/1/2018	15:23:23	0.001
11/1/2018	15:24:23	0.001
11/1/2018	15:25:23	0.001
11/1/2018	15:26:23	0.001
11/1/2018	15:27:23	0.002
11/1/2018	15:28:23	0.002
11/1/2018	15:29:23	0.002
11/1/2018	15:30:23	0.002
11/1/2018	15:31:23	0.002
11/1/2018	15:32:23	0.001
11/1/2018	15:33:23	0.001
11/1/2018	15:34:23	0.002
11/1/2018	15:35:23	0.001
11/1/2018	15:36:23	0.001
11/1/2018	15:37:23	0.001
11/1/2018	15:38:23	0.001
11/1/2018	15:39:23	0.001
11/1/2018	15:40:23	0.001
11/1/2018	15:41:23	0.002
11/1/2018	15:42:23	0.001
11/1/2018	15:43:23	0.001
11/1/2018	15:44:23	0.001
11/1/2018	15:45:23	0.001
11/1/2018	15:46:23	0.001
11/1/2018	15:47:23	0.001
11/1/2018	15:48:23	0
11/1/2018	15:49:23	0.001
11/1/2018	15:50:23	0.001
11/1/2018	15:51:23	0.001
11/1/2018	15:52:23	0.001

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530141710
Test ID:	8

Test Abbreviation:	MANUAL_008
Start Date:	11/2/2018
Start Time:	8:18:22
Duration (dd:hh:mm:ss):	0:03:27:00
Log Interval (mm:ss):	1:00
Number of points:	207
Notes:	

Statistics		
	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.007
	Minimum:	0.003
	Time of Minimum:	8:28:22
	Date of Minimum:	11/2/2018
	Maximum:	0.018
	Time of Maximum:	8:19:22
	Date of Maximum:	11/2/2018

Calibration		
	Sensor:	AEROSOL
	Cal. date	9/18/2018

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
11/2/2018	8:19:22	0.018
11/2/2018	8:20:22	0.005
11/2/2018	8:21:22	0.004
11/2/2018	8:22:22	0.006
11/2/2018	8:23:22	0.005
11/2/2018	8:24:22	0.004
11/2/2018	8:25:22	0.004
11/2/2018	8:26:22	0.004
11/2/2018	8:27:22	0.004
11/2/2018	8:28:22	0.003
11/2/2018	8:29:22	0.003
11/2/2018	8:30:22	0.003
11/2/2018	8:31:22	0.004
11/2/2018	8:32:22	0.003
11/2/2018	8:33:22	0.003
11/2/2018	8:34:22	0.003
11/2/2018	8:35:22	0.003
11/2/2018	8:36:22	0.003
11/2/2018	8:37:22	0.003
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11/2/2018	8:46:22	0.004
11/2/2018	8:47:22	0.004
11/2/2018	8:48:22	0.004
11/2/2018	8:49:22	0.004
11/2/2018	8:50:22	0.004
11/2/2018	8:51:22	0.004
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11/2/2018	8:56:22	0.004
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11/2/2018	9:03:22	0.007
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11/2/2018	9:07:22	0.008
11/2/2018	9:08:22	0.008
11/2/2018	9:09:22	0.007
11/2/2018	9:10:22	0.007
11/2/2018	9:11:22	0.006
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11/2/2018	9:17:22	0.005
11/2/2018	9:18:22	0.005
11/2/2018	9:19:22	0.005
11/2/2018	9:20:22	0.005
11/2/2018	9:21:22	0.005
11/2/2018	9:22:22	0.005
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11/2/2018	9:24:22	0.004
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11/2/2018	9:26:22	0.007
11/2/2018	9:27:22	0.007
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11/2/2018	9:29:22	0.006

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11/2/2018	9:32:22	0.012
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11/2/2018	9:34:22	0.01
11/2/2018	9:35:22	0.01
11/2/2018	9:36:22	0.009
11/2/2018	9:37:22	0.01
11/2/2018	9:38:22	0.011
11/2/2018	9:39:22	0.013
11/2/2018	9:40:22	0.013
11/2/2018	9:41:22	0.013
11/2/2018	9:42:22	0.013
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11/2/2018	9:44:22	0.013
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11/2/2018	9:57:22	0.011
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11/2/2018	10:09:22	0.007
11/2/2018	10:10:22	0.006
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11/2/2018	10:13:22	0.007
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11/2/2018	10:55:22	0.006
11/2/2018	10:56:22	0.006
11/2/2018	10:57:22	0.006
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11/2/2018	11:16:22	0.005
11/2/2018	11:17:22	0.006
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11/2/2018	11:38:22	0.006
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11/2/2018	11:41:22	0.006
11/2/2018	11:42:22	0.006
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11/2/2018	11:44:22	0.006
11/2/2018	11:45:22	0.006

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530141710
Test ID:	9

Test Abbreviation:	MANUAL_009
Start Date:	11/5/2018
Start Time:	8:38:11
Duration (dd:hh:mm:ss):	0:06:37:00
Log Interval (mm:ss):	1:00
Number of points:	397
Notes:	

Statistics	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.004
	Minimum:	0
	Time of Minimum:	14:33:11
	Date of Minimum:	11/5/2018
	Maximum:	0.036
	Time of Maximum:	14:54:11
	Date of Maximum:	11/5/2018

Calibration	Sensor:	AEROSOL
	Cal. date	9/18/2018

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
11/5/2018	8:39:11	0.021
11/5/2018	8:40:11	0.007
11/5/2018	8:41:11	0.007
11/5/2018	8:42:11	0.007
11/5/2018	8:43:11	0.007
11/5/2018	8:44:11	0.006
11/5/2018	8:45:11	0.006
11/5/2018	8:46:11	0.006
11/5/2018	8:47:11	0.006
11/5/2018	8:48:11	0.006
11/5/2018	8:49:11	0.006
11/5/2018	8:50:11	0.006
11/5/2018	8:51:11	0.006
11/5/2018	8:52:11	0.006
11/5/2018	8:53:11	0.006
11/5/2018	8:54:11	0.006
11/5/2018	8:55:11	0.006
11/5/2018	8:56:11	0.006
11/5/2018	8:57:11	0.006
11/5/2018	8:58:11	0.006
11/5/2018	8:59:11	0.006
11/5/2018	9:00:11	0.006
11/5/2018	9:01:11	0.006
11/5/2018	9:02:11	0.006

11/5/2018	9:03:11	0.006
11/5/2018	9:04:11	0.005
11/5/2018	9:05:11	0.005
11/5/2018	9:06:11	0.005
11/5/2018	9:07:11	0.005
11/5/2018	9:08:11	0.005
11/5/2018	9:09:11	0.005
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11/5/2018	9:11:11	0.005
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11/5/2018	9:16:11	0.005
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11/5/2018	13:12:11	0.003
11/5/2018	13:13:11	0.003
11/5/2018	13:14:11	0.003
11/5/2018	13:15:11	0.003
11/5/2018	13:16:11	0.003
11/5/2018	13:17:11	0.002
11/5/2018	13:18:11	0.002
11/5/2018	13:19:11	0.002
11/5/2018	13:20:11	0.002
11/5/2018	13:21:11	0.002
11/5/2018	13:22:11	0.002
11/5/2018	13:23:11	0.002
11/5/2018	13:24:11	0.002
11/5/2018	13:25:11	0.003
11/5/2018	13:26:11	0.002
11/5/2018	13:27:11	0.002
11/5/2018	13:28:11	0.002
11/5/2018	13:29:11	0.003
11/5/2018	13:30:11	0.002
11/5/2018	13:31:11	0.002
11/5/2018	13:32:11	0.002
11/5/2018	13:33:11	0.002
11/5/2018	13:34:11	0.002
11/5/2018	13:35:11	0.002
11/5/2018	13:36:11	0.002
11/5/2018	13:37:11	0.002
11/5/2018	13:38:11	0.002
11/5/2018	13:39:11	0.003
11/5/2018	13:40:11	0.002
11/5/2018	13:41:11	0.002
11/5/2018	13:42:11	0.002
11/5/2018	13:43:11	0.003
11/5/2018	13:44:11	0.003

11/5/2018	13:45:11	0.003
11/5/2018	13:46:11	0.003
11/5/2018	13:47:11	0.003
11/5/2018	13:48:11	0.002
11/5/2018	13:49:11	0.001
11/5/2018	13:50:11	0.001
11/5/2018	13:51:11	0.002
11/5/2018	13:52:11	0.002
11/5/2018	13:53:11	0.001
11/5/2018	13:54:11	0.001
11/5/2018	13:55:11	0.001
11/5/2018	13:56:11	0.003
11/5/2018	13:57:11	0.004
11/5/2018	13:58:11	0.002
11/5/2018	13:59:11	0.003
11/5/2018	14:00:11	0.001
11/5/2018	14:01:11	0.001
11/5/2018	14:02:11	0.001
11/5/2018	14:03:11	0.001
11/5/2018	14:04:11	0.001
11/5/2018	14:05:11	0.001
11/5/2018	14:06:11	0.001
11/5/2018	14:07:11	0.001
11/5/2018	14:08:11	0.002
11/5/2018	14:09:11	0.002
11/5/2018	14:10:11	0.002
11/5/2018	14:11:11	0.001
11/5/2018	14:12:11	0.001
11/5/2018	14:13:11	0.001
11/5/2018	14:14:11	0.001
11/5/2018	14:15:11	0.001
11/5/2018	14:16:11	0.001
11/5/2018	14:17:11	0.001
11/5/2018	14:18:11	0.001
11/5/2018	14:19:11	0.001
11/5/2018	14:20:11	0.001
11/5/2018	14:21:11	0.001
11/5/2018	14:22:11	0.001
11/5/2018	14:23:11	0.001
11/5/2018	14:24:11	0.001
11/5/2018	14:25:11	0.001
11/5/2018	14:26:11	0.001
11/5/2018	14:27:11	0.001
11/5/2018	14:28:11	0.001
11/5/2018	14:29:11	0.001
11/5/2018	14:30:11	0.001
11/5/2018	14:31:11	0.001

11/5/2018	14:32:11	0.001
11/5/2018	14:33:11	0
11/5/2018	14:34:11	0
11/5/2018	14:35:11	0
11/5/2018	14:36:11	0.001
11/5/2018	14:37:11	0.001
11/5/2018	14:38:11	0
11/5/2018	14:39:11	0
11/5/2018	14:40:11	0
11/5/2018	14:41:11	0
11/5/2018	14:42:11	0
11/5/2018	14:43:11	0
11/5/2018	14:44:11	0
11/5/2018	14:45:11	0
11/5/2018	14:46:11	0.001
11/5/2018	14:47:11	0.001
11/5/2018	14:48:11	0
11/5/2018	14:49:11	0.001
11/5/2018	14:50:11	0
11/5/2018	14:51:11	0.002
11/5/2018	14:52:11	0.006
11/5/2018	14:53:11	0.001
11/5/2018	14:54:11	0.036
11/5/2018	14:55:11	0.005
11/5/2018	14:56:11	0.001
11/5/2018	14:57:11	0
11/5/2018	14:58:11	0.003
11/5/2018	14:59:11	0
11/5/2018	15:00:11	0
11/5/2018	15:01:11	0
11/5/2018	15:02:11	0
11/5/2018	15:03:11	0
11/5/2018	15:04:11	0
11/5/2018	15:05:11	0
11/5/2018	15:06:11	0
11/5/2018	15:07:11	0
11/5/2018	15:08:11	0
11/5/2018	15:09:11	0
11/5/2018	15:10:11	0.001
11/5/2018	15:11:11	0
11/5/2018	15:12:11	0
11/5/2018	15:13:11	0
11/5/2018	15:14:11	0
11/5/2018	15:15:11	0

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Model:	DustTrak II
Model Number:	8530
Serial Number:	8530133202
Test ID:	1
Test Abbreviation:	MANUAL_001
Start Date:	10/27/2018
Start Time:	9:01:39
Duration (dd:hh:mm:ss):	0:00:50:00
Log Interval (mm:ss):	1:00
Number of points:	50
Notes:	

Statistics		
	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.006
	Minimum:	0.003
	Time of Minimum:	9:04:39
	Date of Minimum:	10/27/2018
	Maximum:	0.056
	Time of Maximum:	9:02:39
	Date of Maximum:	10/27/2018

Calibration		
	Sensor:	AEROSOL
	Cal. date	8/7/2013

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
10/27/2018	9:02:39	0.056
10/27/2018	9:03:39	0.004
10/27/2018	9:04:39	0.003
10/27/2018	9:05:39	0.004
10/27/2018	9:06:39	0.004
10/27/2018	9:07:39	0.004
10/27/2018	9:08:39	0.004
10/27/2018	9:09:39	0.004
10/27/2018	9:10:39	0.004
10/27/2018	9:11:39	0.004
10/27/2018	9:12:39	0.003
10/27/2018	9:13:39	0.004
10/27/2018	9:14:39	0.004
10/27/2018	9:15:39	0.005
10/27/2018	9:16:39	0.005
10/27/2018	9:17:39	0.005
10/27/2018	9:18:39	0.004
10/27/2018	9:19:39	0.004

10/27/2018	9:20:39	0.004
10/27/2018	9:21:39	0.004
10/27/2018	9:22:39	0.005
10/27/2018	9:23:39	0.005
10/27/2018	9:24:39	0.005
10/27/2018	9:25:39	0.005
10/27/2018	9:26:39	0.005
10/27/2018	9:27:39	0.005
10/27/2018	9:28:39	0.005
10/27/2018	9:29:39	0.004
10/27/2018	9:30:39	0.004
10/27/2018	9:31:39	0.005
10/27/2018	9:32:39	0.006
10/27/2018	9:33:39	0.006
10/27/2018	9:34:39	0.006
10/27/2018	9:35:39	0.007
10/27/2018	9:36:39	0.006
10/27/2018	9:37:39	0.006
10/27/2018	9:38:39	0.006
10/27/2018	9:39:39	0.006
10/27/2018	9:40:39	0.006
10/27/2018	9:41:39	0.006
10/27/2018	9:42:39	0.006
10/27/2018	9:43:39	0.006
10/27/2018	9:44:39	0.006
10/27/2018	9:45:39	0.007
10/27/2018	9:46:39	0.006
10/27/2018	9:47:39	0.007
10/27/2018	9:48:39	0.007
10/27/2018	9:49:39	0.007
10/27/2018	9:50:39	0.007
10/27/2018	9:51:39	0.007

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530133202
Test ID:	2
Test Abbreviation:	MANUAL_002
Start Date:	10/29/2018
Start Time:	8:54:30
Duration (dd:hh:mm:ss):	0:02:15:00
Log Interval (mm:ss):	1:00
Number of points:	135
Notes:	

Statistics	Channel:	AEROSOL
	Units:	mg/m^3

Average:		0.007
Minimum:		0.004
Time of Minimum:		11:01:30
Date of Minimum:		10/29/2018
Maximum:		0.103
Time of Maximum:		10:58:30
Date of Maximum:		10/29/2018

Calibration	Sensor:	AEROSOL
	Cal. date	8/7/2013

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
10/29/2018	8:55:30	0.01
10/29/2018	8:56:30	0.008
10/29/2018	8:57:30	0.009
10/29/2018	8:58:30	0.009
10/29/2018	8:59:30	0.008
10/29/2018	9:00:30	0.008
10/29/2018	9:01:30	0.008
10/29/2018	9:02:30	0.008
10/29/2018	9:03:30	0.007
10/29/2018	9:04:30	0.007
10/29/2018	9:05:30	0.008
10/29/2018	9:06:30	0.008
10/29/2018	9:07:30	0.008
10/29/2018	9:08:30	0.008
10/29/2018	9:09:30	0.008
10/29/2018	9:10:30	0.009
10/29/2018	9:11:30	0.008
10/29/2018	9:12:30	0.008
10/29/2018	9:13:30	0.008
10/29/2018	9:14:30	0.008
10/29/2018	9:15:30	0.007
10/29/2018	9:16:30	0.007
10/29/2018	9:17:30	0.007
10/29/2018	9:18:30	0.007
10/29/2018	9:19:30	0.007
10/29/2018	9:20:30	0.007
10/29/2018	9:21:30	0.007
10/29/2018	9:22:30	0.008
10/29/2018	9:23:30	0.008
10/29/2018	9:24:30	0.008
10/29/2018	9:25:30	0.008
10/29/2018	9:26:30	0.008
10/29/2018	9:27:30	0.008
10/29/2018	9:28:30	0.007

10/29/2018	9:29:30	0.007
10/29/2018	9:30:30	0.007
10/29/2018	9:31:30	0.007
10/29/2018	9:32:30	0.006
10/29/2018	9:33:30	0.006
10/29/2018	9:34:30	0.006
10/29/2018	9:35:30	0.005
10/29/2018	9:36:30	0.005
10/29/2018	9:37:30	0.005
10/29/2018	9:38:30	0.005
10/29/2018	9:39:30	0.005
10/29/2018	9:40:30	0.005
10/29/2018	9:41:30	0.006
10/29/2018	9:42:30	0.006
10/29/2018	9:43:30	0.006
10/29/2018	9:44:30	0.006
10/29/2018	9:45:30	0.006
10/29/2018	9:46:30	0.006
10/29/2018	9:47:30	0.006
10/29/2018	9:48:30	0.006
10/29/2018	9:49:30	0.008
10/29/2018	9:50:30	0.007
10/29/2018	9:51:30	0.006
10/29/2018	9:52:30	0.005
10/29/2018	9:53:30	0.005
10/29/2018	9:54:30	0.006
10/29/2018	9:55:30	0.006
10/29/2018	9:56:30	0.006
10/29/2018	9:57:30	0.006
10/29/2018	9:58:30	0.006
10/29/2018	9:59:30	0.006
10/29/2018	10:00:30	0.006
10/29/2018	10:01:30	0.006
10/29/2018	10:02:30	0.006
10/29/2018	10:03:30	0.006
10/29/2018	10:04:30	0.006
10/29/2018	10:05:30	0.006
10/29/2018	10:06:30	0.006
10/29/2018	10:07:30	0.006
10/29/2018	10:08:30	0.007
10/29/2018	10:09:30	0.007
10/29/2018	10:10:30	0.007
10/29/2018	10:11:30	0.007
10/29/2018	10:12:30	0.007
10/29/2018	10:13:30	0.007
10/29/2018	10:14:30	0.007
10/29/2018	10:15:30	0.007

10/29/2018	10:16:30	0.007
10/29/2018	10:17:30	0.007
10/29/2018	10:18:30	0.007
10/29/2018	10:19:30	0.007
10/29/2018	10:20:30	0.006
10/29/2018	10:21:30	0.006
10/29/2018	10:22:30	0.007
10/29/2018	10:23:30	0.006
10/29/2018	10:24:30	0.006
10/29/2018	10:25:30	0.007
10/29/2018	10:26:30	0.006
10/29/2018	10:27:30	0.005
10/29/2018	10:28:30	0.005
10/29/2018	10:29:30	0.005
10/29/2018	10:30:30	0.005
10/29/2018	10:31:30	0.005
10/29/2018	10:32:30	0.005
10/29/2018	10:33:30	0.005
10/29/2018	10:34:30	0.005
10/29/2018	10:35:30	0.005
10/29/2018	10:36:30	0.006
10/29/2018	10:37:30	0.006
10/29/2018	10:38:30	0.006
10/29/2018	10:39:30	0.006
10/29/2018	10:40:30	0.006
10/29/2018	10:41:30	0.006
10/29/2018	10:42:30	0.006
10/29/2018	10:43:30	0.005
10/29/2018	10:44:30	0.005
10/29/2018	10:45:30	0.006
10/29/2018	10:46:30	0.006
10/29/2018	10:47:30	0.01
10/29/2018	10:48:30	0.013
10/29/2018	10:49:30	0.008
10/29/2018	10:50:30	0.005
10/29/2018	10:51:30	0.005
10/29/2018	10:52:30	0.006
10/29/2018	10:53:30	0.006
10/29/2018	10:54:30	0.005
10/29/2018	10:55:30	0.006
10/29/2018	10:56:30	0.005
10/29/2018	10:57:30	0.005
10/29/2018	10:58:30	0.103
10/29/2018	10:59:30	0.005
10/29/2018	11:00:30	0.005
10/29/2018	11:01:30	0.004
10/29/2018	11:02:30	0.004

10/29/2018	11:03:30	0.004
10/29/2018	11:04:30	0.005
10/29/2018	11:05:30	0.005
10/29/2018	11:06:30	0.004
10/29/2018	11:07:30	0.004
10/29/2018	11:08:30	0.004
10/29/2018	11:09:30	0.004

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530133202
Test ID:	3
Test Abbreviation:	MANUAL_003
Start Date:	10/29/2018
Start Time:	12:04:22
Duration (dd:hh:mm:ss):	0:03:30:00
Log Interval (mm:ss):	1:00
Number of points:	210
Notes:	

Statistics	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.008
	Minimum:	0.005
	Time of Minimum:	12:06:22
	Date of Minimum:	10/29/2018
	Maximum:	0.034
	Time of Maximum:	14:32:22
	Date of Maximum:	10/29/2018

Calibration	Sensor:	AEROSOL
	Cal. date	8/7/2013

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
10/29/2018	12:05:22	0.006
10/29/2018	12:06:22	0.005
10/29/2018	12:07:22	0.005
10/29/2018	12:08:22	0.005
10/29/2018	12:09:22	0.005
10/29/2018	12:10:22	0.006
10/29/2018	12:11:22	0.006
10/29/2018	12:12:22	0.006
10/29/2018	12:13:22	0.006
10/29/2018	12:14:22	0.006
10/29/2018	12:15:22	0.006
10/29/2018	12:16:22	0.007

10/29/2018	12:17:22	0.007
10/29/2018	12:18:22	0.007
10/29/2018	12:19:22	0.006
10/29/2018	12:20:22	0.007
10/29/2018	12:21:22	0.007
10/29/2018	12:22:22	0.007
10/29/2018	12:23:22	0.007
10/29/2018	12:24:22	0.007
10/29/2018	12:25:22	0.007
10/29/2018	12:26:22	0.007
10/29/2018	12:27:22	0.007
10/29/2018	12:28:22	0.007
10/29/2018	12:29:22	0.007
10/29/2018	12:30:22	0.007
10/29/2018	12:31:22	0.007
10/29/2018	12:32:22	0.007
10/29/2018	12:33:22	0.007
10/29/2018	12:34:22	0.007
10/29/2018	12:35:22	0.007
10/29/2018	12:36:22	0.007
10/29/2018	12:37:22	0.007
10/29/2018	12:38:22	0.008
10/29/2018	12:39:22	0.007
10/29/2018	12:40:22	0.007
10/29/2018	12:41:22	0.007
10/29/2018	12:42:22	0.007
10/29/2018	12:43:22	0.007
10/29/2018	12:44:22	0.007
10/29/2018	12:45:22	0.007
10/29/2018	12:46:22	0.007
10/29/2018	12:47:22	0.007
10/29/2018	12:48:22	0.007
10/29/2018	12:49:22	0.007
10/29/2018	12:50:22	0.006
10/29/2018	12:51:22	0.006
10/29/2018	12:52:22	0.006
10/29/2018	12:53:22	0.006
10/29/2018	12:54:22	0.006
10/29/2018	12:55:22	0.007
10/29/2018	12:56:22	0.007
10/29/2018	12:57:22	0.006
10/29/2018	12:58:22	0.006
10/29/2018	12:59:22	0.007
10/29/2018	13:00:22	0.007
10/29/2018	13:01:22	0.007
10/29/2018	13:02:22	0.007
10/29/2018	13:03:22	0.007

10/29/2018	13:04:22	0.007
10/29/2018	13:05:22	0.007
10/29/2018	13:06:22	0.007
10/29/2018	13:07:22	0.007
10/29/2018	13:08:22	0.006
10/29/2018	13:09:22	0.007
10/29/2018	13:10:22	0.007
10/29/2018	13:11:22	0.007
10/29/2018	13:12:22	0.007
10/29/2018	13:13:22	0.007
10/29/2018	13:14:22	0.007
10/29/2018	13:15:22	0.007
10/29/2018	13:16:22	0.007
10/29/2018	13:17:22	0.007
10/29/2018	13:18:22	0.007
10/29/2018	13:19:22	0.007
10/29/2018	13:20:22	0.007
10/29/2018	13:21:22	0.007
10/29/2018	13:22:22	0.007
10/29/2018	13:23:22	0.007
10/29/2018	13:24:22	0.008
10/29/2018	13:25:22	0.007
10/29/2018	13:26:22	0.007
10/29/2018	13:27:22	0.007
10/29/2018	13:28:22	0.007
10/29/2018	13:29:22	0.008
10/29/2018	13:30:22	0.008
10/29/2018	13:31:22	0.007
10/29/2018	13:32:22	0.007
10/29/2018	13:33:22	0.007
10/29/2018	13:34:22	0.007
10/29/2018	13:35:22	0.008
10/29/2018	13:36:22	0.007
10/29/2018	13:37:22	0.007
10/29/2018	13:38:22	0.007
10/29/2018	13:39:22	0.007
10/29/2018	13:40:22	0.007
10/29/2018	13:41:22	0.007
10/29/2018	13:42:22	0.008
10/29/2018	13:43:22	0.008
10/29/2018	13:44:22	0.007
10/29/2018	13:45:22	0.008
10/29/2018	13:46:22	0.008
10/29/2018	13:47:22	0.007
10/29/2018	13:48:22	0.008
10/29/2018	13:49:22	0.008
10/29/2018	13:50:22	0.008

10/29/2018	13:51:22	0.008
10/29/2018	13:52:22	0.008
10/29/2018	13:53:22	0.008
10/29/2018	13:54:22	0.008
10/29/2018	13:55:22	0.008
10/29/2018	13:56:22	0.008
10/29/2018	13:57:22	0.008
10/29/2018	13:58:22	0.008
10/29/2018	13:59:22	0.008
10/29/2018	14:00:22	0.008
10/29/2018	14:01:22	0.01
10/29/2018	14:02:22	0.011
10/29/2018	14:03:22	0.008
10/29/2018	14:04:22	0.008
10/29/2018	14:05:22	0.008
10/29/2018	14:06:22	0.011
10/29/2018	14:07:22	0.008
10/29/2018	14:08:22	0.021
10/29/2018	14:09:22	0.009
10/29/2018	14:10:22	0.008
10/29/2018	14:11:22	0.008
10/29/2018	14:12:22	0.008
10/29/2018	14:13:22	0.008
10/29/2018	14:14:22	0.008
10/29/2018	14:15:22	0.009
10/29/2018	14:16:22	0.009
10/29/2018	14:17:22	0.009
10/29/2018	14:18:22	0.008
10/29/2018	14:19:22	0.008
10/29/2018	14:20:22	0.008
10/29/2018	14:21:22	0.008
10/29/2018	14:22:22	0.01
10/29/2018	14:23:22	0.008
10/29/2018	14:24:22	0.011
10/29/2018	14:25:22	0.024
10/29/2018	14:26:22	0.01
10/29/2018	14:27:22	0.008
10/29/2018	14:28:22	0.007
10/29/2018	14:29:22	0.014
10/29/2018	14:30:22	0.027
10/29/2018	14:31:22	0.031
10/29/2018	14:32:22	0.034
10/29/2018	14:33:22	0.008
10/29/2018	14:34:22	0.009
10/29/2018	14:35:22	0.007
10/29/2018	14:36:22	0.007
10/29/2018	14:37:22	0.007

10/29/2018	14:38:22	0.007
10/29/2018	14:39:22	0.007
10/29/2018	14:40:22	0.009
10/29/2018	14:41:22	0.007
10/29/2018	14:42:22	0.007
10/29/2018	14:43:22	0.008
10/29/2018	14:44:22	0.008
10/29/2018	14:45:22	0.01
10/29/2018	14:46:22	0.011
10/29/2018	14:47:22	0.009
10/29/2018	14:48:22	0.008
10/29/2018	14:49:22	0.008
10/29/2018	14:50:22	0.008
10/29/2018	14:51:22	0.008
10/29/2018	14:52:22	0.008
10/29/2018	14:53:22	0.008
10/29/2018	14:54:22	0.008
10/29/2018	14:55:22	0.008
10/29/2018	14:56:22	0.008
10/29/2018	14:57:22	0.008
10/29/2018	14:58:22	0.008
10/29/2018	14:59:22	0.008
10/29/2018	15:00:22	0.009
10/29/2018	15:01:22	0.008
10/29/2018	15:02:22	0.009
10/29/2018	15:03:22	0.009
10/29/2018	15:04:22	0.009
10/29/2018	15:05:22	0.009
10/29/2018	15:06:22	0.009
10/29/2018	15:07:22	0.009
10/29/2018	15:08:22	0.009
10/29/2018	15:09:22	0.009
10/29/2018	15:10:22	0.009
10/29/2018	15:11:22	0.009
10/29/2018	15:12:22	0.009
10/29/2018	15:13:22	0.009
10/29/2018	15:14:22	0.009
10/29/2018	15:15:22	0.009
10/29/2018	15:16:22	0.009
10/29/2018	15:17:22	0.009
10/29/2018	15:18:22	0.008
10/29/2018	15:19:22	0.008
10/29/2018	15:20:22	0.008
10/29/2018	15:21:22	0.008
10/29/2018	15:22:22	0.008
10/29/2018	15:23:22	0.008
10/29/2018	15:24:22	0.008

10/29/2018	15:25:22	0.009
10/29/2018	15:26:22	0.008
10/29/2018	15:27:22	0.008
10/29/2018	15:28:22	0.008
10/29/2018	15:29:22	0.008
10/29/2018	15:30:22	0.008
10/29/2018	15:31:22	0.008
10/29/2018	15:32:22	0.008
10/29/2018	15:33:22	0.008
10/29/2018	15:34:22	0.008

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530133202
Test ID:	4
Test Abbreviation:	MANUAL_004
Start Date:	10/30/2018
Start Time:	8:18:25
Duration (dd:hh:mm:ss):	0:04:54:00
Log Interval (mm:ss):	1:00
Number of points:	294
Notes:	

Statistics		
	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.005
	Minimum:	0.004
	Time of Minimum:	8:19:25
	Date of Minimum:	10/30/2018
	Maximum:	0.023
	Time of Maximum:	12:20:25
	Date of Maximum:	10/30/2018

Calibration		
	Sensor:	AEROSOL
	Cal. date	8/7/2013

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
10/30/2018	8:19:25	0.004
10/30/2018	8:20:25	0.004
10/30/2018	8:21:25	0.005
10/30/2018	8:22:25	0.005
10/30/2018	8:23:25	0.005
10/30/2018	8:24:25	0.005
10/30/2018	8:25:25	0.005
10/30/2018	8:26:25	0.005
10/30/2018	8:27:25	0.005

10/30/2018	8:28:25	0.005
10/30/2018	8:29:25	0.005
10/30/2018	8:30:25	0.005
10/30/2018	8:31:25	0.005
10/30/2018	8:32:25	0.005
10/30/2018	8:33:25	0.004
10/30/2018	8:34:25	0.004
10/30/2018	8:35:25	0.004
10/30/2018	8:36:25	0.004
10/30/2018	8:37:25	0.004
10/30/2018	8:38:25	0.004
10/30/2018	8:39:25	0.004
10/30/2018	8:40:25	0.005
10/30/2018	8:41:25	0.004
10/30/2018	8:42:25	0.005
10/30/2018	8:43:25	0.005
10/30/2018	8:44:25	0.005
10/30/2018	8:45:25	0.005
10/30/2018	8:46:25	0.005
10/30/2018	8:47:25	0.005
10/30/2018	8:48:25	0.005
10/30/2018	8:49:25	0.005
10/30/2018	8:50:25	0.005
10/30/2018	8:51:25	0.006
10/30/2018	8:52:25	0.006
10/30/2018	8:53:25	0.005
10/30/2018	8:54:25	0.005
10/30/2018	8:55:25	0.005
10/30/2018	8:56:25	0.004
10/30/2018	8:57:25	0.005
10/30/2018	8:58:25	0.005
10/30/2018	8:59:25	0.005
10/30/2018	9:00:25	0.004
10/30/2018	9:01:25	0.004
10/30/2018	9:02:25	0.004
10/30/2018	9:03:25	0.005
10/30/2018	9:04:25	0.004
10/30/2018	9:05:25	0.004
10/30/2018	9:06:25	0.004
10/30/2018	9:07:25	0.005
10/30/2018	9:08:25	0.005
10/30/2018	9:09:25	0.004
10/30/2018	9:10:25	0.004
10/30/2018	9:11:25	0.004
10/30/2018	9:12:25	0.004
10/30/2018	9:13:25	0.004
10/30/2018	9:14:25	0.004

10/30/2018	9:15:25	0.004
10/30/2018	9:16:25	0.005
10/30/2018	9:17:25	0.005
10/30/2018	9:18:25	0.005
10/30/2018	9:19:25	0.005
10/30/2018	9:20:25	0.005
10/30/2018	9:21:25	0.005
10/30/2018	9:22:25	0.005
10/30/2018	9:23:25	0.005
10/30/2018	9:24:25	0.005
10/30/2018	9:25:25	0.005
10/30/2018	9:26:25	0.005
10/30/2018	9:27:25	0.005
10/30/2018	9:28:25	0.004
10/30/2018	9:29:25	0.005
10/30/2018	9:30:25	0.005
10/30/2018	9:31:25	0.004
10/30/2018	9:32:25	0.004
10/30/2018	9:33:25	0.004
10/30/2018	9:34:25	0.004
10/30/2018	9:35:25	0.004
10/30/2018	9:36:25	0.004
10/30/2018	9:37:25	0.004
10/30/2018	9:38:25	0.004
10/30/2018	9:39:25	0.004
10/30/2018	9:40:25	0.004
10/30/2018	9:41:25	0.004
10/30/2018	9:42:25	0.004
10/30/2018	9:43:25	0.004
10/30/2018	9:44:25	0.005
10/30/2018	9:45:25	0.004
10/30/2018	9:46:25	0.004
10/30/2018	9:47:25	0.004
10/30/2018	9:48:25	0.004
10/30/2018	9:49:25	0.004
10/30/2018	9:50:25	0.004
10/30/2018	9:51:25	0.004
10/30/2018	9:52:25	0.004
10/30/2018	9:53:25	0.004
10/30/2018	9:54:25	0.004
10/30/2018	9:55:25	0.004
10/30/2018	9:56:25	0.004
10/30/2018	9:57:25	0.005
10/30/2018	9:58:25	0.005
10/30/2018	9:59:25	0.005
10/30/2018	10:00:25	0.005
10/30/2018	10:01:25	0.005

10/30/2018	10:02:25	0.005
10/30/2018	10:03:25	0.005
10/30/2018	10:04:25	0.005
10/30/2018	10:05:25	0.005
10/30/2018	10:06:25	0.005
10/30/2018	10:07:25	0.005
10/30/2018	10:08:25	0.005
10/30/2018	10:09:25	0.005
10/30/2018	10:10:25	0.005
10/30/2018	10:11:25	0.005
10/30/2018	10:12:25	0.005
10/30/2018	10:13:25	0.005
10/30/2018	10:14:25	0.005
10/30/2018	10:15:25	0.005
10/30/2018	10:16:25	0.005
10/30/2018	10:17:25	0.005
10/30/2018	10:18:25	0.005
10/30/2018	10:19:25	0.005
10/30/2018	10:20:25	0.005
10/30/2018	10:21:25	0.005
10/30/2018	10:22:25	0.005
10/30/2018	10:23:25	0.005
10/30/2018	10:24:25	0.005
10/30/2018	10:25:25	0.005
10/30/2018	10:26:25	0.005
10/30/2018	10:27:25	0.005
10/30/2018	10:28:25	0.005
10/30/2018	10:29:25	0.005
10/30/2018	10:30:25	0.005
10/30/2018	10:31:25	0.005
10/30/2018	10:32:25	0.005
10/30/2018	10:33:25	0.005
10/30/2018	10:34:25	0.005
10/30/2018	10:35:25	0.005
10/30/2018	10:36:25	0.005
10/30/2018	10:37:25	0.005
10/30/2018	10:38:25	0.005
10/30/2018	10:39:25	0.005
10/30/2018	10:40:25	0.005
10/30/2018	10:41:25	0.005
10/30/2018	10:42:25	0.004
10/30/2018	10:43:25	0.004
10/30/2018	10:44:25	0.004
10/30/2018	10:45:25	0.004
10/30/2018	10:46:25	0.004
10/30/2018	10:47:25	0.004
10/30/2018	10:48:25	0.004

10/30/2018	10:49:25	0.004
10/30/2018	10:50:25	0.004
10/30/2018	10:51:25	0.004
10/30/2018	10:52:25	0.004
10/30/2018	10:53:25	0.004
10/30/2018	10:54:25	0.004
10/30/2018	10:55:25	0.004
10/30/2018	10:56:25	0.004
10/30/2018	10:57:25	0.004
10/30/2018	10:58:25	0.004
10/30/2018	10:59:25	0.004
10/30/2018	11:00:25	0.004
10/30/2018	11:01:25	0.004
10/30/2018	11:02:25	0.004
10/30/2018	11:03:25	0.004
10/30/2018	11:04:25	0.004
10/30/2018	11:05:25	0.004
10/30/2018	11:06:25	0.004
10/30/2018	11:07:25	0.004
10/30/2018	11:08:25	0.004
10/30/2018	11:09:25	0.004
10/30/2018	11:10:25	0.004
10/30/2018	11:11:25	0.004
10/30/2018	11:12:25	0.004
10/30/2018	11:13:25	0.004
10/30/2018	11:14:25	0.004
10/30/2018	11:15:25	0.004
10/30/2018	11:16:25	0.005
10/30/2018	11:17:25	0.004
10/30/2018	11:18:25	0.004
10/30/2018	11:19:25	0.004
10/30/2018	11:20:25	0.004
10/30/2018	11:21:25	0.004
10/30/2018	11:22:25	0.004
10/30/2018	11:23:25	0.004
10/30/2018	11:24:25	0.004
10/30/2018	11:25:25	0.004
10/30/2018	11:26:25	0.004
10/30/2018	11:27:25	0.004
10/30/2018	11:28:25	0.004
10/30/2018	11:29:25	0.004
10/30/2018	11:30:25	0.004
10/30/2018	11:31:25	0.004
10/30/2018	11:32:25	0.004
10/30/2018	11:33:25	0.004
10/30/2018	11:34:25	0.004
10/30/2018	11:35:25	0.004

10/30/2018	11:36:25	0.004
10/30/2018	11:37:25	0.004
10/30/2018	11:38:25	0.004
10/30/2018	11:39:25	0.004
10/30/2018	11:40:25	0.004
10/30/2018	11:41:25	0.004
10/30/2018	11:42:25	0.004
10/30/2018	11:43:25	0.004
10/30/2018	11:44:25	0.004
10/30/2018	11:45:25	0.004
10/30/2018	11:46:25	0.004
10/30/2018	11:47:25	0.004
10/30/2018	11:48:25	0.004
10/30/2018	11:49:25	0.004
10/30/2018	11:50:25	0.004
10/30/2018	11:51:25	0.004
10/30/2018	11:52:25	0.004
10/30/2018	11:53:25	0.004
10/30/2018	11:54:25	0.004
10/30/2018	11:55:25	0.004
10/30/2018	11:56:25	0.004
10/30/2018	11:57:25	0.004
10/30/2018	11:58:25	0.004
10/30/2018	11:59:25	0.004
10/30/2018	12:00:25	0.004
10/30/2018	12:01:25	0.004
10/30/2018	12:02:25	0.004
10/30/2018	12:03:25	0.004
10/30/2018	12:04:25	0.005
10/30/2018	12:05:25	0.005
10/30/2018	12:06:25	0.004
10/30/2018	12:07:25	0.004
10/30/2018	12:08:25	0.004
10/30/2018	12:09:25	0.005
10/30/2018	12:10:25	0.004
10/30/2018	12:11:25	0.004
10/30/2018	12:12:25	0.004
10/30/2018	12:13:25	0.004
10/30/2018	12:14:25	0.004
10/30/2018	12:15:25	0.004
10/30/2018	12:16:25	0.004
10/30/2018	12:17:25	0.005
10/30/2018	12:18:25	0.005
10/30/2018	12:19:25	0.005
10/30/2018	12:20:25	0.023
10/30/2018	12:21:25	0.005
10/30/2018	12:22:25	0.005

10/30/2018	12:23:25	0.011
10/30/2018	12:24:25	0.005
10/30/2018	12:25:25	0.005
10/30/2018	12:26:25	0.005
10/30/2018	12:27:25	0.005
10/30/2018	12:28:25	0.005
10/30/2018	12:29:25	0.005
10/30/2018	12:30:25	0.005
10/30/2018	12:31:25	0.005
10/30/2018	12:32:25	0.005
10/30/2018	12:33:25	0.005
10/30/2018	12:34:25	0.005
10/30/2018	12:35:25	0.006
10/30/2018	12:36:25	0.006
10/30/2018	12:37:25	0.005
10/30/2018	12:38:25	0.005
10/30/2018	12:39:25	0.005
10/30/2018	12:40:25	0.005
10/30/2018	12:41:25	0.005
10/30/2018	12:42:25	0.005
10/30/2018	12:43:25	0.005
10/30/2018	12:44:25	0.005
10/30/2018	12:45:25	0.005
10/30/2018	12:46:25	0.005
10/30/2018	12:47:25	0.005
10/30/2018	12:48:25	0.005
10/30/2018	12:49:25	0.005
10/30/2018	12:50:25	0.005
10/30/2018	12:51:25	0.005
10/30/2018	12:52:25	0.005
10/30/2018	12:53:25	0.005
10/30/2018	12:54:25	0.005
10/30/2018	12:55:25	0.009
10/30/2018	12:56:25	0.013
10/30/2018	12:57:25	0.006
10/30/2018	12:58:25	0.006
10/30/2018	12:59:25	0.006
10/30/2018	13:00:25	0.006
10/30/2018	13:01:25	0.006
10/30/2018	13:02:25	0.005
10/30/2018	13:03:25	0.006
10/30/2018	13:04:25	0.004
10/30/2018	13:05:25	0.004
10/30/2018	13:06:25	0.005
10/30/2018	13:07:25	0.005
10/30/2018	13:08:25	0.005
10/30/2018	13:09:25	0.005

10/30/2018	13:10:25	0.005
10/30/2018	13:11:25	0.004
10/30/2018	13:12:25	0.005

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530133202
Test ID:	5
Test Abbreviation:	MANUAL_005
Start Date:	10/31/2018
Start Time:	8:09:16
Duration (dd:hh:mm:ss):	0:04:06:00
Log Interval (mm:ss):	1:00
Number of points:	246
Notes:	

Statistics		
	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.009
	Minimum:	0.004
	Time of Minimum:	8:14:16
	Date of Minimum:	10/31/2018
	Maximum:	0.095
	Time of Maximum:	8:10:16
	Date of Maximum:	10/31/2018

Calibration		
	Sensor:	AEROSOL
	Cal. date	8/7/2013

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
10/31/2018	8:10:16	0.095
10/31/2018	8:11:16	0.006
10/31/2018	8:12:16	0.005
10/31/2018	8:13:16	0.005
10/31/2018	8:14:16	0.004
10/31/2018	8:15:16	0.004
10/31/2018	8:16:16	0.008
10/31/2018	8:17:16	0.008
10/31/2018	8:18:16	0.007
10/31/2018	8:19:16	0.007
10/31/2018	8:20:16	0.005
10/31/2018	8:21:16	0.005
10/31/2018	8:22:16	0.005
10/31/2018	8:23:16	0.007
10/31/2018	8:24:16	0.006
10/31/2018	8:25:16	0.006

10/31/2018	8:26:16	0.006
10/31/2018	8:27:16	0.005
10/31/2018	8:28:16	0.007
10/31/2018	8:29:16	0.008
10/31/2018	8:30:16	0.009
10/31/2018	8:31:16	0.006
10/31/2018	8:32:16	0.006
10/31/2018	8:33:16	0.006
10/31/2018	8:34:16	0.006
10/31/2018	8:35:16	0.005
10/31/2018	8:36:16	0.005
10/31/2018	8:37:16	0.005
10/31/2018	8:38:16	0.005
10/31/2018	8:39:16	0.006
10/31/2018	8:40:16	0.006
10/31/2018	8:41:16	0.005
10/31/2018	8:42:16	0.005
10/31/2018	8:43:16	0.005
10/31/2018	8:44:16	0.005
10/31/2018	8:45:16	0.004
10/31/2018	8:46:16	0.005
10/31/2018	8:47:16	0.005
10/31/2018	8:48:16	0.005
10/31/2018	8:49:16	0.005
10/31/2018	8:50:16	0.007
10/31/2018	8:51:16	0.005
10/31/2018	8:52:16	0.005
10/31/2018	8:53:16	0.005
10/31/2018	8:54:16	0.005
10/31/2018	8:55:16	0.005
10/31/2018	8:56:16	0.006
10/31/2018	8:57:16	0.006
10/31/2018	8:58:16	0.005
10/31/2018	8:59:16	0.005
10/31/2018	9:00:16	0.007
10/31/2018	9:01:16	0.007
10/31/2018	9:02:16	0.006
10/31/2018	9:03:16	0.006
10/31/2018	9:04:16	0.009
10/31/2018	9:05:16	0.006
10/31/2018	9:06:16	0.005
10/31/2018	9:07:16	0.005
10/31/2018	9:08:16	0.005
10/31/2018	9:09:16	0.006
10/31/2018	9:10:16	0.005
10/31/2018	9:11:16	0.005
10/31/2018	9:12:16	0.017

10/31/2018	9:13:16	0.006
10/31/2018	9:14:16	0.007
10/31/2018	9:15:16	0.006
10/31/2018	9:16:16	0.006
10/31/2018	9:17:16	0.006
10/31/2018	9:18:16	0.007
10/31/2018	9:19:16	0.007
10/31/2018	9:20:16	0.007
10/31/2018	9:21:16	0.006
10/31/2018	9:22:16	0.006
10/31/2018	9:23:16	0.006
10/31/2018	9:24:16	0.006
10/31/2018	9:25:16	0.006
10/31/2018	9:26:16	0.006
10/31/2018	9:27:16	0.006
10/31/2018	9:28:16	0.006
10/31/2018	9:29:16	0.006
10/31/2018	9:30:16	0.006
10/31/2018	9:31:16	0.006
10/31/2018	9:32:16	0.007
10/31/2018	9:33:16	0.007
10/31/2018	9:34:16	0.006
10/31/2018	9:35:16	0.006
10/31/2018	9:36:16	0.006
10/31/2018	9:37:16	0.006
10/31/2018	9:38:16	0.006
10/31/2018	9:39:16	0.006
10/31/2018	9:40:16	0.02
10/31/2018	9:41:16	0.01
10/31/2018	9:42:16	0.006
10/31/2018	9:43:16	0.006
10/31/2018	9:44:16	0.006
10/31/2018	9:45:16	0.006
10/31/2018	9:46:16	0.007
10/31/2018	9:47:16	0.007
10/31/2018	9:48:16	0.006
10/31/2018	9:49:16	0.006
10/31/2018	9:50:16	0.006
10/31/2018	9:51:16	0.006
10/31/2018	9:52:16	0.007
10/31/2018	9:53:16	0.007
10/31/2018	9:54:16	0.007
10/31/2018	9:55:16	0.007
10/31/2018	9:56:16	0.007
10/31/2018	9:57:16	0.007
10/31/2018	9:58:16	0.007
10/31/2018	9:59:16	0.007

10/31/2018	10:00:16	0.007
10/31/2018	10:01:16	0.007
10/31/2018	10:02:16	0.007
10/31/2018	10:03:16	0.007
10/31/2018	10:04:16	0.007
10/31/2018	10:05:16	0.008
10/31/2018	10:06:16	0.008
10/31/2018	10:07:16	0.009
10/31/2018	10:08:16	0.009
10/31/2018	10:09:16	0.01
10/31/2018	10:10:16	0.008
10/31/2018	10:11:16	0.009
10/31/2018	10:12:16	0.009
10/31/2018	10:13:16	0.008
10/31/2018	10:14:16	0.008
10/31/2018	10:15:16	0.009
10/31/2018	10:16:16	0.009
10/31/2018	10:17:16	0.009
10/31/2018	10:18:16	0.009
10/31/2018	10:19:16	0.009
10/31/2018	10:20:16	0.009
10/31/2018	10:21:16	0.009
10/31/2018	10:22:16	0.009
10/31/2018	10:23:16	0.009
10/31/2018	10:24:16	0.009
10/31/2018	10:25:16	0.01
10/31/2018	10:26:16	0.01
10/31/2018	10:27:16	0.01
10/31/2018	10:28:16	0.01
10/31/2018	10:29:16	0.01
10/31/2018	10:30:16	0.01
10/31/2018	10:31:16	0.01
10/31/2018	10:32:16	0.01
10/31/2018	10:33:16	0.01
10/31/2018	10:34:16	0.01
10/31/2018	10:35:16	0.01
10/31/2018	10:36:16	0.01
10/31/2018	10:37:16	0.01
10/31/2018	10:38:16	0.01
10/31/2018	10:39:16	0.01
10/31/2018	10:40:16	0.01
10/31/2018	10:41:16	0.01
10/31/2018	10:42:16	0.01
10/31/2018	10:43:16	0.01
10/31/2018	10:44:16	0.01
10/31/2018	10:45:16	0.01
10/31/2018	10:46:16	0.01

10/31/2018	10:47:16	0.01
10/31/2018	10:48:16	0.01
10/31/2018	10:49:16	0.01
10/31/2018	10:50:16	0.01
10/31/2018	10:51:16	0.01
10/31/2018	10:52:16	0.011
10/31/2018	10:53:16	0.01
10/31/2018	10:54:16	0.01
10/31/2018	10:55:16	0.01
10/31/2018	10:56:16	0.01
10/31/2018	10:57:16	0.01
10/31/2018	10:58:16	0.01
10/31/2018	10:59:16	0.01
10/31/2018	11:00:16	0.01
10/31/2018	11:01:16	0.01
10/31/2018	11:02:16	0.01
10/31/2018	11:03:16	0.01
10/31/2018	11:04:16	0.01
10/31/2018	11:05:16	0.01
10/31/2018	11:06:16	0.01
10/31/2018	11:07:16	0.01
10/31/2018	11:08:16	0.01
10/31/2018	11:09:16	0.01
10/31/2018	11:10:16	0.01
10/31/2018	11:11:16	0.01
10/31/2018	11:12:16	0.01
10/31/2018	11:13:16	0.01
10/31/2018	11:14:16	0.01
10/31/2018	11:15:16	0.01
10/31/2018	11:16:16	0.01
10/31/2018	11:17:16	0.01
10/31/2018	11:18:16	0.011
10/31/2018	11:19:16	0.011
10/31/2018	11:20:16	0.011
10/31/2018	11:21:16	0.011
10/31/2018	11:22:16	0.011
10/31/2018	11:23:16	0.011
10/31/2018	11:24:16	0.011
10/31/2018	11:25:16	0.011
10/31/2018	11:26:16	0.011
10/31/2018	11:27:16	0.011
10/31/2018	11:28:16	0.011
10/31/2018	11:29:16	0.011
10/31/2018	11:30:16	0.011
10/31/2018	11:31:16	0.011
10/31/2018	11:32:16	0.011
10/31/2018	11:33:16	0.01

10/31/2018	11:34:16	0.011
10/31/2018	11:35:16	0.011
10/31/2018	11:36:16	0.01
10/31/2018	11:37:16	0.01
10/31/2018	11:38:16	0.01
10/31/2018	11:39:16	0.01
10/31/2018	11:40:16	0.01
10/31/2018	11:41:16	0.01
10/31/2018	11:42:16	0.01
10/31/2018	11:43:16	0.01
10/31/2018	11:44:16	0.01
10/31/2018	11:45:16	0.01
10/31/2018	11:46:16	0.01
10/31/2018	11:47:16	0.01
10/31/2018	11:48:16	0.01
10/31/2018	11:49:16	0.01
10/31/2018	11:50:16	0.01
10/31/2018	11:51:16	0.01
10/31/2018	11:52:16	0.01
10/31/2018	11:53:16	0.01
10/31/2018	11:54:16	0.01
10/31/2018	11:55:16	0.01
10/31/2018	11:56:16	0.01
10/31/2018	11:57:16	0.01
10/31/2018	11:58:16	0.01
10/31/2018	11:59:16	0.01
10/31/2018	12:00:16	0.01
10/31/2018	12:01:16	0.01
10/31/2018	12:02:16	0.01
10/31/2018	12:03:16	0.01
10/31/2018	12:04:16	0.011
10/31/2018	12:05:16	0.011
10/31/2018	12:06:16	0.011
10/31/2018	12:07:16	0.011
10/31/2018	12:08:16	0.011
10/31/2018	12:09:16	0.011
10/31/2018	12:10:16	0.011
10/31/2018	12:11:16	0.011
10/31/2018	12:12:16	0.011
10/31/2018	12:13:16	0.011
10/31/2018	12:14:16	0.011
10/31/2018	12:15:16	0.011

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530133202
Test ID:	6

Test Abbreviation:	MANUAL_006
Start Date:	10/31/2018
Start Time:	15:07:59
Duration (dd:hh:mm:ss):	0:00:20:00
Log Interval (mm:ss):	1:00
Number of points:	20
Notes:	

Statistics		
	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.023
	Minimum:	0.019
	Time of Minimum:	15:27:59
	Date of Minimum:	10/31/2018
	Maximum:	0.057
	Time of Maximum:	15:08:59
	Date of Maximum:	10/31/2018

Calibration		
	Sensor:	AEROSOL
	Cal. date	8/7/2013

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
10/31/2018	15:08:59	0.057
10/31/2018	15:09:59	0.021
10/31/2018	15:10:59	0.02
10/31/2018	15:11:59	0.022
10/31/2018	15:12:59	0.021
10/31/2018	15:13:59	0.02
10/31/2018	15:14:59	0.021
10/31/2018	15:15:59	0.024
10/31/2018	15:16:59	0.023
10/31/2018	15:17:59	0.022
10/31/2018	15:18:59	0.02
10/31/2018	15:19:59	0.029
10/31/2018	15:20:59	0.026
10/31/2018	15:21:59	0.021
10/31/2018	15:22:59	0.02
10/31/2018	15:23:59	0.021
10/31/2018	15:24:59	0.02
10/31/2018	15:25:59	0.02
10/31/2018	15:26:59	0.02
10/31/2018	15:27:59	0.019

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530133202

Test ID:	7
Test Abbreviation:	MANUAL_007
Start Date:	11/1/2018
Start Time:	9:08:30
Duration (dd:hh:mm:ss):	0:05:41:00
Log Interval (mm:ss):	1:00
Number of points:	341
Notes:	

Statistics	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.007
	Minimum:	0.002
	Time of Minimum:	14:29:30
	Date of Minimum:	11/1/2018
	Maximum:	0.113
	Time of Maximum:	13:47:30
	Date of Maximum:	11/1/2018

Calibration	Sensor:	AEROSOL
	Cal. date	8/7/2013

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
11/1/2018	9:09:30	0.016
11/1/2018	9:10:30	0.013
11/1/2018	9:11:30	0.012
11/1/2018	9:12:30	0.011
11/1/2018	9:13:30	0.011
11/1/2018	9:14:30	0.01
11/1/2018	9:15:30	0.01
11/1/2018	9:16:30	0.009
11/1/2018	9:17:30	0.009
11/1/2018	9:18:30	0.01
11/1/2018	9:19:30	0.01
11/1/2018	9:20:30	0.01
11/1/2018	9:21:30	0.01
11/1/2018	9:22:30	0.01
11/1/2018	9:23:30	0.01
11/1/2018	9:24:30	0.01
11/1/2018	9:25:30	0.01
11/1/2018	9:26:30	0.009
11/1/2018	9:27:30	0.009
11/1/2018	9:28:30	0.009
11/1/2018	9:29:30	0.009
11/1/2018	9:30:30	0.009
11/1/2018	9:31:30	0.01

11/1/2018	9:32:30	0.011
11/1/2018	9:33:30	0.011
11/1/2018	9:34:30	0.011
11/1/2018	9:35:30	0.011
11/1/2018	9:36:30	0.012
11/1/2018	9:37:30	0.012
11/1/2018	9:38:30	0.011
11/1/2018	9:39:30	0.013
11/1/2018	9:40:30	0.011
11/1/2018	9:41:30	0.009
11/1/2018	9:42:30	0.009
11/1/2018	9:43:30	0.01
11/1/2018	9:44:30	0.009
11/1/2018	9:45:30	0.008
11/1/2018	9:46:30	0.009
11/1/2018	9:47:30	0.008
11/1/2018	9:48:30	0.009
11/1/2018	9:49:30	0.009
11/1/2018	9:50:30	0.009
11/1/2018	9:51:30	0.008
11/1/2018	9:52:30	0.009
11/1/2018	9:53:30	0.009
11/1/2018	9:54:30	0.009
11/1/2018	9:55:30	0.011
11/1/2018	9:56:30	0.009
11/1/2018	9:57:30	0.009
11/1/2018	9:58:30	0.01
11/1/2018	9:59:30	0.008
11/1/2018	10:00:30	0.009
11/1/2018	10:01:30	0.009
11/1/2018	10:02:30	0.01
11/1/2018	10:03:30	0.008
11/1/2018	10:04:30	0.01
11/1/2018	10:05:30	0.011
11/1/2018	10:06:30	0.009
11/1/2018	10:07:30	0.007
11/1/2018	10:08:30	0.007
11/1/2018	10:09:30	0.007
11/1/2018	10:10:30	0.012
11/1/2018	10:11:30	0.01
11/1/2018	10:12:30	0.006
11/1/2018	10:13:30	0.006
11/1/2018	10:14:30	0.007
11/1/2018	10:15:30	0.006
11/1/2018	10:16:30	0.007
11/1/2018	10:17:30	0.008
11/1/2018	10:18:30	0.007

11/1/2018	10:19:30	0.007
11/1/2018	10:20:30	0.007
11/1/2018	10:21:30	0.007
11/1/2018	10:22:30	0.007
11/1/2018	10:23:30	0.007
11/1/2018	10:24:30	0.007
11/1/2018	10:25:30	0.007
11/1/2018	10:26:30	0.007
11/1/2018	10:27:30	0.007
11/1/2018	10:28:30	0.007
11/1/2018	10:29:30	0.007
11/1/2018	10:30:30	0.007
11/1/2018	10:31:30	0.007
11/1/2018	10:32:30	0.007
11/1/2018	10:33:30	0.009
11/1/2018	10:34:30	0.008
11/1/2018	10:35:30	0.01
11/1/2018	10:36:30	0.008
11/1/2018	10:37:30	0.008
11/1/2018	10:38:30	0.007
11/1/2018	10:39:30	0.007
11/1/2018	10:40:30	0.007
11/1/2018	10:41:30	0.007
11/1/2018	10:42:30	0.008
11/1/2018	10:43:30	0.008
11/1/2018	10:44:30	0.007
11/1/2018	10:45:30	0.007
11/1/2018	10:46:30	0.008
11/1/2018	10:47:30	0.008
11/1/2018	10:48:30	0.008
11/1/2018	10:49:30	0.008
11/1/2018	10:50:30	0.008
11/1/2018	10:51:30	0.007
11/1/2018	10:52:30	0.007
11/1/2018	10:53:30	0.008
11/1/2018	10:54:30	0.007
11/1/2018	10:55:30	0.007
11/1/2018	10:56:30	0.008
11/1/2018	10:57:30	0.008
11/1/2018	10:58:30	0.008
11/1/2018	10:59:30	0.008
11/1/2018	11:00:30	0.008
11/1/2018	11:01:30	0.007
11/1/2018	11:02:30	0.007
11/1/2018	11:03:30	0.007
11/1/2018	11:04:30	0.007
11/1/2018	11:05:30	0.007

11/1/2018	11:06:30	0.008
11/1/2018	11:07:30	0.008
11/1/2018	11:08:30	0.008
11/1/2018	11:09:30	0.008
11/1/2018	11:10:30	0.008
11/1/2018	11:11:30	0.008
11/1/2018	11:12:30	0.018
11/1/2018	11:13:30	0.01
11/1/2018	11:14:30	0.008
11/1/2018	11:15:30	0.008
11/1/2018	11:16:30	0.009
11/1/2018	11:17:30	0.008
11/1/2018	11:18:30	0.009
11/1/2018	11:19:30	0.008
11/1/2018	11:20:30	0.011
11/1/2018	11:21:30	0.008
11/1/2018	11:22:30	0.008
11/1/2018	11:23:30	0.008
11/1/2018	11:24:30	0.008
11/1/2018	11:25:30	0.009
11/1/2018	11:26:30	0.008
11/1/2018	11:27:30	0.008
11/1/2018	11:28:30	0.008
11/1/2018	11:29:30	0.009
11/1/2018	11:30:30	0.008
11/1/2018	11:31:30	0.008
11/1/2018	11:32:30	0.008
11/1/2018	11:33:30	0.008
11/1/2018	11:34:30	0.008
11/1/2018	11:35:30	0.008
11/1/2018	11:36:30	0.008
11/1/2018	11:37:30	0.008
11/1/2018	11:38:30	0.008
11/1/2018	11:39:30	0.008
11/1/2018	11:40:30	0.007
11/1/2018	11:41:30	0.007
11/1/2018	11:42:30	0.007
11/1/2018	11:43:30	0.007
11/1/2018	11:44:30	0.007
11/1/2018	11:45:30	0.007
11/1/2018	11:46:30	0.007
11/1/2018	11:47:30	0.007
11/1/2018	11:48:30	0.007
11/1/2018	11:49:30	0.007
11/1/2018	11:50:30	0.007
11/1/2018	11:51:30	0.007
11/1/2018	11:52:30	0.007

11/1/2018	11:53:30	0.007
11/1/2018	11:54:30	0.007
11/1/2018	11:55:30	0.007
11/1/2018	11:56:30	0.007
11/1/2018	11:57:30	0.007
11/1/2018	11:58:30	0.007
11/1/2018	11:59:30	0.007
11/1/2018	12:00:30	0.007
11/1/2018	12:01:30	0.007
11/1/2018	12:02:30	0.007
11/1/2018	12:03:30	0.007
11/1/2018	12:04:30	0.006
11/1/2018	12:05:30	0.006
11/1/2018	12:06:30	0.007
11/1/2018	12:07:30	0.007
11/1/2018	12:08:30	0.007
11/1/2018	12:09:30	0.006
11/1/2018	12:10:30	0.007
11/1/2018	12:11:30	0.006
11/1/2018	12:12:30	0.006
11/1/2018	12:13:30	0.006
11/1/2018	12:14:30	0.006
11/1/2018	12:15:30	0.006
11/1/2018	12:16:30	0.006
11/1/2018	12:17:30	0.006
11/1/2018	12:18:30	0.006
11/1/2018	12:19:30	0.006
11/1/2018	12:20:30	0.007
11/1/2018	12:21:30	0.006
11/1/2018	12:22:30	0.006
11/1/2018	12:23:30	0.006
11/1/2018	12:24:30	0.006
11/1/2018	12:25:30	0.006
11/1/2018	12:26:30	0.006
11/1/2018	12:27:30	0.006
11/1/2018	12:28:30	0.006
11/1/2018	12:29:30	0.006
11/1/2018	12:30:30	0.006
11/1/2018	12:31:30	0.006
11/1/2018	12:32:30	0.006
11/1/2018	12:33:30	0.006
11/1/2018	12:34:30	0.006
11/1/2018	12:35:30	0.006
11/1/2018	12:36:30	0.006
11/1/2018	12:37:30	0.006
11/1/2018	12:38:30	0.006
11/1/2018	12:39:30	0.006

11/1/2018	12:40:30	0.006
11/1/2018	12:41:30	0.005
11/1/2018	12:42:30	0.006
11/1/2018	12:43:30	0.005
11/1/2018	12:44:30	0.005
11/1/2018	12:45:30	0.005
11/1/2018	12:46:30	0.006
11/1/2018	12:47:30	0.005
11/1/2018	12:48:30	0.005
11/1/2018	12:49:30	0.005
11/1/2018	12:50:30	0.005
11/1/2018	12:51:30	0.005
11/1/2018	12:52:30	0.005
11/1/2018	12:53:30	0.005
11/1/2018	12:54:30	0.005
11/1/2018	12:55:30	0.005
11/1/2018	12:56:30	0.006
11/1/2018	12:57:30	0.005
11/1/2018	12:58:30	0.005
11/1/2018	12:59:30	0.005
11/1/2018	13:00:30	0.006
11/1/2018	13:01:30	0.005
11/1/2018	13:02:30	0.005
11/1/2018	13:03:30	0.005
11/1/2018	13:04:30	0.005
11/1/2018	13:05:30	0.005
11/1/2018	13:06:30	0.005
11/1/2018	13:07:30	0.005
11/1/2018	13:08:30	0.005
11/1/2018	13:09:30	0.005
11/1/2018	13:10:30	0.005
11/1/2018	13:11:30	0.005
11/1/2018	13:12:30	0.005
11/1/2018	13:13:30	0.005
11/1/2018	13:14:30	0.005
11/1/2018	13:15:30	0.005
11/1/2018	13:16:30	0.005
11/1/2018	13:17:30	0.005
11/1/2018	13:18:30	0.004
11/1/2018	13:19:30	0.004
11/1/2018	13:20:30	0.004
11/1/2018	13:21:30	0.004
11/1/2018	13:22:30	0.004
11/1/2018	13:23:30	0.004
11/1/2018	13:24:30	0.004
11/1/2018	13:25:30	0.003
11/1/2018	13:26:30	0.003

11/1/2018	13:27:30	0.003
11/1/2018	13:28:30	0.003
11/1/2018	13:29:30	0.003
11/1/2018	13:30:30	0.003
11/1/2018	13:31:30	0.003
11/1/2018	13:32:30	0.003
11/1/2018	13:33:30	0.003
11/1/2018	13:34:30	0.003
11/1/2018	13:35:30	0.003
11/1/2018	13:36:30	0.003
11/1/2018	13:37:30	0.003
11/1/2018	13:38:30	0.003
11/1/2018	13:39:30	0.003
11/1/2018	13:40:30	0.003
11/1/2018	13:41:30	0.003
11/1/2018	13:42:30	0.003
11/1/2018	13:43:30	0.004
11/1/2018	13:44:30	0.003
11/1/2018	13:45:30	0.005
11/1/2018	13:46:30	0.003
11/1/2018	13:47:30	0.113
11/1/2018	13:48:30	0.004
11/1/2018	13:49:30	0.003
11/1/2018	13:50:30	0.003
11/1/2018	13:51:30	0.003
11/1/2018	13:52:30	0.003
11/1/2018	13:53:30	0.003
11/1/2018	13:54:30	0.003
11/1/2018	13:55:30	0.003
11/1/2018	13:56:30	0.003
11/1/2018	13:57:30	0.003
11/1/2018	13:58:30	0.003
11/1/2018	13:59:30	0.003
11/1/2018	14:00:30	0.003
11/1/2018	14:01:30	0.003
11/1/2018	14:02:30	0.003
11/1/2018	14:03:30	0.003
11/1/2018	14:04:30	0.003
11/1/2018	14:05:30	0.004
11/1/2018	14:06:30	0.003
11/1/2018	14:07:30	0.003
11/1/2018	14:08:30	0.003
11/1/2018	14:09:30	0.003
11/1/2018	14:10:30	0.003
11/1/2018	14:11:30	0.004
11/1/2018	14:12:30	0.003
11/1/2018	14:13:30	0.003

11/1/2018	14:14:30	0.003
11/1/2018	14:15:30	0.003
11/1/2018	14:16:30	0.003
11/1/2018	14:17:30	0.003
11/1/2018	14:18:30	0.003
11/1/2018	14:19:30	0.054
11/1/2018	14:20:30	0.003
11/1/2018	14:21:30	0.003
11/1/2018	14:22:30	0.003
11/1/2018	14:23:30	0.003
11/1/2018	14:24:30	0.003
11/1/2018	14:25:30	0.003
11/1/2018	14:26:30	0.003
11/1/2018	14:27:30	0.003
11/1/2018	14:28:30	0.003
11/1/2018	14:29:30	0.002
11/1/2018	14:30:30	0.003
11/1/2018	14:31:30	0.003
11/1/2018	14:32:30	0.002
11/1/2018	14:33:30	0.002
11/1/2018	14:34:30	0.002
11/1/2018	14:35:30	0.002
11/1/2018	14:36:30	0.002
11/1/2018	14:37:30	0.002
11/1/2018	14:38:30	0.002
11/1/2018	14:39:30	0.002
11/1/2018	14:40:30	0.003
11/1/2018	14:41:30	0.002
11/1/2018	14:42:30	0.002
11/1/2018	14:43:30	0.002
11/1/2018	14:44:30	0.004
11/1/2018	14:45:30	0.003
11/1/2018	14:46:30	0.002
11/1/2018	14:47:30	0.002
11/1/2018	14:48:30	0.002
11/1/2018	14:49:30	0.002

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530133202
Test ID:	8
Test Abbreviation:	MANUAL_008
Start Date:	11/2/2018
Start Time:	8:14:39
Duration (dd:hh:mm:ss):	0:03:27:00
Log Interval (mm:ss):	1:00
Number of points:	207

Notes:

Statistics	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.006
	Minimum:	0.002
	Time of Minimum:	8:16:39
	Date of Minimum:	11/2/2018
	Maximum:	0.245
	Time of Maximum:	11:15:39
	Date of Maximum:	11/2/2018

Calibration	Sensor:	AEROSOL
	Cal. date	8/7/2013

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
11/2/2018	8:15:39	0.004
11/2/2018	8:16:39	0.002
11/2/2018	8:17:39	0.003
11/2/2018	8:18:39	0.003
11/2/2018	8:19:39	0.004
11/2/2018	8:20:39	0.004
11/2/2018	8:21:39	0.004
11/2/2018	8:22:39	0.003
11/2/2018	8:23:39	0.003
11/2/2018	8:24:39	0.003
11/2/2018	8:25:39	0.003
11/2/2018	8:26:39	0.003
11/2/2018	8:27:39	0.004
11/2/2018	8:28:39	0.004
11/2/2018	8:29:39	0.004
11/2/2018	8:30:39	0.004
11/2/2018	8:31:39	0.004
11/2/2018	8:32:39	0.004
11/2/2018	8:33:39	0.011
11/2/2018	8:34:39	0.007
11/2/2018	8:35:39	0.004
11/2/2018	8:36:39	0.003
11/2/2018	8:37:39	0.004
11/2/2018	8:38:39	0.004
11/2/2018	8:39:39	0.004
11/2/2018	8:40:39	0.004
11/2/2018	8:41:39	0.004
11/2/2018	8:42:39	0.004
11/2/2018	8:43:39	0.004
11/2/2018	8:44:39	0.004

11/2/2018	8:45:39	0.004
11/2/2018	8:46:39	0.004
11/2/2018	8:47:39	0.004
11/2/2018	8:48:39	0.004
11/2/2018	8:49:39	0.004
11/2/2018	8:50:39	0.004
11/2/2018	8:51:39	0.004
11/2/2018	8:52:39	0.004
11/2/2018	8:53:39	0.005
11/2/2018	8:54:39	0.004
11/2/2018	8:55:39	0.004
11/2/2018	8:56:39	0.004
11/2/2018	8:57:39	0.005
11/2/2018	8:58:39	0.005
11/2/2018	8:59:39	0.005
11/2/2018	9:00:39	0.005
11/2/2018	9:01:39	0.006
11/2/2018	9:02:39	0.005
11/2/2018	9:03:39	0.006
11/2/2018	9:04:39	0.011
11/2/2018	9:05:39	0.01
11/2/2018	9:06:39	0.008
11/2/2018	9:07:39	0.007
11/2/2018	9:08:39	0.007
11/2/2018	9:09:39	0.007
11/2/2018	9:10:39	0.007
11/2/2018	9:11:39	0.006
11/2/2018	9:12:39	0.006
11/2/2018	9:13:39	0.007
11/2/2018	9:14:39	0.007
11/2/2018	9:15:39	0.006
11/2/2018	9:16:39	0.006
11/2/2018	9:17:39	0.006
11/2/2018	9:18:39	0.006
11/2/2018	9:19:39	0.006
11/2/2018	9:20:39	0.007
11/2/2018	9:21:39	0.006
11/2/2018	9:22:39	0.005
11/2/2018	9:23:39	0.005
11/2/2018	9:24:39	0.005
11/2/2018	9:25:39	0.005
11/2/2018	9:26:39	0.006
11/2/2018	9:27:39	0.006
11/2/2018	9:28:39	0.006
11/2/2018	9:29:39	0.005
11/2/2018	9:30:39	0.005
11/2/2018	9:31:39	0.005

11/2/2018	9:32:39	0.005
11/2/2018	9:33:39	0.005
11/2/2018	9:34:39	0.005
11/2/2018	9:35:39	0.005
11/2/2018	9:36:39	0.005
11/2/2018	9:37:39	0.005
11/2/2018	9:38:39	0.005
11/2/2018	9:39:39	0.005
11/2/2018	9:40:39	0.005
11/2/2018	9:41:39	0.006
11/2/2018	9:42:39	0.006
11/2/2018	9:43:39	0.005
11/2/2018	9:44:39	0.005
11/2/2018	9:45:39	0.005
11/2/2018	9:46:39	0.005
11/2/2018	9:47:39	0.005
11/2/2018	9:48:39	0.005
11/2/2018	9:49:39	0.004
11/2/2018	9:50:39	0.005
11/2/2018	9:51:39	0.004
11/2/2018	9:52:39	0.004
11/2/2018	9:53:39	0.007
11/2/2018	9:54:39	0.02
11/2/2018	9:55:39	0.026
11/2/2018	9:56:39	0.008
11/2/2018	9:57:39	0.004
11/2/2018	9:58:39	0.004
11/2/2018	9:59:39	0.004
11/2/2018	10:00:39	0.004
11/2/2018	10:01:39	0.004
11/2/2018	10:02:39	0.003
11/2/2018	10:03:39	0.003
11/2/2018	10:04:39	0.003
11/2/2018	10:05:39	0.003
11/2/2018	10:06:39	0.003
11/2/2018	10:07:39	0.004
11/2/2018	10:08:39	0.003
11/2/2018	10:09:39	0.003
11/2/2018	10:10:39	0.003
11/2/2018	10:11:39	0.004
11/2/2018	10:12:39	0.003
11/2/2018	10:13:39	0.003
11/2/2018	10:14:39	0.003
11/2/2018	10:15:39	0.003
11/2/2018	10:16:39	0.003
11/2/2018	10:17:39	0.003
11/2/2018	10:18:39	0.003

11/2/2018	10:19:39	0.003
11/2/2018	10:20:39	0.003
11/2/2018	10:21:39	0.003
11/2/2018	10:22:39	0.003
11/2/2018	10:23:39	0.005
11/2/2018	10:24:39	0.004
11/2/2018	10:25:39	0.004
11/2/2018	10:26:39	0.004
11/2/2018	10:27:39	0.004
11/2/2018	10:28:39	0.004
11/2/2018	10:29:39	0.004
11/2/2018	10:30:39	0.004
11/2/2018	10:31:39	0.004
11/2/2018	10:32:39	0.006
11/2/2018	10:33:39	0.006
11/2/2018	10:34:39	0.004
11/2/2018	10:35:39	0.004
11/2/2018	10:36:39	0.005
11/2/2018	10:37:39	0.005
11/2/2018	10:38:39	0.005
11/2/2018	10:39:39	0.003
11/2/2018	10:40:39	0.003
11/2/2018	10:41:39	0.003
11/2/2018	10:42:39	0.004
11/2/2018	10:43:39	0.003
11/2/2018	10:44:39	0.003
11/2/2018	10:45:39	0.003
11/2/2018	10:46:39	0.003
11/2/2018	10:47:39	0.003
11/2/2018	10:48:39	0.003
11/2/2018	10:49:39	0.003
11/2/2018	10:50:39	0.003
11/2/2018	10:51:39	0.004
11/2/2018	10:52:39	0.005
11/2/2018	10:53:39	0.003
11/2/2018	10:54:39	0.003
11/2/2018	10:55:39	0.004
11/2/2018	10:56:39	0.004
11/2/2018	10:57:39	0.003
11/2/2018	10:58:39	0.003
11/2/2018	10:59:39	0.004
11/2/2018	11:00:39	0.004
11/2/2018	11:01:39	0.004
11/2/2018	11:02:39	0.004
11/2/2018	11:03:39	0.005
11/2/2018	11:04:39	0.005
11/2/2018	11:05:39	0.004

11/2/2018	11:06:39	0.004
11/2/2018	11:07:39	0.004
11/2/2018	11:08:39	0.004
11/2/2018	11:09:39	0.004
11/2/2018	11:10:39	0.004
11/2/2018	11:11:39	0.004
11/2/2018	11:12:39	0.004
11/2/2018	11:13:39	0.004
11/2/2018	11:14:39	0.005
11/2/2018	11:15:39	0.245
11/2/2018	11:16:39	0.054
11/2/2018	11:17:39	0.006
11/2/2018	11:18:39	0.005
11/2/2018	11:19:39	0.006
11/2/2018	11:20:39	0.009
11/2/2018	11:21:39	0.005
11/2/2018	11:22:39	0.005
11/2/2018	11:23:39	0.005
11/2/2018	11:24:39	0.005
11/2/2018	11:25:39	0.006
11/2/2018	11:26:39	0.006
11/2/2018	11:27:39	0.006
11/2/2018	11:28:39	0.006
11/2/2018	11:29:39	0.005
11/2/2018	11:30:39	0.006
11/2/2018	11:31:39	0.006
11/2/2018	11:32:39	0.006
11/2/2018	11:33:39	0.006
11/2/2018	11:34:39	0.005
11/2/2018	11:35:39	0.005
11/2/2018	11:36:39	0.006
11/2/2018	11:37:39	0.008
11/2/2018	11:38:39	0.005
11/2/2018	11:39:39	0.005
11/2/2018	11:40:39	0.006
11/2/2018	11:41:39	0.005

Model:	DustTrak II
Model Number:	8530
Serial Number:	8530133202
Test ID:	9
Test Abbreviation:	MANUAL_009
Start Date:	11/5/2018
Start Time:	8:37:19
Duration (dd:hh:mm:ss):	0:06:34:00
Log Interval (mm:ss):	1:00
Number of points:	394

Notes:

Statistics	Channel:	AEROSOL
	Units:	mg/m^3
	Average:	0.01
	Minimum:	0.006
	Time of Minimum:	14:41:19
	Date of Minimum:	11/5/2018
	Maximum:	0.148
	Time of Maximum:	8:38:19
	Date of Maximum:	11/5/2018

Calibration	Sensor:	AEROSOL
	Cal. date	8/7/2013

Date	Time	AEROSOL
MM/dd/yyyy	hh:mm:ss	mg/m^3
11/5/2018	8:38:19	0.148
11/5/2018	8:39:19	0.014
11/5/2018	8:40:19	0.008
11/5/2018	8:41:19	0.008
11/5/2018	8:42:19	0.008
11/5/2018	8:43:19	0.009
11/5/2018	8:44:19	0.008
11/5/2018	8:45:19	0.008
11/5/2018	8:46:19	0.008
11/5/2018	8:47:19	0.008
11/5/2018	8:48:19	0.008
11/5/2018	8:49:19	0.008
11/5/2018	8:50:19	0.008
11/5/2018	8:51:19	0.008
11/5/2018	8:52:19	0.008
11/5/2018	8:53:19	0.008
11/5/2018	8:54:19	0.008
11/5/2018	8:55:19	0.008
11/5/2018	8:56:19	0.008
11/5/2018	8:57:19	0.008
11/5/2018	8:58:19	0.009
11/5/2018	8:59:19	0.01
11/5/2018	9:00:19	0.009
11/5/2018	9:01:19	0.009
11/5/2018	9:02:19	0.009
11/5/2018	9:03:19	0.009
11/5/2018	9:04:19	0.008
11/5/2018	9:05:19	0.009
11/5/2018	9:06:19	0.009
11/5/2018	9:07:19	0.009

11/5/2018	9:08:19	0.009
11/5/2018	9:09:19	0.01
11/5/2018	9:10:19	0.01
11/5/2018	9:11:19	0.01
11/5/2018	9:12:19	0.01
11/5/2018	9:13:19	0.01
11/5/2018	9:14:19	0.01
11/5/2018	9:15:19	0.009
11/5/2018	9:16:19	0.009
11/5/2018	9:17:19	0.009
11/5/2018	9:18:19	0.009
11/5/2018	9:19:19	0.01
11/5/2018	9:20:19	0.01
11/5/2018	9:21:19	0.01
11/5/2018	9:22:19	0.011
11/5/2018	9:23:19	0.011
11/5/2018	9:24:19	0.011
11/5/2018	9:25:19	0.011
11/5/2018	9:26:19	0.011
11/5/2018	9:27:19	0.011
11/5/2018	9:28:19	0.01
11/5/2018	9:29:19	0.011
11/5/2018	9:30:19	0.01
11/5/2018	9:31:19	0.01
11/5/2018	9:32:19	0.01
11/5/2018	9:33:19	0.01
11/5/2018	9:34:19	0.01
11/5/2018	9:35:19	0.01
11/5/2018	9:36:19	0.01
11/5/2018	9:37:19	0.01
11/5/2018	9:38:19	0.01
11/5/2018	9:39:19	0.011
11/5/2018	9:40:19	0.011
11/5/2018	9:41:19	0.011
11/5/2018	9:42:19	0.011
11/5/2018	9:43:19	0.011
11/5/2018	9:44:19	0.011
11/5/2018	9:45:19	0.011
11/5/2018	9:46:19	0.013
11/5/2018	9:47:19	0.011
11/5/2018	9:48:19	0.011
11/5/2018	9:49:19	0.011
11/5/2018	9:50:19	0.011
11/5/2018	9:51:19	0.011
11/5/2018	9:52:19	0.011
11/5/2018	9:53:19	0.011
11/5/2018	9:54:19	0.011

11/5/2018	9:55:19	0.011
11/5/2018	9:56:19	0.011
11/5/2018	9:57:19	0.011
11/5/2018	9:58:19	0.011
11/5/2018	9:59:19	0.012
11/5/2018	10:00:19	0.011
11/5/2018	10:01:19	0.011
11/5/2018	10:02:19	0.01
11/5/2018	10:03:19	0.011
11/5/2018	10:04:19	0.011
11/5/2018	10:05:19	0.012
11/5/2018	10:06:19	0.011
11/5/2018	10:07:19	0.011
11/5/2018	10:08:19	0.011
11/5/2018	10:09:19	0.011
11/5/2018	10:10:19	0.011
11/5/2018	10:11:19	0.012
11/5/2018	10:12:19	0.011
11/5/2018	10:13:19	0.011
11/5/2018	10:14:19	0.011
11/5/2018	10:15:19	0.011
11/5/2018	10:16:19	0.011
11/5/2018	10:17:19	0.011
11/5/2018	10:18:19	0.011
11/5/2018	10:19:19	0.011
11/5/2018	10:20:19	0.011
11/5/2018	10:21:19	0.011
11/5/2018	10:22:19	0.01
11/5/2018	10:23:19	0.011
11/5/2018	10:24:19	0.011
11/5/2018	10:25:19	0.01
11/5/2018	10:26:19	0.01
11/5/2018	10:27:19	0.011
11/5/2018	10:28:19	0.011
11/5/2018	10:29:19	0.011
11/5/2018	10:30:19	0.011
11/5/2018	10:31:19	0.011
11/5/2018	10:32:19	0.011
11/5/2018	10:33:19	0.011
11/5/2018	10:34:19	0.011
11/5/2018	10:35:19	0.011
11/5/2018	10:36:19	0.011
11/5/2018	10:37:19	0.011
11/5/2018	10:38:19	0.011
11/5/2018	10:39:19	0.011
11/5/2018	10:40:19	0.01
11/5/2018	10:41:19	0.01

11/5/2018	10:42:19	0.011
11/5/2018	10:43:19	0.01
11/5/2018	10:44:19	0.011
11/5/2018	10:45:19	0.011
11/5/2018	10:46:19	0.015
11/5/2018	10:47:19	0.011
11/5/2018	10:48:19	0.01
11/5/2018	10:49:19	0.01
11/5/2018	10:50:19	0.01
11/5/2018	10:51:19	0.012
11/5/2018	10:52:19	0.013
11/5/2018	10:53:19	0.014
11/5/2018	10:54:19	0.014
11/5/2018	10:55:19	0.01
11/5/2018	10:56:19	0.017
11/5/2018	10:57:19	0.027
11/5/2018	10:58:19	0.017
11/5/2018	10:59:19	0.014
11/5/2018	11:00:19	0.011
11/5/2018	11:01:19	0.01
11/5/2018	11:02:19	0.011
11/5/2018	11:03:19	0.01
11/5/2018	11:04:19	0.01
11/5/2018	11:05:19	0.009
11/5/2018	11:06:19	0.01
11/5/2018	11:07:19	0.009
11/5/2018	11:08:19	0.009
11/5/2018	11:09:19	0.009
11/5/2018	11:10:19	0.01
11/5/2018	11:11:19	0.009
11/5/2018	11:12:19	0.01
11/5/2018	11:13:19	0.01
11/5/2018	11:14:19	0.01
11/5/2018	11:15:19	0.012
11/5/2018	11:16:19	0.01
11/5/2018	11:17:19	0.01
11/5/2018	11:18:19	0.013
11/5/2018	11:19:19	0.01
11/5/2018	11:20:19	0.01
11/5/2018	11:21:19	0.01
11/5/2018	11:22:19	0.01
11/5/2018	11:23:19	0.01
11/5/2018	11:24:19	0.01
11/5/2018	11:25:19	0.01
11/5/2018	11:26:19	0.01
11/5/2018	11:27:19	0.01
11/5/2018	11:28:19	0.011

11/5/2018	11:29:19	0.01
11/5/2018	11:30:19	0.01
11/5/2018	11:31:19	0.01
11/5/2018	11:32:19	0.011
11/5/2018	11:33:19	0.01
11/5/2018	11:34:19	0.011
11/5/2018	11:35:19	0.01
11/5/2018	11:36:19	0.011
11/5/2018	11:37:19	0.01
11/5/2018	11:38:19	0.011
11/5/2018	11:39:19	0.012
11/5/2018	11:40:19	0.012
11/5/2018	11:41:19	0.011
11/5/2018	11:42:19	0.01
11/5/2018	11:43:19	0.011
11/5/2018	11:44:19	0.011
11/5/2018	11:45:19	0.011
11/5/2018	11:46:19	0.011
11/5/2018	11:47:19	0.011
11/5/2018	11:48:19	0.011
11/5/2018	11:49:19	0.011
11/5/2018	11:50:19	0.011
11/5/2018	11:51:19	0.01
11/5/2018	11:52:19	0.011
11/5/2018	11:53:19	0.011
11/5/2018	11:54:19	0.011
11/5/2018	11:55:19	0.011
11/5/2018	11:56:19	0.012
11/5/2018	11:57:19	0.011
11/5/2018	11:58:19	0.011
11/5/2018	11:59:19	0.011
11/5/2018	12:00:19	0.01
11/5/2018	12:01:19	0.011
11/5/2018	12:02:19	0.011
11/5/2018	12:03:19	0.01
11/5/2018	12:04:19	0.011
11/5/2018	12:05:19	0.011
11/5/2018	12:06:19	0.011
11/5/2018	12:07:19	0.011
11/5/2018	12:08:19	0.011
11/5/2018	12:09:19	0.011
11/5/2018	12:10:19	0.012
11/5/2018	12:11:19	0.012
11/5/2018	12:12:19	0.013
11/5/2018	12:13:19	0.011
11/5/2018	12:14:19	0.011
11/5/2018	12:15:19	0.011

11/5/2018	12:16:19	0.011
11/5/2018	12:17:19	0.011
11/5/2018	12:18:19	0.01
11/5/2018	12:19:19	0.011
11/5/2018	12:20:19	0.01
11/5/2018	12:21:19	0.01
11/5/2018	12:22:19	0.01
11/5/2018	12:23:19	0.01
11/5/2018	12:24:19	0.01
11/5/2018	12:25:19	0.01
11/5/2018	12:26:19	0.01
11/5/2018	12:27:19	0.01
11/5/2018	12:28:19	0.01
11/5/2018	12:29:19	0.01
11/5/2018	12:30:19	0.01
11/5/2018	12:31:19	0.01
11/5/2018	12:32:19	0.01
11/5/2018	12:33:19	0.01
11/5/2018	12:34:19	0.01
11/5/2018	12:35:19	0.01
11/5/2018	12:36:19	0.011
11/5/2018	12:37:19	0.011
11/5/2018	12:38:19	0.012
11/5/2018	12:39:19	0.01
11/5/2018	12:40:19	0.011
11/5/2018	12:41:19	0.011
11/5/2018	12:42:19	0.012
11/5/2018	12:43:19	0.01
11/5/2018	12:44:19	0.01
11/5/2018	12:45:19	0.01
11/5/2018	12:46:19	0.011
11/5/2018	12:47:19	0.011
11/5/2018	12:48:19	0.01
11/5/2018	12:49:19	0.011
11/5/2018	12:50:19	0.011
11/5/2018	12:51:19	0.011
11/5/2018	12:52:19	0.011
11/5/2018	12:53:19	0.011
11/5/2018	12:54:19	0.011
11/5/2018	12:55:19	0.011
11/5/2018	12:56:19	0.011
11/5/2018	12:57:19	0.011
11/5/2018	12:58:19	0.011
11/5/2018	12:59:19	0.011
11/5/2018	13:00:19	0.012
11/5/2018	13:01:19	0.011
11/5/2018	13:02:19	0.01

11/5/2018	13:03:19	0.01
11/5/2018	13:04:19	0.01
11/5/2018	13:05:19	0.01
11/5/2018	13:06:19	0.01
11/5/2018	13:07:19	0.01
11/5/2018	13:08:19	0.01
11/5/2018	13:09:19	0.011
11/5/2018	13:10:19	0.014
11/5/2018	13:11:19	0.013
11/5/2018	13:12:19	0.011
11/5/2018	13:13:19	0.012
11/5/2018	13:14:19	0.01
11/5/2018	13:15:19	0.01
11/5/2018	13:16:19	0.01
11/5/2018	13:17:19	0.01
11/5/2018	13:18:19	0.01
11/5/2018	13:19:19	0.01
11/5/2018	13:20:19	0.01
11/5/2018	13:21:19	0.01
11/5/2018	13:22:19	0.01
11/5/2018	13:23:19	0.01
11/5/2018	13:24:19	0.009
11/5/2018	13:25:19	0.009
11/5/2018	13:26:19	0.009
11/5/2018	13:27:19	0.01
11/5/2018	13:28:19	0.009
11/5/2018	13:29:19	0.009
11/5/2018	13:30:19	0.009
11/5/2018	13:31:19	0.009
11/5/2018	13:32:19	0.011
11/5/2018	13:33:19	0.009
11/5/2018	13:34:19	0.009
11/5/2018	13:35:19	0.009
11/5/2018	13:36:19	0.009
11/5/2018	13:37:19	0.009
11/5/2018	13:38:19	0.009
11/5/2018	13:39:19	0.009
11/5/2018	13:40:19	0.009
11/5/2018	13:41:19	0.009
11/5/2018	13:42:19	0.014
11/5/2018	13:43:19	0.011
11/5/2018	13:44:19	0.009
11/5/2018	13:45:19	0.009
11/5/2018	13:46:19	0.009
11/5/2018	13:47:19	0.008
11/5/2018	13:48:19	0.008
11/5/2018	13:49:19	0.008

11/5/2018	13:50:19	0.008
11/5/2018	13:51:19	0.008
11/5/2018	13:52:19	0.008
11/5/2018	13:53:19	0.008
11/5/2018	13:54:19	0.008
11/5/2018	13:55:19	0.01
11/5/2018	13:56:19	0.013
11/5/2018	13:57:19	0.008
11/5/2018	13:58:19	0.008
11/5/2018	13:59:19	0.008
11/5/2018	14:00:19	0.007
11/5/2018	14:01:19	0.008
11/5/2018	14:02:19	0.007
11/5/2018	14:03:19	0.007
11/5/2018	14:04:19	0.008
11/5/2018	14:05:19	0.007
11/5/2018	14:06:19	0.007
11/5/2018	14:07:19	0.007
11/5/2018	14:08:19	0.007
11/5/2018	14:09:19	0.007
11/5/2018	14:10:19	0.007
11/5/2018	14:11:19	0.007
11/5/2018	14:12:19	0.007
11/5/2018	14:13:19	0.008
11/5/2018	14:14:19	0.007
11/5/2018	14:15:19	0.007
11/5/2018	14:16:19	0.007
11/5/2018	14:17:19	0.007
11/5/2018	14:18:19	0.007
11/5/2018	14:19:19	0.008
11/5/2018	14:20:19	0.008
11/5/2018	14:21:19	0.008
11/5/2018	14:22:19	0.008
11/5/2018	14:23:19	0.008
11/5/2018	14:24:19	0.009
11/5/2018	14:25:19	0.029
11/5/2018	14:26:19	0.008
11/5/2018	14:27:19	0.008
11/5/2018	14:28:19	0.007
11/5/2018	14:29:19	0.008
11/5/2018	14:30:19	0.008
11/5/2018	14:31:19	0.008
11/5/2018	14:32:19	0.007
11/5/2018	14:33:19	0.007
11/5/2018	14:34:19	0.007
11/5/2018	14:35:19	0.007
11/5/2018	14:36:19	0.007

11/5/2018	14:37:19	0.007
11/5/2018	14:38:19	0.007
11/5/2018	14:39:19	0.007
11/5/2018	14:40:19	0.007
11/5/2018	14:41:19	0.006
11/5/2018	14:42:19	0.007
11/5/2018	14:43:19	0.006
11/5/2018	14:44:19	0.008
11/5/2018	14:45:19	0.044
11/5/2018	14:46:19	0.009
11/5/2018	14:47:19	0.007
11/5/2018	14:48:19	0.006
11/5/2018	14:49:19	0.006
11/5/2018	14:50:19	0.014
11/5/2018	14:51:19	0.01
11/5/2018	14:52:19	0.007
11/5/2018	14:53:19	0.007
11/5/2018	14:54:19	0.008
11/5/2018	14:55:19	0.01
11/5/2018	14:56:19	0.014
11/5/2018	14:57:19	0.007
11/5/2018	14:58:19	0.006
11/5/2018	14:59:19	0.007
11/5/2018	15:00:19	0.007
11/5/2018	15:01:19	0.007
11/5/2018	15:02:19	0.006
11/5/2018	15:03:19	0.007
11/5/2018	15:04:19	0.007
11/5/2018	15:05:19	0.007
11/5/2018	15:06:19	0.007
11/5/2018	15:07:19	0.007
11/5/2018	15:08:19	0.007
11/5/2018	15:09:19	0.007
11/5/2018	15:10:19	0.007
11/5/2018	15:11:19	0.007

TrakPro Version 4.70 ASCII Data File

Model:,DustTrak II
Model Number:,8530
Serial Number:,8530121427
Test ID:,003
Test Abbreviation:,MANUAL_003
Start Date:,08/08/2019
Start Time:,09:08:00
Duration (dd:hh:mm:ss):,0:02:21:00
Log Interval (mm:ss):,01:00
Number of points:,141
Notes:,

Statistics,Channel:,AEROSOL
,Units:,mg/m^3
,Average:,0.014
,Minimum:,-0.024
,Time of Minimum:,09:29:00
,Date of Minimum:,08/08/2019
,Maximum:,0.025
,Time of Maximum:,10:01:00
,Date of Maximum:,08/08/2019

Calibration,Sensor:,AEROSOL
,Cal. date,08/29/2018

Date,Time,AEROSOL
MM/dd/yyyy,hh:mm:ss,mg/m^3
08/08/2019,09:09:00,-0.020
08/08/2019,09:10:00,-0.021
08/08/2019,09:11:00,-0.021
08/08/2019,09:12:00,-0.021
08/08/2019,09:13:00,-0.022
08/08/2019,09:14:00,-0.022
08/08/2019,09:15:00,-0.021
08/08/2019,09:16:00,-0.021
08/08/2019,09:17:00,-0.021
08/08/2019,09:18:00,-0.022
08/08/2019,09:19:00,-0.022
08/08/2019,09:20:00,-0.021
08/08/2019,09:21:00,-0.022
08/08/2019,09:22:00,-0.023
08/08/2019,09:23:00,-0.023
08/08/2019,09:24:00,-0.022
08/08/2019,09:25:00,-0.022
08/08/2019,09:26:00,-0.022
08/08/2019,09:27:00,-0.023

08/08/2019,09:28:00,-0.023
08/08/2019,09:29:00,-0.024
08/08/2019,09:30:00,0.014
08/08/2019,09:31:00,0.021
08/08/2019,09:32:00,0.021
08/08/2019,09:33:00,0.021
08/08/2019,09:34:00,0.021
08/08/2019,09:35:00,0.021
08/08/2019,09:36:00,0.021
08/08/2019,09:37:00,0.020
08/08/2019,09:38:00,0.019
08/08/2019,09:39:00,0.020
08/08/2019,09:40:00,0.019
08/08/2019,09:41:00,0.019
08/08/2019,09:42:00,0.019
08/08/2019,09:43:00,0.019
08/08/2019,09:44:00,0.019
08/08/2019,09:45:00,0.019
08/08/2019,09:46:00,0.019
08/08/2019,09:47:00,0.019
08/08/2019,09:48:00,0.019
08/08/2019,09:49:00,0.020
08/08/2019,09:50:00,0.020
08/08/2019,09:51:00,0.019
08/08/2019,09:52:00,0.019
08/08/2019,09:53:00,0.020
08/08/2019,09:54:00,0.019
08/08/2019,09:55:00,0.021
08/08/2019,09:56:00,0.019
08/08/2019,09:57:00,0.020
08/08/2019,09:58:00,0.020
08/08/2019,09:59:00,0.020
08/08/2019,10:00:00,0.020
08/08/2019,10:01:00,0.025
08/08/2019,10:02:00,0.020
08/08/2019,10:03:00,0.020
08/08/2019,10:04:00,0.020
08/08/2019,10:05:00,0.020
08/08/2019,10:06:00,0.020
08/08/2019,10:07:00,0.020
08/08/2019,10:08:00,0.020
08/08/2019,10:09:00,0.020
08/08/2019,10:10:00,0.020
08/08/2019,10:11:00,0.021
08/08/2019,10:12:00,0.021
08/08/2019,10:13:00,0.020
08/08/2019,10:14:00,0.020
08/08/2019,10:15:00,0.020

08/08/2019,10:16:00,0.020
08/08/2019,10:17:00,0.020
08/08/2019,10:18:00,0.021
08/08/2019,10:19:00,0.020
08/08/2019,10:20:00,0.021
08/08/2019,10:21:00,0.020
08/08/2019,10:22:00,0.021
08/08/2019,10:23:00,0.020
08/08/2019,10:24:00,0.020
08/08/2019,10:25:00,0.020
08/08/2019,10:26:00,0.020
08/08/2019,10:27:00,0.020
08/08/2019,10:28:00,0.020
08/08/2019,10:29:00,0.020
08/08/2019,10:30:00,0.020
08/08/2019,10:31:00,0.020
08/08/2019,10:32:00,0.020
08/08/2019,10:33:00,0.020
08/08/2019,10:34:00,0.020
08/08/2019,10:35:00,0.020
08/08/2019,10:36:00,0.021
08/08/2019,10:37:00,0.020
08/08/2019,10:38:00,0.021
08/08/2019,10:39:00,0.020
08/08/2019,10:40:00,0.021
08/08/2019,10:41:00,0.021
08/08/2019,10:42:00,0.021
08/08/2019,10:43:00,0.022
08/08/2019,10:44:00,0.021
08/08/2019,10:45:00,0.021
08/08/2019,10:46:00,0.021
08/08/2019,10:47:00,0.021
08/08/2019,10:48:00,0.020
08/08/2019,10:49:00,0.020
08/08/2019,10:50:00,0.020
08/08/2019,10:51:00,0.021
08/08/2019,10:52:00,0.021
08/08/2019,10:53:00,0.021
08/08/2019,10:54:00,0.021
08/08/2019,10:55:00,0.021
08/08/2019,10:56:00,0.021
08/08/2019,10:57:00,0.021
08/08/2019,10:58:00,0.022
08/08/2019,10:59:00,0.021
08/08/2019,11:00:00,0.021
08/08/2019,11:01:00,0.020
08/08/2019,11:02:00,0.021
08/08/2019,11:03:00,0.021

08/08/2019,11:04:00,0.021
08/08/2019,11:05:00,0.021
08/08/2019,11:06:00,0.020
08/08/2019,11:07:00,0.021
08/08/2019,11:08:00,0.020
08/08/2019,11:09:00,0.020
08/08/2019,11:10:00,0.020
08/08/2019,11:11:00,0.021
08/08/2019,11:12:00,0.020
08/08/2019,11:13:00,0.020
08/08/2019,11:14:00,0.021
08/08/2019,11:15:00,0.020
08/08/2019,11:16:00,0.020
08/08/2019,11:17:00,0.020
08/08/2019,11:18:00,0.020
08/08/2019,11:19:00,0.020
08/08/2019,11:20:00,0.021
08/08/2019,11:21:00,0.020
08/08/2019,11:22:00,0.020
08/08/2019,11:23:00,0.020
08/08/2019,11:24:00,0.020
08/08/2019,11:25:00,0.020
08/08/2019,11:26:00,0.020
08/08/2019,11:27:00,0.020
08/08/2019,11:28:00,0.020
08/08/2019,11:29:00,0.020

Model:,DustTrak II
Model Number:,8530
Serial Number:,8530121427
Test ID:,004
Test Abbreviation:,MANUAL_004
Start Date:,08/08/2019
Start Time:,15:09:12
Duration (dd:hh:mm:ss):,0:00:26:00
Log Interval (mm:ss):,01:00
Number of points:,26
Notes:,

Statistics,Channel:,AEROSOL
,Units:,mg/m^3
,Average:,-0.023
,Minimum:,-0.024
,Time of Minimum:,15:18:12
,Date of Minimum:,08/08/2019
,Maximum:,-0.021
,Time of Maximum:,15:10:12
,Date of Maximum:,08/08/2019

```
Calibration,Sensor:,AEROSOL
,Cal. date,08/29/2018

Date,Time,AEROSOL
MM/dd/yyyy,hh:mm:ss,mg/m^3
08/08/2019,15:10:12,-0.021
08/08/2019,15:11:12,-0.022
08/08/2019,15:12:12,-0.022
08/08/2019,15:13:12,-0.022
08/08/2019,15:14:12,-0.022
08/08/2019,15:15:12,-0.022
08/08/2019,15:16:12,-0.023
08/08/2019,15:17:12,-0.023
08/08/2019,15:18:12,-0.024
08/08/2019,15:19:12,-0.023
08/08/2019,15:20:12,-0.022
08/08/2019,15:21:12,-0.021
08/08/2019,15:22:12,-0.023
08/08/2019,15:23:12,-0.022
08/08/2019,15:24:12,-0.022
08/08/2019,15:25:12,-0.023
08/08/2019,15:26:12,-0.024
08/08/2019,15:27:12,-0.023
08/08/2019,15:28:12,-0.023
08/08/2019,15:29:12,-0.023
08/08/2019,15:30:12,-0.024
08/08/2019,15:31:12,-0.024
08/08/2019,15:32:12,-0.023
08/08/2019,15:33:12,-0.024
08/08/2019,15:34:12,-0.023
08/08/2019,15:35:12,-0.024

Model:,DustTrak II
Model Number:,8530
Serial Number:,8530121427
Test ID:,005
Test Abbreviation:,MANUAL_005
Start Date:,08/08/2019
Start Time:,15:36:38
Duration (dd:hh:mm:ss):,0:00:43:00
Log Interval (mm:ss):,01:00
Number of points:,43
Notes:,

Statistics,Channel:,AEROSOL
,Units:,mg/m^3
,Average:,0.018
```

,Minimum:,0.016
,Time of Minimum:,15:46:38
,Date of Minimum:,08/08/2019
,Maximum:,0.065
,Time of Maximum:,15:37:38
,Date of Maximum:,08/08/2019

Calibration,Sensor:,AEROSOL
,Cal. date,08/29/2018

Date,Time,AEROSOL
MM/dd/yyyy,hh:mm:ss,mg/m^3
08/08/2019,15:37:38,0.065
08/08/2019,15:38:38,0.018
08/08/2019,15:39:38,0.018
08/08/2019,15:40:38,0.022
08/08/2019,15:41:38,0.017
08/08/2019,15:42:38,0.017
08/08/2019,15:43:38,0.018
08/08/2019,15:44:38,0.019
08/08/2019,15:45:38,0.017
08/08/2019,15:46:38,0.016
08/08/2019,15:47:38,0.017
08/08/2019,15:48:38,0.016
08/08/2019,15:49:38,0.017
08/08/2019,15:50:38,0.016
08/08/2019,15:51:38,0.016
08/08/2019,15:52:38,0.017
08/08/2019,15:53:38,0.016
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Model:,DustTrak II
Model Number:,8530
Serial Number:,8530121427
Test ID:,006
Test Abbreviation:,MANUAL_006
Start Date:,08/12/2019
Start Time:,08:05:27
Duration (dd:hh:mm:ss):,0:06:44:00
Log Interval (mm:ss):,01:00
Number of points:,404
Notes:,

Statistics,Channel:,AEROSOL
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,Time of Minimum:,10:01:27
,Date of Minimum:,08/12/2019
,Maximum:,0.039
,Time of Maximum:,08:07:27
,Date of Maximum:,08/12/2019

Calibration,Sensor:,AEROSOL
,Cal. date,08/29/2018

Date,Time,AEROSOL
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Model:,DustTrak II
Model Number:,8530
Serial Number:,8530121427
Test ID:,007
Test Abbreviation:,MANUAL_007
Start Date:,08/13/2019
Start Time:,06:50:04
Duration (dd:hh:mm:ss):,0:07:53:00
Log Interval (mm:ss):,01:00
Number of points:,473
Notes:,

Statistics,Channel:,AEROSOL
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,Minimum:,0.016
,Time of Minimum:,14:32:04
,Date of Minimum:,08/13/2019
,Maximum:,0.039
,Time of Maximum:,06:51:04
,Date of Maximum:,08/13/2019

Calibration,Sensor:,AEROSOL
,Cal. date,08/29/2018

Date,Time,AEROSOL
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Model Number:,8530
Serial Number:,8530121427
Test ID:,008
Test Abbreviation:,MANUAL_008
Start Date:,08/14/2019
Start Time:,07:24:57
Duration (dd:hh:mm:ss):,0:02:12:00
Log Interval (mm:ss):,01:00
Number of points:,132
Notes:,

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,Minimum:,0.007
,Time of Minimum:,08:57:57
,Date of Minimum:,08/14/2019
,Maximum:,0.009

,Time of Maximum:,07:25:57
,Date of Maximum:,08/14/2019

Calibration,Sensor:,AEROSOL
,Cal. date,08/29/2018

Date,Time,AEROSOL
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08/14/2019,09:35:57,0.007
08/14/2019,09:36:57,0.007

```
============================================================
19/08/14 06:15
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000(PGM-7320)
Unit SN 592-918228
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Pause in Menu Mode
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/14/2019 06:15:19
End     8/14/2019 06:15:23
Sample Period(s)        60
Number of Records       0
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030364W4
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      100.0
TWA Alarm       50.0
Measurement Gas Isobutylene
Calibration Time        8/8/2019 07:03

************************************************************
Datalog

0 record.

============================================================
19/08/14 06:21
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000(PGM-7320)
Unit SN 592-918228
```

Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 12345678
User ID 12345678

Begin 8/14/2019 06:21:14
End 8/14/2019 06:21:22
Sample Period(s) 60
Number of Records 0

Sensor PID(ppm)
Sensor SN S023030364W4
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 100.0
TWA Alarm 50.0
Measurement Gas Isobutylene
Calibration Time 8/14/2019 06:18

****

Datalog

0 record.

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19/08/14 06:31

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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-918228
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 12345678

User ID 12345678

Begin 8/14/2019 06:31:13
End 8/14/2019 08:44:22
Sample Period(s) 60
Number of Records 133

Sensor PID(ppm)
Sensor SN S023030364W4
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 100.0
TWA Alarm 50.0
Measurement Gas Isobutylene
Calibration Time 8/14/2019 06:18
Peak 0.0
Min 0.0
Average 0.0

****

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	
001	8/14/2019 06:32:13	0.0	0.0	0.0	
002	8/14/2019 06:33:13	0.0	0.0	0.0	
003	8/14/2019 06:34:13	0.0	0.0	0.0	
004	8/14/2019 06:35:13	0.0	0.0	0.0	
005	8/14/2019 06:36:13	0.0	0.0	0.0	
006	8/14/2019 06:37:13	0.0	0.0	0.0	
007	8/14/2019 06:38:13	0.0	0.0	0.0	
008	8/14/2019 06:39:13	0.0	0.0	0.0	
009	8/14/2019 06:40:13	0.0	0.0	0.0	
010	8/14/2019 06:41:13	0.0	0.0	0.0	
011	8/14/2019 06:42:13	0.0	0.0	0.0	
012	8/14/2019 06:43:13	0.0	0.0	0.0	
013	8/14/2019 06:44:13	0.0	0.0	0.0	
014	8/14/2019 06:45:13	0.0	0.0	0.0	
015	8/14/2019 06:46:13	0.0	0.0	0.0	
016	8/14/2019 06:47:13	0.0	0.0	0.0	
017	8/14/2019 06:48:13	0.0	0.0	0.0	
018	8/14/2019 06:49:13	0.0	0.0	0.0	
019	8/14/2019 06:50:13	0.0	0.0	0.0	
020	8/14/2019 06:51:13	0.0	0.0	0.0	
021	8/14/2019 06:52:13	0.0	0.0	0.0	

022	8/14/2019 06:53:13	0.0	0.0	0.0
023	8/14/2019 06:54:13	0.0	0.0	0.0
024	8/14/2019 06:55:13	0.0	0.0	0.0
025	8/14/2019 06:56:13	0.0	0.0	0.0
026	8/14/2019 06:57:13	0.0	0.0	0.0
027	8/14/2019 06:58:13	0.0	0.0	0.0
028	8/14/2019 06:59:13	0.0	0.0	0.0
029	8/14/2019 07:00:13	0.0	0.0	0.0
030	8/14/2019 07:01:13	0.0	0.0	0.0
031	8/14/2019 07:02:13	0.0	0.0	0.0
032	8/14/2019 07:03:13	0.0	0.0	0.0
033	8/14/2019 07:04:13	0.0	0.0	0.0
034	8/14/2019 07:05:13	0.0	0.0	0.0
035	8/14/2019 07:06:13	0.0	0.0	0.0
036	8/14/2019 07:07:13	0.0	0.0	0.0
037	8/14/2019 07:08:13	0.0	0.0	0.0
038	8/14/2019 07:09:13	0.0	0.0	0.0
039	8/14/2019 07:10:13	0.0	0.0	0.0
040	8/14/2019 07:11:13	0.0	0.0	0.0
041	8/14/2019 07:12:13	0.0	0.0	0.0
042	8/14/2019 07:13:13	0.0	0.0	0.0
043	8/14/2019 07:14:13	0.0	0.0	0.0
044	8/14/2019 07:15:13	0.0	0.0	0.0
045	8/14/2019 07:16:13	0.0	0.0	0.0
046	8/14/2019 07:17:13	0.0	0.0	0.0
047	8/14/2019 07:18:13	0.0	0.0	0.0
048	8/14/2019 07:19:13	0.0	0.0	0.0
049	8/14/2019 07:20:13	0.0	0.0	0.0
050	8/14/2019 07:21:13	0.0	0.0	0.0
051	8/14/2019 07:22:13	0.0	0.0	0.0
052	8/14/2019 07:23:13	0.0	0.0	0.0
053	8/14/2019 07:24:13	0.0	0.0	0.0
054	8/14/2019 07:25:13	0.0	0.0	0.0
055	8/14/2019 07:26:13	0.0	0.0	0.0
056	8/14/2019 07:27:13	0.0	0.0	0.0
057	8/14/2019 07:28:13	0.0	0.0	0.0
058	8/14/2019 07:29:13	0.0	0.0	0.0
059	8/14/2019 07:30:13	0.0	0.0	0.0
060	8/14/2019 07:31:13	0.0	0.0	0.0
061	8/14/2019 07:32:13	0.0	0.0	0.0
062	8/14/2019 07:33:13	0.0	0.0	0.0
063	8/14/2019 07:34:13	0.0	0.0	0.0
064	8/14/2019 07:35:13	0.0	0.0	0.0
065	8/14/2019 07:36:13	0.0	0.0	0.0
066	8/14/2019 07:37:13	0.0	0.0	0.0
067	8/14/2019 07:38:13	0.0	0.0	0.0
068	8/14/2019 07:39:13	0.0	0.0	0.0
069	8/14/2019 07:40:13	0.0	0.0	0.0

070	8/14/2019 07:41:13	0.0	0.0	0.0
071	8/14/2019 07:42:13	0.0	0.0	0.0
072	8/14/2019 07:43:13	0.0	0.0	0.0
073	8/14/2019 07:44:13	0.0	0.0	0.0
074	8/14/2019 07:45:13	0.0	0.0	0.0
075	8/14/2019 07:46:13	0.0	0.0	0.0
076	8/14/2019 07:47:13	0.0	0.0	0.0
077	8/14/2019 07:48:13	0.0	0.0	0.0
078	8/14/2019 07:49:13	0.0	0.0	0.0
079	8/14/2019 07:50:13	0.0	0.0	0.0
080	8/14/2019 07:51:13	0.0	0.0	0.0
081	8/14/2019 07:52:13	0.0	0.0	0.0
082	8/14/2019 07:53:13	0.0	0.0	0.0
083	8/14/2019 07:54:13	0.0	0.0	0.0
084	8/14/2019 07:55:13	0.0	0.0	0.0
085	8/14/2019 07:56:13	0.0	0.0	0.0
086	8/14/2019 07:57:13	0.0	0.0	0.0
087	8/14/2019 07:58:13	0.0	0.0	0.0
088	8/14/2019 07:59:13	0.0	0.0	0.0
089	8/14/2019 08:00:13	0.0	0.0	0.0
090	8/14/2019 08:01:13	0.0	0.0	0.0
091	8/14/2019 08:02:13	0.0	0.0	0.0
092	8/14/2019 08:03:13	0.0	0.0	0.0
093	8/14/2019 08:04:13	0.0	0.0	0.0
094	8/14/2019 08:05:13	0.0	0.0	0.0
095	8/14/2019 08:06:13	0.0	0.0	0.0
096	8/14/2019 08:07:13	0.0	0.0	0.0
097	8/14/2019 08:08:13	0.0	0.0	0.0
098	8/14/2019 08:09:13	0.0	0.0	0.0
099	8/14/2019 08:10:13	0.0	0.0	0.0
100	8/14/2019 08:11:13	0.0	0.0	0.0
101	8/14/2019 08:12:13	0.0	0.0	0.0
102	8/14/2019 08:13:13	0.0	0.0	0.0
103	8/14/2019 08:14:13	0.0	0.0	0.0
104	8/14/2019 08:15:13	0.0	0.0	0.0
105	8/14/2019 08:16:13	0.0	0.0	0.0
106	8/14/2019 08:17:13	0.0	0.0	0.0
107	8/14/2019 08:18:13	0.0	0.0	0.0
108	8/14/2019 08:19:13	0.0	0.0	0.0
109	8/14/2019 08:20:13	0.0	0.0	0.0
110	8/14/2019 08:21:13	0.0	0.0	0.0
111	8/14/2019 08:22:13	0.0	0.0	0.0
112	8/14/2019 08:23:13	0.0	0.0	0.0
113	8/14/2019 08:24:13	0.0	0.0	0.0
114	8/14/2019 08:25:13	0.0	0.0	0.0
115	8/14/2019 08:26:13	0.0	0.0	0.0
116	8/14/2019 08:27:13	0.0	0.0	0.0
117	8/14/2019 08:28:13	0.0	0.0	0.0

118	8/14/2019 08:29:13	0.0	0.0	0.0
119	8/14/2019 08:30:13	0.0	0.0	0.0
120	8/14/2019 08:31:13	0.0	0.0	0.0
121	8/14/2019 08:32:13	0.0	0.0	0.0
122	8/14/2019 08:33:13	0.0	0.0	0.0
123	8/14/2019 08:34:13	0.0	0.0	0.0
124	8/14/2019 08:35:13	0.0	0.0	0.0
125	8/14/2019 08:36:13	0.0	0.0	0.0
126	8/14/2019 08:37:13	0.0	0.0	0.0
127	8/14/2019 08:38:13	0.0	0.0	0.0
128	8/14/2019 08:39:13	0.0	0.0	0.0
129	8/14/2019 08:40:13	0.0	0.0	0.0
130	8/14/2019 08:41:13	0.0	0.0	0.0
131	8/14/2019 08:42:13	0.0	0.0	0.0
132	8/14/2019 08:43:13	0.0	0.0	0.0
133	8/14/2019 08:44:13	0.0	0.0	0.0
Peak		0.0	0.0	0.0
Min		0.0	0.0	0.0
Average		0.0	0.0	0.0

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/14/2019 06:32:13	0.0	---
002	8/14/2019 06:33:13	0.0	---
003	8/14/2019 06:34:13	0.0	---
004	8/14/2019 06:35:13	0.0	---
005	8/14/2019 06:36:13	0.0	---
006	8/14/2019 06:37:13	0.0	---
007	8/14/2019 06:38:13	0.0	---
008	8/14/2019 06:39:13	0.0	---
009	8/14/2019 06:40:13	0.0	---
010	8/14/2019 06:41:13	0.0	---
011	8/14/2019 06:42:13	0.0	---
012	8/14/2019 06:43:13	0.0	---
013	8/14/2019 06:44:13	0.0	---
014	8/14/2019 06:45:13	0.0	---
015	8/14/2019 06:46:13	0.0	0.0
016	8/14/2019 06:47:13	0.0	0.0
017	8/14/2019 06:48:13	0.0	0.0
018	8/14/2019 06:49:13	0.0	0.0
019	8/14/2019 06:50:13	0.0	0.0
020	8/14/2019 06:51:13	0.0	0.0
021	8/14/2019 06:52:13	0.0	0.0
022	8/14/2019 06:53:13	0.0	0.0
023	8/14/2019 06:54:13	0.0	0.0
024	8/14/2019 06:55:13	0.0	0.0

025	8/14/2019 06:56:13	0.0	0.0
026	8/14/2019 06:57:13	0.0	0.0
027	8/14/2019 06:58:13	0.0	0.0
028	8/14/2019 06:59:13	0.0	0.0
029	8/14/2019 07:00:13	0.0	0.0
030	8/14/2019 07:01:13	0.0	0.0
031	8/14/2019 07:02:13	0.0	0.0
032	8/14/2019 07:03:13	0.0	0.0
033	8/14/2019 07:04:13	0.0	0.0
034	8/14/2019 07:05:13	0.0	0.0
035	8/14/2019 07:06:13	0.0	0.0
036	8/14/2019 07:07:13	0.0	0.0
037	8/14/2019 07:08:13	0.0	0.0
038	8/14/2019 07:09:13	0.0	0.0
039	8/14/2019 07:10:13	0.0	0.0
040	8/14/2019 07:11:13	0.0	0.0
041	8/14/2019 07:12:13	0.0	0.0
042	8/14/2019 07:13:13	0.0	0.0
043	8/14/2019 07:14:13	0.0	0.0
044	8/14/2019 07:15:13	0.0	0.0
045	8/14/2019 07:16:13	0.0	0.0
046	8/14/2019 07:17:13	0.0	0.0
047	8/14/2019 07:18:13	0.0	0.0
048	8/14/2019 07:19:13	0.0	0.0
049	8/14/2019 07:20:13	0.0	0.0
050	8/14/2019 07:21:13	0.0	0.0
051	8/14/2019 07:22:13	0.0	0.0
052	8/14/2019 07:23:13	0.0	0.0
053	8/14/2019 07:24:13	0.0	0.0
054	8/14/2019 07:25:13	0.0	0.0
055	8/14/2019 07:26:13	0.0	0.0
056	8/14/2019 07:27:13	0.0	0.0
057	8/14/2019 07:28:13	0.0	0.0
058	8/14/2019 07:29:13	0.0	0.0
059	8/14/2019 07:30:13	0.0	0.0
060	8/14/2019 07:31:13	0.0	0.0
061	8/14/2019 07:32:13	0.0	0.0
062	8/14/2019 07:33:13	0.0	0.0
063	8/14/2019 07:34:13	0.0	0.0
064	8/14/2019 07:35:13	0.0	0.0
065	8/14/2019 07:36:13	0.0	0.0
066	8/14/2019 07:37:13	0.0	0.0
067	8/14/2019 07:38:13	0.0	0.0
068	8/14/2019 07:39:13	0.0	0.0
069	8/14/2019 07:40:13	0.0	0.0
070	8/14/2019 07:41:13	0.0	0.0
071	8/14/2019 07:42:13	0.0	0.0
072	8/14/2019 07:43:13	0.0	0.0

073	8/14/2019 07:44:13	0.0	0.0
074	8/14/2019 07:45:13	0.0	0.0
075	8/14/2019 07:46:13	0.0	0.0
076	8/14/2019 07:47:13	0.0	0.0
077	8/14/2019 07:48:13	0.0	0.0
078	8/14/2019 07:49:13	0.0	0.0
079	8/14/2019 07:50:13	0.0	0.0
080	8/14/2019 07:51:13	0.0	0.0
081	8/14/2019 07:52:13	0.0	0.0
082	8/14/2019 07:53:13	0.0	0.0
083	8/14/2019 07:54:13	0.0	0.0
084	8/14/2019 07:55:13	0.0	0.0
085	8/14/2019 07:56:13	0.0	0.0
086	8/14/2019 07:57:13	0.0	0.0
087	8/14/2019 07:58:13	0.0	0.0
088	8/14/2019 07:59:13	0.0	0.0
089	8/14/2019 08:00:13	0.0	0.0
090	8/14/2019 08:01:13	0.0	0.0
091	8/14/2019 08:02:13	0.0	0.0
092	8/14/2019 08:03:13	0.0	0.0
093	8/14/2019 08:04:13	0.0	0.0
094	8/14/2019 08:05:13	0.0	0.0
095	8/14/2019 08:06:13	0.0	0.0
096	8/14/2019 08:07:13	0.0	0.0
097	8/14/2019 08:08:13	0.0	0.0
098	8/14/2019 08:09:13	0.0	0.0
099	8/14/2019 08:10:13	0.0	0.0
100	8/14/2019 08:11:13	0.0	0.0
101	8/14/2019 08:12:13	0.0	0.0
102	8/14/2019 08:13:13	0.0	0.0
103	8/14/2019 08:14:13	0.0	0.0
104	8/14/2019 08:15:13	0.0	0.0
105	8/14/2019 08:16:13	0.0	0.0
106	8/14/2019 08:17:13	0.0	0.0
107	8/14/2019 08:18:13	0.0	0.0
108	8/14/2019 08:19:13	0.0	0.0
109	8/14/2019 08:20:13	0.0	0.0
110	8/14/2019 08:21:13	0.0	0.0
111	8/14/2019 08:22:13	0.0	0.0
112	8/14/2019 08:23:13	0.0	0.0
113	8/14/2019 08:24:13	0.0	0.0
114	8/14/2019 08:25:13	0.0	0.0
115	8/14/2019 08:26:13	0.0	0.0
116	8/14/2019 08:27:13	0.0	0.0
117	8/14/2019 08:28:13	0.0	0.0
118	8/14/2019 08:29:13	0.0	0.0
119	8/14/2019 08:30:13	0.0	0.0
120	8/14/2019 08:31:13	0.0	0.0

121	8/14/2019 08:32:13	0.0	0.0
122	8/14/2019 08:33:13	0.0	0.0
123	8/14/2019 08:34:13	0.0	0.0
124	8/14/2019 08:35:13	0.0	0.0
125	8/14/2019 08:36:13	0.0	0.0
126	8/14/2019 08:37:13	0.0	0.0
127	8/14/2019 08:38:13	0.0	0.0
128	8/14/2019 08:39:13	0.0	0.0
129	8/14/2019 08:40:13	0.0	0.0
130	8/14/2019 08:41:13	0.0	0.0
131	8/14/2019 08:42:13	0.0	0.0
132	8/14/2019 08:43:13	0.0	0.0
133	8/14/2019 08:44:13	0.0	0.0

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19/08/16 10:09

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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-918228
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 12345678
User ID 12345678

Begin 8/16/2019 10:09:53
End 8/16/2019 10:10:10
Sample Period(s) 60
Number of Records 0

Sensor PID(ppm)
Sensor SN S023030364W4
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 100.0
TWA Alarm 50.0
Measurement Gas Isobutylene
Calibration Time 8/14/2019 06:18

```
************************************************************
Datalog

0 record.

============================================================
19/08/19 09:28
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000(PGM-7320)
Unit SN 592-918228
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Pause in Communication Mode
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/19/2019 09:28:26
End     8/19/2019 09:30:18
Sample Period(s)        60
Number of Records       1
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030364W4
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      100.0
TWA Alarm       50.0
Measurement Gas Isobutylene
Calibration Time        8/14/2019 06:18
Peak    0.6
Min     0.6
Average 0.6

************************************************************
Datalog
                PID(ppm)        PID(ppm)        PID(ppm)
Index   Date/Time       (Avg)   (Max)   (Real)
001     8/19/2019 09:29:26      0.5     0.6     0.6
```

Peak	0.5	0.6	0.6
Min	0.5	0.6	0.6
Average	0.5	0.6	0.6

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/19/2019 09:29:26	0.0	---

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19/08/19 09:30

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Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-918228
Unit Firmware Ver	V2.20A

Running Mode	Hygiene Mode
Datalog Mode	Auto
Diagnostic Mode	No
Stop Reason	Pause in Communication Mode

Site ID	12345678
User ID	12345678

Begin	8/19/2019 09:30:19
End	8/19/2019 09:30:35
Sample Period(s)	60
Number of Records	0

Sensor	PID(ppm)
Sensor SN	S023030364W4
Measure Type	Avg; Max; Real
Span	100.0
Span 2	1000.0
Low Alarm	50.0
High Alarm	100.0
Over Alarm	15000.0
STEL Alarm	100.0
TWA Alarm	50.0
Measurement Gas	Isobutylene
Calibration Time	8/14/2019 06:18

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Datalog

0 record.

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============================================================
19/08/08 07:28
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000(PGM-7320)
Unit SN 592-909007
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Pause in Menu Mode
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/8/2019 07:28:08
End     8/8/2019 07:28:12
Sample Period(s)        60
Number of Records       0
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030105U9
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      25.0
TWA Alarm       10.0
Measurement Gas Isobutylene
Calibration Time        8/6/2019 10:07

************************************************************
Datalog

0 record.

============================================================
19/08/08 07:31
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000(PGM-7320)
Unit SN 592-909007
```

Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 12345678
User ID 12345678

Begin 8/8/2019 07:31:30
End 8/8/2019 07:31:56
Sample Period(s) 60
Number of Records 0

Sensor PID(ppm)
Sensor SN S023030105U9
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 25.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/8/2019 07:31

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Datalog

0 record.

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19/08/08 08:38

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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-909007
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 12345678

User ID 12345678

Begin 8/8/2019 08:38:54
End 8/8/2019 11:01:05
Sample Period(s) 60
Number of Records 142

Sensor PID(ppm)
Sensor SN S023030105U9
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 25.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/8/2019 07:31
Peak 0.2
Min 0.1
Average 0.1

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Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	PID(ppm)
001	8/8/2019 08:39:54		0.2	0.2	0.2
002	8/8/2019 08:40:54		0.2	0.2	0.2
003	8/8/2019 08:41:54		0.2	0.2	0.2
004	8/8/2019 08:42:54		0.2	0.2	0.2
005	8/8/2019 08:43:54		0.1	0.2	0.1
006	8/8/2019 08:44:54		0.1	0.1	0.1
007	8/8/2019 08:45:54		0.1	0.1	0.1
008	8/8/2019 08:46:54		0.1	0.1	0.1
009	8/8/2019 08:47:54		0.1	0.1	0.1
010	8/8/2019 08:48:54		0.1	0.1	0.1
011	8/8/2019 08:49:54		0.1	0.1	0.1
012	8/8/2019 08:50:54		0.1	0.1	0.1
013	8/8/2019 08:51:54		0.1	0.1	0.1
014	8/8/2019 08:52:54		0.1	0.1	0.1
015	8/8/2019 08:53:54		0.1	0.1	0.1
016	8/8/2019 08:54:54		0.1	0.1	0.1
017	8/8/2019 08:55:54		0.1	0.1	0.1
018	8/8/2019 08:56:54		0.1	0.1	0.1
019	8/8/2019 08:57:54		0.1	0.1	0.1
020	8/8/2019 08:58:54		0.1	0.1	0.1
021	8/8/2019 08:59:54		0.1	0.1	0.1

022	8/8/2019 09:00:54	0.1	0.1	0.1
023	8/8/2019 09:01:54	0.1	0.1	0.1
024	8/8/2019 09:02:54	0.1	0.1	0.1
025	8/8/2019 09:03:54	0.1	0.1	0.1
026	8/8/2019 09:04:54	0.1	0.1	0.1
027	8/8/2019 09:05:54	0.1	0.1	0.1
028	8/8/2019 09:06:54	0.1	0.1	0.1
029	8/8/2019 09:07:54	0.1	0.1	0.1
030	8/8/2019 09:08:54	0.1	0.1	0.1
031	8/8/2019 09:09:54	0.1	0.1	0.1
032	8/8/2019 09:10:54	0.1	0.1	0.1
033	8/8/2019 09:11:54	0.1	0.1	0.1
034	8/8/2019 09:12:54	0.1	0.1	0.1
035	8/8/2019 09:13:54	0.1	0.1	0.1
036	8/8/2019 09:14:54	0.1	0.1	0.1
037	8/8/2019 09:15:54	0.1	0.1	0.1
038	8/8/2019 09:16:54	0.1	0.1	0.1
039	8/8/2019 09:17:54	0.1	0.1	0.1
040	8/8/2019 09:18:54	0.1	0.1	0.1
041	8/8/2019 09:19:54	0.1	0.1	0.1
042	8/8/2019 09:20:54	0.1	0.1	0.1
043	8/8/2019 09:21:54	0.1	0.1	0.1
044	8/8/2019 09:22:54	0.1	0.1	0.1
045	8/8/2019 09:23:54	0.1	0.1	0.1
046	8/8/2019 09:24:54	0.1	0.1	0.1
047	8/8/2019 09:25:54	0.1	0.1	0.1
048	8/8/2019 09:26:54	0.1	0.1	0.1
049	8/8/2019 09:27:54	0.1	0.1	0.1
050	8/8/2019 09:28:54	0.1	0.1	0.1
051	8/8/2019 09:29:54	0.1	0.1	0.1
052	8/8/2019 09:30:54	0.1	0.1	0.1
053	8/8/2019 09:31:54	0.1	0.1	0.1
054	8/8/2019 09:32:54	0.1	0.1	0.1
055	8/8/2019 09:33:54	0.1	0.1	0.1
056	8/8/2019 09:34:54	0.1	0.1	0.1
057	8/8/2019 09:35:54	0.1	0.1	0.1
058	8/8/2019 09:36:54	0.1	0.1	0.1
059	8/8/2019 09:37:54	0.1	0.1	0.1
060	8/8/2019 09:38:54	0.1	0.1	0.1
061	8/8/2019 09:39:54	0.1	0.1	0.1
062	8/8/2019 09:40:54	0.1	0.1	0.1
063	8/8/2019 09:41:54	0.1	0.1	0.1
064	8/8/2019 09:42:54	0.1	0.1	0.1
065	8/8/2019 09:43:54	0.1	0.1	0.1
066	8/8/2019 09:44:54	0.1	0.1	0.1
067	8/8/2019 09:45:54	0.1	0.1	0.1
068	8/8/2019 09:46:54	0.1	0.1	0.1
069	8/8/2019 09:47:54	0.1	0.1	0.1

070	8/8/2019 09:48:54	0.1	0.1	0.1
071	8/8/2019 09:49:54	0.1	0.1	0.1
072	8/8/2019 09:50:54	0.1	0.1	0.1
073	8/8/2019 09:51:54	0.1	0.1	0.1
074	8/8/2019 09:52:54	0.1	0.1	0.1
075	8/8/2019 09:53:54	0.1	0.1	0.1
076	8/8/2019 09:54:54	0.1	0.1	0.1
077	8/8/2019 09:55:54	0.1	0.1	0.1
078	8/8/2019 09:56:54	0.1	0.1	0.1
079	8/8/2019 09:57:54	0.1	0.1	0.1
080	8/8/2019 09:58:54	0.1	0.1	0.1
081	8/8/2019 09:59:54	0.1	0.1	0.1
082	8/8/2019 10:00:54	0.1	0.1	0.1
083	8/8/2019 10:01:54	0.1	0.1	0.1
084	8/8/2019 10:02:54	0.1	0.1	0.1
085	8/8/2019 10:03:54	0.1	0.1	0.1
086	8/8/2019 10:04:54	0.1	0.1	0.1
087	8/8/2019 10:05:54	0.1	0.1	0.1
088	8/8/2019 10:06:54	0.1	0.1	0.1
089	8/8/2019 10:07:54	0.1	0.1	0.1
090	8/8/2019 10:08:54	0.1	0.1	0.1
091	8/8/2019 10:09:54	0.1	0.1	0.1
092	8/8/2019 10:10:54	0.1	0.1	0.1
093	8/8/2019 10:11:54	0.1	0.1	0.1
094	8/8/2019 10:12:54	0.1	0.1	0.1
095	8/8/2019 10:13:54	0.1	0.1	0.1
096	8/8/2019 10:14:54	0.1	0.1	0.1
097	8/8/2019 10:15:54	0.1	0.1	0.1
098	8/8/2019 10:16:54	0.1	0.1	0.1
099	8/8/2019 10:17:54	0.1	0.1	0.1
100	8/8/2019 10:18:54	0.1	0.1	0.1
101	8/8/2019 10:19:54	0.1	0.1	0.1
102	8/8/2019 10:20:54	0.1	0.1	0.1
103	8/8/2019 10:21:54	0.1	0.1	0.1
104	8/8/2019 10:22:54	0.1	0.1	0.1
105	8/8/2019 10:23:54	0.1	0.1	0.1
106	8/8/2019 10:24:54	0.1	0.1	0.1
107	8/8/2019 10:25:54	0.1	0.1	0.1
108	8/8/2019 10:26:54	0.1	0.1	0.1
109	8/8/2019 10:27:54	0.1	0.1	0.1
110	8/8/2019 10:28:54	0.1	0.1	0.1
111	8/8/2019 10:29:54	0.1	0.1	0.1
112	8/8/2019 10:30:54	0.1	0.1	0.1
113	8/8/2019 10:31:54	0.1	0.1	0.1
114	8/8/2019 10:32:54	0.1	0.1	0.1
115	8/8/2019 10:33:54	0.1	0.1	0.1
116	8/8/2019 10:34:54	0.1	0.1	0.1
117	8/8/2019 10:35:54	0.1	0.1	0.1

118	8/8/2019 10:36:54	0.1	0.1	0.1
119	8/8/2019 10:37:54	0.1	0.1	0.1
120	8/8/2019 10:38:54	0.1	0.1	0.1
121	8/8/2019 10:39:54	0.1	0.1	0.1
122	8/8/2019 10:40:54	0.1	0.1	0.1
123	8/8/2019 10:41:54	0.1	0.1	0.1
124	8/8/2019 10:42:54	0.1	0.1	0.1
125	8/8/2019 10:43:54	0.1	0.1	0.1
126	8/8/2019 10:44:54	0.1	0.1	0.1
127	8/8/2019 10:45:54	0.1	0.1	0.1
128	8/8/2019 10:46:54	0.1	0.1	0.1
129	8/8/2019 10:47:54	0.1	0.1	0.1
130	8/8/2019 10:48:54	0.1	0.1	0.1
131	8/8/2019 10:49:54	0.1	0.1	0.1
132	8/8/2019 10:50:54	0.1	0.1	0.1
133	8/8/2019 10:51:54	0.1	0.1	0.1
134	8/8/2019 10:52:54	0.1	0.1	0.1
135	8/8/2019 10:53:54	0.1	0.1	0.1
136	8/8/2019 10:54:54	0.1	0.1	0.1
137	8/8/2019 10:55:54	0.1	0.1	0.1
138	8/8/2019 10:56:54	0.1	0.1	0.1
139	8/8/2019 10:57:54	0.1	0.1	0.1
140	8/8/2019 10:58:54	0.1	0.1	0.1
141	8/8/2019 10:59:54	0.1	0.1	0.1
142	8/8/2019 11:00:54	0.1	0.1	0.1
Peak		0.2	0.2	0.2
Min		0.1	0.1	0.1
Average		0.1	0.1	0.1

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TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/8/2019 08:39:54	0.0	---
002	8/8/2019 08:40:54	0.0	---
003	8/8/2019 08:41:54	0.0	---
004	8/8/2019 08:42:54	0.0	---
005	8/8/2019 08:43:54	0.0	---
006	8/8/2019 08:44:54	0.0	---
007	8/8/2019 08:45:54	0.0	---
008	8/8/2019 08:46:54	0.0	---
009	8/8/2019 08:47:54	0.0	---
010	8/8/2019 08:48:54	0.0	---
011	8/8/2019 08:49:54	0.0	---
012	8/8/2019 08:50:54	0.0	---
013	8/8/2019 08:51:54	0.0	---
014	8/8/2019 08:52:54	0.0	---
015	8/8/2019 08:53:54	0.0	0.1

016	8/8/2019 08:54:54	0.0	0.1
017	8/8/2019 08:55:54	0.0	0.1
018	8/8/2019 08:56:54	0.0	0.1
019	8/8/2019 08:57:54	0.0	0.1
020	8/8/2019 08:58:54	0.0	0.1
021	8/8/2019 08:59:54	0.0	0.1
022	8/8/2019 09:00:54	0.0	0.1
023	8/8/2019 09:01:54	0.0	0.1
024	8/8/2019 09:02:54	0.0	0.1
025	8/8/2019 09:03:54	0.0	0.1
026	8/8/2019 09:04:54	0.0	0.1
027	8/8/2019 09:05:54	0.0	0.1
028	8/8/2019 09:06:54	0.0	0.1
029	8/8/2019 09:07:54	0.0	0.1
030	8/8/2019 09:08:54	0.0	0.1
031	8/8/2019 09:09:54	0.0	0.1
032	8/8/2019 09:10:54	0.0	0.1
033	8/8/2019 09:11:54	0.0	0.1
034	8/8/2019 09:12:54	0.0	0.1
035	8/8/2019 09:13:54	0.0	0.1
036	8/8/2019 09:14:54	0.0	0.1
037	8/8/2019 09:15:54	0.0	0.1
038	8/8/2019 09:16:54	0.0	0.1
039	8/8/2019 09:17:54	0.0	0.1
040	8/8/2019 09:18:54	0.0	0.1
041	8/8/2019 09:19:54	0.0	0.1
042	8/8/2019 09:20:54	0.0	0.1
043	8/8/2019 09:21:54	0.0	0.1
044	8/8/2019 09:22:54	0.0	0.1
045	8/8/2019 09:23:54	0.0	0.1
046	8/8/2019 09:24:54	0.0	0.1
047	8/8/2019 09:25:54	0.0	0.1
048	8/8/2019 09:26:54	0.0	0.1
049	8/8/2019 09:27:54	0.0	0.1
050	8/8/2019 09:28:54	0.0	0.1
051	8/8/2019 09:29:54	0.0	0.1
052	8/8/2019 09:30:54	0.0	0.1
053	8/8/2019 09:31:54	0.0	0.1
054	8/8/2019 09:32:54	0.0	0.1
055	8/8/2019 09:33:54	0.0	0.1
056	8/8/2019 09:34:54	0.0	0.1
057	8/8/2019 09:35:54	0.0	0.1
058	8/8/2019 09:36:54	0.0	0.1
059	8/8/2019 09:37:54	0.0	0.1
060	8/8/2019 09:38:54	0.0	0.1
061	8/8/2019 09:39:54	0.0	0.1
062	8/8/2019 09:40:54	0.0	0.1
063	8/8/2019 09:41:54	0.0	0.1

064	8/8/2019 09:42:54	0.0	0.1
065	8/8/2019 09:43:54	0.0	0.1
066	8/8/2019 09:44:54	0.0	0.1
067	8/8/2019 09:45:54	0.0	0.1
068	8/8/2019 09:46:54	0.0	0.1
069	8/8/2019 09:47:54	0.0	0.1
070	8/8/2019 09:48:54	0.0	0.1
071	8/8/2019 09:49:54	0.0	0.1
072	8/8/2019 09:50:54	0.0	0.1
073	8/8/2019 09:51:54	0.0	0.1
074	8/8/2019 09:52:54	0.0	0.1
075	8/8/2019 09:53:54	0.0	0.1
076	8/8/2019 09:54:54	0.0	0.1
077	8/8/2019 09:55:54	0.0	0.1
078	8/8/2019 09:56:54	0.0	0.1
079	8/8/2019 09:57:54	0.0	0.1
080	8/8/2019 09:58:54	0.0	0.1
081	8/8/2019 09:59:54	0.0	0.1
082	8/8/2019 10:00:54	0.0	0.1
083	8/8/2019 10:01:54	0.0	0.1
084	8/8/2019 10:02:54	0.0	0.1
085	8/8/2019 10:03:54	0.0	0.1
086	8/8/2019 10:04:54	0.0	0.1
087	8/8/2019 10:05:54	0.0	0.1
088	8/8/2019 10:06:54	0.0	0.1
089	8/8/2019 10:07:54	0.0	0.1
090	8/8/2019 10:08:54	0.0	0.1
091	8/8/2019 10:09:54	0.0	0.1
092	8/8/2019 10:10:54	0.0	0.1
093	8/8/2019 10:11:54	0.0	0.1
094	8/8/2019 10:12:54	0.0	0.1
095	8/8/2019 10:13:54	0.0	0.1
096	8/8/2019 10:14:54	0.0	0.1
097	8/8/2019 10:15:54	0.0	0.1
098	8/8/2019 10:16:54	0.0	0.1
099	8/8/2019 10:17:54	0.0	0.1
100	8/8/2019 10:18:54	0.0	0.1
101	8/8/2019 10:19:54	0.0	0.1
102	8/8/2019 10:20:54	0.0	0.1
103	8/8/2019 10:21:54	0.0	0.1
104	8/8/2019 10:22:54	0.0	0.1
105	8/8/2019 10:23:54	0.0	0.1
106	8/8/2019 10:24:54	0.0	0.1
107	8/8/2019 10:25:54	0.0	0.1
108	8/8/2019 10:26:54	0.0	0.1
109	8/8/2019 10:27:54	0.0	0.1
110	8/8/2019 10:28:54	0.0	0.1
111	8/8/2019 10:29:54	0.0	0.1

112	8/8/2019 10:30:54	0.0	0.1
113	8/8/2019 10:31:54	0.0	0.1
114	8/8/2019 10:32:54	0.0	0.1
115	8/8/2019 10:33:54	0.0	0.1
116	8/8/2019 10:34:54	0.0	0.1
117	8/8/2019 10:35:54	0.0	0.1
118	8/8/2019 10:36:54	0.0	0.1
119	8/8/2019 10:37:54	0.0	0.1
120	8/8/2019 10:38:54	0.0	0.1
121	8/8/2019 10:39:54	0.0	0.1
122	8/8/2019 10:40:54	0.0	0.1
123	8/8/2019 10:41:54	0.0	0.1
124	8/8/2019 10:42:54	0.0	0.1
125	8/8/2019 10:43:54	0.0	0.1
126	8/8/2019 10:44:54	0.0	0.1
127	8/8/2019 10:45:54	0.0	0.1
128	8/8/2019 10:46:54	0.0	0.1
129	8/8/2019 10:47:54	0.0	0.1
130	8/8/2019 10:48:54	0.0	0.1
131	8/8/2019 10:49:54	0.0	0.1
132	8/8/2019 10:50:54	0.0	0.1
133	8/8/2019 10:51:54	0.0	0.1
134	8/8/2019 10:52:54	0.0	0.1
135	8/8/2019 10:53:54	0.0	0.1
136	8/8/2019 10:54:54	0.0	0.1
137	8/8/2019 10:55:54	0.0	0.1
138	8/8/2019 10:56:54	0.0	0.1
139	8/8/2019 10:57:54	0.0	0.1
140	8/8/2019 10:58:54	0.0	0.1
141	8/8/2019 10:59:54	0.0	0.1
142	8/8/2019 11:00:54	0.0	0.1

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19/08/08 14:38

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Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-909007

Unit Firmware Ver V2.20A

Running Mode Hygiene Mode

Datalog Mode Auto

Diagnostic Mode No

Stop Reason Power Down

Site ID 12345678

User ID 12345678

Begin 8/8/2019 14:38:56
End 8/8/2019 15:52:00
Sample Period(s) 60
Number of Records 73

Sensor PID(ppm)
Sensor SN S023030105U9
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 25.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/8/2019 07:31
Peak 0.3
Min 0.1
Average 0.1

****

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	PID(ppm)
001	8/8/2019 14:39:56		0.3	0.4	0.3
002	8/8/2019 14:40:56		0.3	0.3	0.3
003	8/8/2019 14:41:56		0.2	0.3	0.2
004	8/8/2019 14:42:56		0.2	0.2	0.2
005	8/8/2019 14:43:56		0.2	0.2	0.2
006	8/8/2019 14:44:56		0.2	0.2	0.2
007	8/8/2019 14:45:56		0.2	0.2	0.2
008	8/8/2019 14:46:56		0.2	0.2	0.2
009	8/8/2019 14:47:56		0.2	0.2	0.2
010	8/8/2019 14:48:56		0.2	0.2	0.2
011	8/8/2019 14:49:56		0.2	0.2	0.2
012	8/8/2019 14:50:56		0.2	0.2	0.2
013	8/8/2019 14:51:56		0.2	0.2	0.2
014	8/8/2019 14:52:56		0.2	0.2	0.2
015	8/8/2019 14:53:56		0.2	0.2	0.2
016	8/8/2019 14:54:56		0.2	0.2	0.2
017	8/8/2019 14:55:56		0.2	0.2	0.2
018	8/8/2019 14:56:56		0.2	0.2	0.2
019	8/8/2019 14:57:56		0.2	0.2	0.2
020	8/8/2019 14:58:56		0.2	0.2	0.2
021	8/8/2019 14:59:56		0.2	0.2	0.2
022	8/8/2019 15:00:56		0.2	0.2	0.2
023	8/8/2019 15:01:56		0.2	0.2	0.2

024	8/8/2019 15:02:56	0.2	0.2	0.2
025	8/8/2019 15:03:56	0.1	0.2	0.1
026	8/8/2019 15:04:56	0.1	0.1	0.1
027	8/8/2019 15:05:56	0.1	0.1	0.1
028	8/8/2019 15:06:56	0.1	0.1	0.1
029	8/8/2019 15:07:56	0.1	0.1	0.1
030	8/8/2019 15:08:56	0.1	0.1	0.1
031	8/8/2019 15:09:56	0.1	0.1	0.1
032	8/8/2019 15:10:56	0.1	0.1	0.1
033	8/8/2019 15:11:56	0.1	0.1	0.1
034	8/8/2019 15:12:56	0.1	0.1	0.1
035	8/8/2019 15:13:56	0.1	0.1	0.1
036	8/8/2019 15:14:56	0.1	0.1	0.1
037	8/8/2019 15:15:56	0.1	0.1	0.1
038	8/8/2019 15:16:56	0.1	0.1	0.1
039	8/8/2019 15:17:56	0.1	0.1	0.1
040	8/8/2019 15:18:56	0.1	0.1	0.1
041	8/8/2019 15:19:56	0.1	0.1	0.1
042	8/8/2019 15:20:56	0.1	0.1	0.1
043	8/8/2019 15:21:56	0.1	0.1	0.1
044	8/8/2019 15:22:56	0.1	0.1	0.1
045	8/8/2019 15:23:56	0.1	0.1	0.1
046	8/8/2019 15:24:56	0.1	0.1	0.1
047	8/8/2019 15:25:56	0.1	0.1	0.1
048	8/8/2019 15:26:56	0.1	0.1	0.1
049	8/8/2019 15:27:56	0.1	0.1	0.1
050	8/8/2019 15:28:56	0.1	0.1	0.1
051	8/8/2019 15:29:56	0.1	0.1	0.1
052	8/8/2019 15:30:56	0.1	0.1	0.1
053	8/8/2019 15:31:56	0.1	0.1	0.1
054	8/8/2019 15:32:56	0.1	0.1	0.1
055	8/8/2019 15:33:56	0.1	0.1	0.1
056	8/8/2019 15:34:56	0.1	0.1	0.1
057	8/8/2019 15:35:56	0.1	0.1	0.1
058	8/8/2019 15:36:56	0.1	0.1	0.1
059	8/8/2019 15:37:56	0.1	0.1	0.1
060	8/8/2019 15:38:56	0.1	0.1	0.1
061	8/8/2019 15:39:56	0.1	0.1	0.1
062	8/8/2019 15:40:56	0.1	0.1	0.1
063	8/8/2019 15:41:56	0.1	0.1	0.1
064	8/8/2019 15:42:56	0.1	0.1	0.1
065	8/8/2019 15:43:56	0.1	0.1	0.1
066	8/8/2019 15:44:56	0.1	0.1	0.1
067	8/8/2019 15:45:56	0.1	0.1	0.1
068	8/8/2019 15:46:56	0.1	0.1	0.1
069	8/8/2019 15:47:56	0.1	0.1	0.1
070	8/8/2019 15:48:56	0.1	0.1	0.1
071	8/8/2019 15:49:56	0.1	0.1	0.1

072	8/8/2019 15:50:56		0.1	0.1	0.1
073	8/8/2019 15:51:56		0.1	0.1	0.1
Peak		0.3	0.4	0.3	
Min		0.1	0.1	0.1	
Average		0.1	0.1	0.1	

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TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/8/2019 14:39:56	0.0	---
002	8/8/2019 14:40:56	0.0	---
003	8/8/2019 14:41:56	0.0	---
004	8/8/2019 14:42:56	0.0	---
005	8/8/2019 14:43:56	0.0	---
006	8/8/2019 14:44:56	0.0	---
007	8/8/2019 14:45:56	0.0	---
008	8/8/2019 14:46:56	0.0	---
009	8/8/2019 14:47:56	0.0	---
010	8/8/2019 14:48:56	0.0	---
011	8/8/2019 14:49:56	0.0	---
012	8/8/2019 14:50:56	0.0	---
013	8/8/2019 14:51:56	0.0	---
014	8/8/2019 14:52:56	0.0	---
015	8/8/2019 14:53:56	0.0	0.2
016	8/8/2019 14:54:56	0.0	0.2
017	8/8/2019 14:55:56	0.0	0.2
018	8/8/2019 14:56:56	0.0	0.2
019	8/8/2019 14:57:56	0.0	0.2
020	8/8/2019 14:58:56	0.0	0.2
021	8/8/2019 14:59:56	0.0	0.2
022	8/8/2019 15:00:56	0.0	0.2
023	8/8/2019 15:01:56	0.0	0.2
024	8/8/2019 15:02:56	0.0	0.2
025	8/8/2019 15:03:56	0.0	0.2
026	8/8/2019 15:04:56	0.0	0.2
027	8/8/2019 15:05:56	0.0	0.2
028	8/8/2019 15:06:56	0.0	0.2
029	8/8/2019 15:07:56	0.0	0.2
030	8/8/2019 15:08:56	0.0	0.2
031	8/8/2019 15:09:56	0.0	0.2
032	8/8/2019 15:10:56	0.0	0.2
033	8/8/2019 15:11:56	0.0	0.2
034	8/8/2019 15:12:56	0.0	0.1
035	8/8/2019 15:13:56	0.0	0.1
036	8/8/2019 15:14:56	0.0	0.1
037	8/8/2019 15:15:56	0.0	0.1
038	8/8/2019 15:16:56	0.0	0.1

039	8/8/2019 15:17:56	0.0	0.1
040	8/8/2019 15:18:56	0.0	0.1
041	8/8/2019 15:19:56	0.0	0.1
042	8/8/2019 15:20:56	0.0	0.1
043	8/8/2019 15:21:56	0.0	0.1
044	8/8/2019 15:22:56	0.0	0.1
045	8/8/2019 15:23:56	0.0	0.1
046	8/8/2019 15:24:56	0.0	0.1
047	8/8/2019 15:25:56	0.0	0.1
048	8/8/2019 15:26:56	0.0	0.1
049	8/8/2019 15:27:56	0.0	0.1
050	8/8/2019 15:28:56	0.0	0.1
051	8/8/2019 15:29:56	0.0	0.1
052	8/8/2019 15:30:56	0.0	0.1
053	8/8/2019 15:31:56	0.0	0.1
054	8/8/2019 15:32:56	0.0	0.1
055	8/8/2019 15:33:56	0.0	0.1
056	8/8/2019 15:34:56	0.0	0.1
057	8/8/2019 15:35:56	0.0	0.1
058	8/8/2019 15:36:56	0.0	0.1
059	8/8/2019 15:37:56	0.0	0.1
060	8/8/2019 15:38:56	0.0	0.1
061	8/8/2019 15:39:56	0.0	0.1
062	8/8/2019 15:40:56	0.0	0.1
063	8/8/2019 15:41:56	0.0	0.1
064	8/8/2019 15:42:56	0.0	0.1
065	8/8/2019 15:43:56	0.0	0.1
066	8/8/2019 15:44:56	0.0	0.1
067	8/8/2019 15:45:56	0.0	0.1
068	8/8/2019 15:46:56	0.0	0.1
069	8/8/2019 15:47:56	0.0	0.1
070	8/8/2019 15:48:56	0.0	0.1
071	8/8/2019 15:49:56	0.0	0.1
072	8/8/2019 15:50:56	0.0	0.1
073	8/8/2019 15:51:56	0.0	0.1

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19/08/12 07:22

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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-909007
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Pause in Menu Mode

```
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/12/2019 07:22:40
End     8/12/2019 07:25:28
Sample Period(s)        60
Number of Records       2
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030105U9
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      25.0
TWA Alarm       10.0
Measurement Gas Isobutylene
Calibration Time        8/8/2019 07:31
Peak    0.1
Min     0.1
Average 0.1

************************************************************
Datalog
                PID(ppm)        PID(ppm)        PID(ppm)
Index   Date/Time       (Avg)   (Max)   (Real)
001     8/12/2019 07:23:40      0.2     0.3     0.1
002     8/12/2019 07:24:40      0.1     0.1     0.1
Peak            0.2     0.3     0.1
Min             0.1     0.1     0.1
Average         0.2     0.2     0.1

************************************************************
TWA/STEL
                PID(ppm)        PID(ppm)
Index   Date/Time       (TWA)   (STEL)
001     8/12/2019 07:23:40      0.0     ---
002     8/12/2019 07:24:40      0.0     ---
============================================================
19/08/12 07:29
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000(PGM-7320)
Unit SN 592-909007
```

```
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Power Down
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/12/2019 07:29:18
End     8/12/2019 07:29:27
Sample Period(s)        60
Number of Records       0
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030105U9
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      25.0
TWA Alarm       10.0
Measurement Gas Isobutylene
Calibration Time        8/12/2019 07:29

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Datalog

0 record.

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19/08/12 07:37
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000(PGM-7320)
Unit SN 592-909007
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Power Down
------------------------------------------------------------
Site ID 12345678
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User ID 12345678

Begin 8/12/2019 07:37:20
End 8/12/2019 14:22:10
Sample Period(s) 60
Number of Records 404

Sensor PID(ppm)
Sensor SN S023030105U9
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 25.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/12/2019 07:29
Peak 0.2
Min 0.0
Average 0.0

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Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	PID(ppm)
001	8/12/2019 07:38:20		0.2	0.2	0.2
002	8/12/2019 07:39:20		0.1	0.2	0.1
003	8/12/2019 07:40:20		0.1	0.1	0.1
004	8/12/2019 07:41:20		0.1	0.1	0.1
005	8/12/2019 07:42:20		0.1	0.1	0.1
006	8/12/2019 07:43:20		0.1	0.1	0.1
007	8/12/2019 07:44:20		0.1	0.1	0.1
008	8/12/2019 07:45:20		0.1	0.1	0.1
009	8/12/2019 07:46:20		0.1	0.1	0.1
010	8/12/2019 07:47:20		0.1	0.1	0.1
011	8/12/2019 07:48:20		0.1	0.1	0.1
012	8/12/2019 07:49:20		0.1	0.1	0.1
013	8/12/2019 07:50:20		0.1	0.1	0.1
014	8/12/2019 07:51:20		0.1	0.1	0.1
015	8/12/2019 07:52:20		0.1	0.1	0.1
016	8/12/2019 07:53:20		0.1	0.1	0.1
017	8/12/2019 07:54:20		0.1	0.1	0.1
018	8/12/2019 07:55:20		0.1	0.1	0.1
019	8/12/2019 07:56:20		0.1	0.1	0.1
020	8/12/2019 07:57:20		0.1	0.1	0.1
021	8/12/2019 07:58:20		0.1	0.1	0.1

022	8/12/2019 07:59:20	0.1	0.1	0.1
023	8/12/2019 08:00:20	0.1	0.1	0.1
024	8/12/2019 08:01:20	0.1	0.1	0.1
025	8/12/2019 08:02:20	0.1	0.1	0.1
026	8/12/2019 08:03:20	0.1	0.1	0.0
027	8/12/2019 08:04:20	0.1	0.1	0.1
028	8/12/2019 08:05:20	0.1	0.1	0.1
029	8/12/2019 08:06:20	0.1	0.1	0.0
030	8/12/2019 08:07:20	0.0	0.1	0.0
031	8/12/2019 08:08:20	0.0	0.0	0.0
032	8/12/2019 08:09:20	0.0	0.1	0.0
033	8/12/2019 08:10:20	0.0	0.0	0.0
034	8/12/2019 08:11:20	0.0	0.0	0.0
035	8/12/2019 08:12:20	0.0	0.0	0.0
036	8/12/2019 08:13:20	0.0	0.0	0.0
037	8/12/2019 08:14:20	0.0	0.0	0.0
038	8/12/2019 08:15:20	0.0	0.0	0.0
039	8/12/2019 08:16:20	0.0	0.0	0.0
040	8/12/2019 08:17:20	0.0	0.0	0.0
041	8/12/2019 08:18:20	0.0	0.0	0.0
042	8/12/2019 08:19:20	0.0	0.0	0.0
043	8/12/2019 08:20:20	0.0	0.0	0.0
044	8/12/2019 08:21:20	0.0	0.0	0.0
045	8/12/2019 08:22:20	0.0	0.0	0.0
046	8/12/2019 08:23:20	0.0	0.0	0.0
047	8/12/2019 08:24:20	0.0	0.0	0.0
048	8/12/2019 08:25:20	0.0	0.0	0.0
049	8/12/2019 08:26:20	0.0	0.0	0.0
050	8/12/2019 08:27:20	0.0	0.0	0.0
051	8/12/2019 08:28:20	0.0	0.0	0.0
052	8/12/2019 08:29:20	0.0	0.0	0.0
053	8/12/2019 08:30:20	0.0	0.0	0.0
054	8/12/2019 08:31:20	0.0	0.0	0.0
055	8/12/2019 08:32:20	0.0	0.0	0.0
056	8/12/2019 08:33:20	0.0	0.0	0.0
057	8/12/2019 08:34:20	0.0	0.0	0.0
058	8/12/2019 08:35:20	0.0	0.0	0.0
059	8/12/2019 08:36:20	0.0	0.1	0.0
060	8/12/2019 08:37:20	0.0	0.0	0.0
061	8/12/2019 08:38:20	0.0	0.0	0.0
062	8/12/2019 08:39:20	0.0	0.0	0.0
063	8/12/2019 08:40:20	0.0	0.0	0.0
064	8/12/2019 08:41:20	0.0	0.0	0.0
065	8/12/2019 08:42:20	0.0	0.0	0.0
066	8/12/2019 08:43:20	0.0	0.0	0.0
067	8/12/2019 08:44:20	0.0	0.0	0.0
068	8/12/2019 08:45:20	0.0	0.0	0.0
069	8/12/2019 08:46:20	0.0	0.0	0.0

070	8/12/2019 08:47:20	0.0	0.0	0.0
071	8/12/2019 08:48:20	0.0	0.1	0.0
072	8/12/2019 08:49:20	0.0	0.0	0.0
073	8/12/2019 08:50:20	0.0	0.0	0.0
074	8/12/2019 08:51:20	0.0	0.0	0.0
075	8/12/2019 08:52:20	0.0	0.0	0.0
076	8/12/2019 08:53:20	0.0	0.0	0.0
077	8/12/2019 08:54:20	0.0	0.0	0.0
078	8/12/2019 08:55:20	0.0	0.0	0.0
079	8/12/2019 08:56:20	0.0	0.1	0.0
080	8/12/2019 08:57:20	0.0	0.0	0.0
081	8/12/2019 08:58:20	0.0	0.0	0.0
082	8/12/2019 08:59:20	0.0	0.0	0.0
083	8/12/2019 09:00:20	0.0	0.0	0.0
084	8/12/2019 09:01:20	0.0	0.0	0.0
085	8/12/2019 09:02:20	0.0	0.0	0.0
086	8/12/2019 09:03:20	0.0	0.0	0.0
087	8/12/2019 09:04:20	0.0	0.0	0.0
088	8/12/2019 09:05:20	0.0	0.0	0.0
089	8/12/2019 09:06:20	0.0	0.1	0.0
090	8/12/2019 09:07:20	0.0	0.0	0.0
091	8/12/2019 09:08:20	0.0	0.0	0.0
092	8/12/2019 09:09:20	0.0	0.0	0.0
093	8/12/2019 09:10:20	0.0	0.0	0.0
094	8/12/2019 09:11:20	0.0	0.1	0.0
095	8/12/2019 09:12:20	0.0	0.1	0.0
096	8/12/2019 09:13:20	0.0	0.1	0.0
097	8/12/2019 09:14:20	0.1	0.1	0.0
098	8/12/2019 09:15:20	0.0	0.1	0.0
099	8/12/2019 09:16:20	0.0	0.1	0.0
100	8/12/2019 09:17:20	0.0	0.1	0.0
101	8/12/2019 09:18:20	0.0	0.1	0.1
102	8/12/2019 09:19:20	0.0	0.1	0.0
103	8/12/2019 09:20:20	0.0	0.1	0.0
104	8/12/2019 09:21:20	0.0	0.1	0.0
105	8/12/2019 09:22:20	0.0	0.1	0.0
106	8/12/2019 09:23:20	0.0	0.1	0.0
107	8/12/2019 09:24:20	0.0	0.1	0.1
108	8/12/2019 09:25:20	0.0	0.1	0.0
109	8/12/2019 09:26:20	0.0	0.1	0.1
110	8/12/2019 09:27:20	0.0	0.1	0.0
111	8/12/2019 09:28:20	0.0	0.1	0.1
112	8/12/2019 09:29:20	0.0	0.1	0.0
113	8/12/2019 09:30:20	0.1	0.1	0.1
114	8/12/2019 09:31:20	0.0	0.1	0.1
115	8/12/2019 09:32:20	0.1	0.1	0.0
116	8/12/2019 09:33:20	0.0	0.1	0.0
117	8/12/2019 09:34:20	0.0	0.1	0.0

118	8/12/2019 09:35:20	0.0	0.1	0.1
119	8/12/2019 09:36:20	0.0	0.1	0.0
120	8/12/2019 09:37:20	0.0	0.1	0.1
121	8/12/2019 09:38:20	0.1	0.1	0.1
122	8/12/2019 09:39:20	0.1	0.1	0.1
123	8/12/2019 09:40:20	0.1	0.1	0.1
124	8/12/2019 09:41:20	0.1	0.1	0.1
125	8/12/2019 09:42:20	0.1	0.1	0.1
126	8/12/2019 09:43:20	0.1	0.1	0.1
127	8/12/2019 09:44:20	0.1	0.1	0.1
128	8/12/2019 09:45:20	0.1	0.1	0.1
129	8/12/2019 09:46:20	0.1	0.1	0.1
130	8/12/2019 09:47:20	0.1	0.1	0.1
131	8/12/2019 09:48:20	0.0	0.1	0.0
132	8/12/2019 09:49:20	0.0	0.1	0.0
133	8/12/2019 09:50:20	0.0	0.1	0.0
134	8/12/2019 09:51:20	0.0	0.1	0.0
135	8/12/2019 09:52:20	0.0	0.1	0.0
136	8/12/2019 09:53:20	0.0	0.1	0.0
137	8/12/2019 09:54:20	0.0	0.1	0.0
138	8/12/2019 09:55:20	0.0	0.1	0.0
139	8/12/2019 09:56:20	0.0	0.1	0.1
140	8/12/2019 09:57:20	0.0	0.1	0.0
141	8/12/2019 09:58:20	0.0	0.1	0.1
142	8/12/2019 09:59:20	0.0	0.1	0.0
143	8/12/2019 10:00:20	0.0	0.1	0.0
144	8/12/2019 10:01:20	0.0	0.0	0.0
145	8/12/2019 10:02:20	0.0	0.1	0.0
146	8/12/2019 10:03:20	0.0	0.1	0.1
147	8/12/2019 10:04:20	0.0	0.1	0.0
148	8/12/2019 10:05:20	0.0	0.0	0.0
149	8/12/2019 10:06:20	0.0	0.0	0.0
150	8/12/2019 10:07:20	0.0	0.0	0.0
151	8/12/2019 10:08:20	0.0	0.0	0.0
152	8/12/2019 10:09:20	0.0	0.0	0.0
153	8/12/2019 10:10:20	0.0	0.0	0.0
154	8/12/2019 10:11:20	0.0	0.0	0.0
155	8/12/2019 10:12:20	0.0	0.0	0.0
156	8/12/2019 10:13:20	0.0	0.0	0.0
157	8/12/2019 10:14:20	0.0	0.0	0.0
158	8/12/2019 10:15:20	0.0	0.0	0.0
159	8/12/2019 10:16:20	0.0	0.0	0.0
160	8/12/2019 10:17:20	0.0	0.0	0.0
161	8/12/2019 10:18:20	0.0	0.1	0.0
162	8/12/2019 10:19:20	0.0	0.0	0.0
163	8/12/2019 10:20:20	0.0	0.0	0.0
164	8/12/2019 10:21:20	0.0	0.0	0.0
165	8/12/2019 10:22:20	0.0	0.0	0.0

166	8/12/2019 10:23:20	0.0	0.0	0.0
167	8/12/2019 10:24:20	0.0	0.0	0.0
168	8/12/2019 10:25:20	0.0	0.0	0.0
169	8/12/2019 10:26:20	0.0	0.0	0.0
170	8/12/2019 10:27:20	0.0	0.0	0.0
171	8/12/2019 10:28:20	0.0	0.0	0.0
172	8/12/2019 10:29:20	0.0	0.0	0.0
173	8/12/2019 10:30:20	0.0	0.1	0.0
174	8/12/2019 10:31:20	0.0	0.0	0.0
175	8/12/2019 10:32:20	0.0	0.0	0.0
176	8/12/2019 10:33:20	0.0	0.0	0.0
177	8/12/2019 10:34:20	0.0	0.0	0.0
178	8/12/2019 10:35:20	0.0	0.0	0.0
179	8/12/2019 10:36:20	0.0	0.0	0.0
180	8/12/2019 10:37:20	0.0	0.0	0.0
181	8/12/2019 10:38:20	0.0	0.0	0.0
182	8/12/2019 10:39:20	0.0	0.0	0.0
183	8/12/2019 10:40:20	0.0	0.0	0.0
184	8/12/2019 10:41:20	0.0	0.0	0.0
185	8/12/2019 10:42:20	0.0	0.0	0.0
186	8/12/2019 10:43:20	0.0	0.0	0.0
187	8/12/2019 10:44:20	0.0	0.0	0.0
188	8/12/2019 10:45:20	0.0	0.0	0.0
189	8/12/2019 10:46:20	0.0	0.0	0.0
190	8/12/2019 10:47:20	0.0	0.0	0.0
191	8/12/2019 10:48:20	0.0	0.0	0.0
192	8/12/2019 10:49:20	0.0	0.0	0.0
193	8/12/2019 10:50:20	0.0	0.0	0.0
194	8/12/2019 10:51:20	0.0	0.1	0.1
195	8/12/2019 10:52:20	0.0	0.1	0.0
196	8/12/2019 10:53:20	0.0	0.0	0.0
197	8/12/2019 10:54:20	0.0	0.0	0.0
198	8/12/2019 10:55:20	0.0	0.0	0.0
199	8/12/2019 10:56:20	0.0	0.1	0.0
200	8/12/2019 10:57:20	0.0	0.0	0.0
201	8/12/2019 10:58:20	0.0	0.0	0.0
202	8/12/2019 10:59:20	0.0	0.0	0.0
203	8/12/2019 11:00:20	0.0	0.0	0.0
204	8/12/2019 11:01:20	0.0	0.0	0.0
205	8/12/2019 11:02:20	0.0	0.0	0.0
206	8/12/2019 11:03:20	0.0	0.0	0.0
207	8/12/2019 11:04:20	0.0	0.0	0.0
208	8/12/2019 11:05:20	0.0	0.0	0.0
209	8/12/2019 11:06:20	0.0	0.0	0.0
210	8/12/2019 11:07:20	0.0	0.0	0.0
211	8/12/2019 11:08:20	0.0	0.0	0.0
212	8/12/2019 11:09:20	0.0	0.0	0.0
213	8/12/2019 11:10:20	0.0	0.0	0.0

214	8/12/2019 11:11:20	0.0	0.0	0.0
215	8/12/2019 11:12:20	0.0	0.0	0.0
216	8/12/2019 11:13:20	0.0	0.0	0.0
217	8/12/2019 11:14:20	0.0	0.0	0.0
218	8/12/2019 11:15:20	0.0	0.0	0.0
219	8/12/2019 11:16:20	0.0	0.0	0.0
220	8/12/2019 11:17:20	0.0	0.0	0.0
221	8/12/2019 11:18:20	0.0	0.0	0.0
222	8/12/2019 11:19:20	0.0	0.0	0.0
223	8/12/2019 11:20:20	0.0	0.0	0.0
224	8/12/2019 11:21:20	0.0	0.0	0.0
225	8/12/2019 11:22:20	0.0	0.0	0.0
226	8/12/2019 11:23:20	0.0	0.0	0.0
227	8/12/2019 11:24:20	0.0	0.0	0.0
228	8/12/2019 11:25:20	0.0	0.0	0.0
229	8/12/2019 11:26:20	0.0	0.0	0.0
230	8/12/2019 11:27:20	0.0	0.0	0.0
231	8/12/2019 11:28:20	0.0	0.0	0.0
232	8/12/2019 11:29:20	0.0	0.0	0.0
233	8/12/2019 11:30:20	0.0	0.0	0.0
234	8/12/2019 11:31:20	0.0	0.0	0.0
235	8/12/2019 11:32:20	0.0	0.0	0.0
236	8/12/2019 11:33:20	0.0	0.0	0.0
237	8/12/2019 11:34:20	0.0	0.0	0.0
238	8/12/2019 11:35:20	0.0	0.0	0.0
239	8/12/2019 11:36:20	0.0	0.0	0.0
240	8/12/2019 11:37:20	0.0	0.0	0.0
241	8/12/2019 11:38:20	0.0	0.0	0.0
242	8/12/2019 11:39:20	0.0	0.0	0.0
243	8/12/2019 11:40:20	0.0	0.0	0.0
244	8/12/2019 11:41:20	0.0	0.0	0.0
245	8/12/2019 11:42:20	0.0	0.0	0.0
246	8/12/2019 11:43:20	0.0	0.0	0.0
247	8/12/2019 11:44:20	0.0	0.0	0.0
248	8/12/2019 11:45:20	0.0	0.0	0.0
249	8/12/2019 11:46:20	0.0	0.0	0.0
250	8/12/2019 11:47:20	0.0	0.0	0.0
251	8/12/2019 11:48:20	0.0	0.0	0.0
252	8/12/2019 11:49:20	0.0	0.0	0.0
253	8/12/2019 11:50:20	0.0	0.0	0.0
254	8/12/2019 11:51:20	0.0	0.0	0.0
255	8/12/2019 11:52:20	0.0	0.0	0.0
256	8/12/2019 11:53:20	0.0	0.0	0.0
257	8/12/2019 11:54:20	0.0	0.0	0.0
258	8/12/2019 11:55:20	0.0	0.0	0.0
259	8/12/2019 11:56:20	0.0	0.0	0.0
260	8/12/2019 11:57:20	0.0	0.0	0.0
261	8/12/2019 11:58:20	0.0	0.0	0.0

262	8/12/2019 11:59:20	0.0	0.0	0.0
263	8/12/2019 12:00:20	0.0	0.0	0.0
264	8/12/2019 12:01:20	0.0	0.0	0.0
265	8/12/2019 12:02:20	0.0	0.0	0.0
266	8/12/2019 12:03:20	0.0	0.0	0.0
267	8/12/2019 12:04:20	0.0	0.0	0.0
268	8/12/2019 12:05:20	0.0	0.0	0.0
269	8/12/2019 12:06:20	0.0	0.0	0.0
270	8/12/2019 12:07:20	0.0	0.0	0.0
271	8/12/2019 12:08:20	0.0	0.0	0.0
272	8/12/2019 12:09:20	0.0	0.0	0.0
273	8/12/2019 12:10:20	0.0	0.0	0.0
274	8/12/2019 12:11:20	0.0	0.0	0.0
275	8/12/2019 12:12:20	0.0	0.0	0.0
276	8/12/2019 12:13:20	0.0	0.0	0.0
277	8/12/2019 12:14:20	0.0	0.0	0.0
278	8/12/2019 12:15:20	0.0	0.0	0.0
279	8/12/2019 12:16:20	0.0	0.0	0.0
280	8/12/2019 12:17:20	0.0	0.0	0.0
281	8/12/2019 12:18:20	0.0	0.0	0.0
282	8/12/2019 12:19:20	0.0	0.0	0.0
283	8/12/2019 12:20:20	0.0	0.0	0.0
284	8/12/2019 12:21:20	0.0	0.0	0.0
285	8/12/2019 12:22:20	0.0	0.0	0.0
286	8/12/2019 12:23:20	0.0	0.0	0.0
287	8/12/2019 12:24:20	0.0	0.0	0.0
288	8/12/2019 12:25:20	0.0	0.0	0.0
289	8/12/2019 12:26:20	0.0	0.0	0.0
290	8/12/2019 12:27:20	0.0	0.0	0.0
291	8/12/2019 12:28:20	0.0	0.0	0.0
292	8/12/2019 12:29:20	0.0	0.0	0.0
293	8/12/2019 12:30:20	0.0	0.0	0.0
294	8/12/2019 12:31:20	0.0	0.0	0.0
295	8/12/2019 12:32:20	0.0	0.0	0.0
296	8/12/2019 12:33:20	0.0	0.0	0.0
297	8/12/2019 12:34:20	0.0	0.0	0.0
298	8/12/2019 12:35:20	0.0	0.0	0.0
299	8/12/2019 12:36:20	0.0	0.0	0.0
300	8/12/2019 12:37:20	0.0	0.0	0.0
301	8/12/2019 12:38:20	0.0	0.0	0.0
302	8/12/2019 12:39:20	0.0	0.0	0.0
303	8/12/2019 12:40:20	0.0	0.0	0.0
304	8/12/2019 12:41:20	0.0	0.0	0.0
305	8/12/2019 12:42:20	0.0	0.0	0.0
306	8/12/2019 12:43:20	0.0	0.0	0.0
307	8/12/2019 12:44:20	0.0	0.0	0.0
308	8/12/2019 12:45:20	0.0	0.0	0.0
309	8/12/2019 12:46:20	0.0	0.0	0.0

310	8/12/2019 12:47:20	0.0	0.0	0.0
311	8/12/2019 12:48:20	0.0	0.0	0.0
312	8/12/2019 12:49:20	0.0	0.0	0.0
313	8/12/2019 12:50:20	0.0	0.0	0.0
314	8/12/2019 12:51:20	0.0	0.0	0.0
315	8/12/2019 12:52:20	0.0	0.0	0.0
316	8/12/2019 12:53:20	0.0	0.0	0.0
317	8/12/2019 12:54:20	0.0	0.0	0.0
318	8/12/2019 12:55:20	0.0	0.0	0.0
319	8/12/2019 12:56:20	0.0	0.0	0.0
320	8/12/2019 12:57:20	0.0	0.0	0.0
321	8/12/2019 12:58:20	0.0	0.0	0.0
322	8/12/2019 12:59:20	0.0	0.0	0.0
323	8/12/2019 13:00:20	0.0	0.0	0.0
324	8/12/2019 13:01:20	0.0	0.0	0.0
325	8/12/2019 13:02:20	0.0	0.0	0.0
326	8/12/2019 13:03:20	0.0	0.0	0.0
327	8/12/2019 13:04:20	0.0	0.0	0.0
328	8/12/2019 13:05:20	0.0	0.0	0.0
329	8/12/2019 13:06:20	0.0	0.0	0.0
330	8/12/2019 13:07:20	0.0	0.0	0.0
331	8/12/2019 13:08:20	0.0	0.0	0.0
332	8/12/2019 13:09:20	0.0	0.0	0.0
333	8/12/2019 13:10:20	0.0	0.0	0.0
334	8/12/2019 13:11:20	0.0	0.0	0.0
335	8/12/2019 13:12:20	0.0	0.1	0.0
336	8/12/2019 13:13:20	0.0	0.0	0.0
337	8/12/2019 13:14:20	0.0	0.0	0.0
338	8/12/2019 13:15:20	0.0	0.0	0.0
339	8/12/2019 13:16:20	0.0	0.0	0.0
340	8/12/2019 13:17:20	0.0	0.0	0.0
341	8/12/2019 13:18:20	0.0	0.0	0.0
342	8/12/2019 13:19:20	0.0	0.0	0.0
343	8/12/2019 13:20:20	0.0	0.0	0.0
344	8/12/2019 13:21:20	0.0	0.0	0.0
345	8/12/2019 13:22:20	0.0	0.0	0.0
346	8/12/2019 13:23:20	0.0	0.0	0.0
347	8/12/2019 13:24:20	0.0	0.0	0.0
348	8/12/2019 13:25:20	0.0	0.0	0.0
349	8/12/2019 13:26:20	0.0	0.0	0.0
350	8/12/2019 13:27:20	0.0	0.0	0.0
351	8/12/2019 13:28:20	0.0	0.0	0.0
352	8/12/2019 13:29:20	0.0	0.0	0.0
353	8/12/2019 13:30:20	0.0	0.0	0.0
354	8/12/2019 13:31:20	0.0	0.0	0.0
355	8/12/2019 13:32:20	0.0	0.0	0.0
356	8/12/2019 13:33:20	0.0	0.0	0.0
357	8/12/2019 13:34:20	0.0	0.0	0.0

358	8/12/2019 13:35:20	0.0	0.0	0.0
359	8/12/2019 13:36:20	0.0	0.0	0.0
360	8/12/2019 13:37:20	0.0	0.0	0.0
361	8/12/2019 13:38:20	0.0	0.0	0.0
362	8/12/2019 13:39:20	0.0	0.0	0.0
363	8/12/2019 13:40:20	0.0	0.0	0.0
364	8/12/2019 13:41:20	0.0	0.0	0.0
365	8/12/2019 13:42:20	0.0	0.0	0.0
366	8/12/2019 13:43:20	0.0	0.0	0.0
367	8/12/2019 13:44:20	0.0	0.0	0.0
368	8/12/2019 13:45:20	0.0	0.0	0.0
369	8/12/2019 13:46:20	0.0	0.0	0.0
370	8/12/2019 13:47:20	0.0	0.0	0.0
371	8/12/2019 13:48:20	0.0	0.0	0.0
372	8/12/2019 13:49:20	0.0	0.0	0.0
373	8/12/2019 13:50:20	0.0	0.0	0.0
374	8/12/2019 13:51:20	0.0	0.0	0.0
375	8/12/2019 13:52:20	0.0	0.0	0.0
376	8/12/2019 13:53:20	0.0	0.0	0.0
377	8/12/2019 13:54:20	0.0	0.0	0.0
378	8/12/2019 13:55:20	0.0	0.0	0.0
379	8/12/2019 13:56:20	0.0	0.0	0.0
380	8/12/2019 13:57:20	0.0	0.0	0.0
381	8/12/2019 13:58:20	0.0	0.0	0.0
382	8/12/2019 13:59:20	0.0	0.0	0.0
383	8/12/2019 14:00:20	0.0	0.0	0.0
384	8/12/2019 14:01:20	0.0	0.0	0.0
385	8/12/2019 14:02:20	0.0	0.0	0.0
386	8/12/2019 14:03:20	0.0	0.0	0.0
387	8/12/2019 14:04:20	0.0	0.0	0.0
388	8/12/2019 14:05:20	0.0	0.0	0.0
389	8/12/2019 14:06:20	0.0	0.0	0.0
390	8/12/2019 14:07:20	0.0	0.0	0.0
391	8/12/2019 14:08:20	0.0	0.0	0.0
392	8/12/2019 14:09:20	0.0	0.0	0.0
393	8/12/2019 14:10:20	0.0	0.0	0.0
394	8/12/2019 14:11:20	0.0	0.0	0.0
395	8/12/2019 14:12:20	0.0	0.0	0.0
396	8/12/2019 14:13:20	0.0	0.0	0.0
397	8/12/2019 14:14:20	0.0	0.0	0.0
398	8/12/2019 14:15:20	0.0	0.0	0.0
399	8/12/2019 14:16:20	0.0	0.0	0.0
400	8/12/2019 14:17:20	0.0	0.0	0.0
401	8/12/2019 14:18:20	0.0	0.0	0.0
402	8/12/2019 14:19:20	0.0	0.0	0.0
403	8/12/2019 14:20:20	0.0	0.0	0.0
404	8/12/2019 14:21:20	0.0	0.0	0.0
Peak		0.2	0.2	0.2

Min	0.0	0.0	0.0
Average	0.0	0.0	0.0

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/12/2019 07:38:20	0.0	---
002	8/12/2019 07:39:20	0.0	---
003	8/12/2019 07:40:20	0.0	---
004	8/12/2019 07:41:20	0.0	---
005	8/12/2019 07:42:20	0.0	---
006	8/12/2019 07:43:20	0.0	---
007	8/12/2019 07:44:20	0.0	---
008	8/12/2019 07:45:20	0.0	---
009	8/12/2019 07:46:20	0.0	---
010	8/12/2019 07:47:20	0.0	---
011	8/12/2019 07:48:20	0.0	---
012	8/12/2019 07:49:20	0.0	---
013	8/12/2019 07:50:20	0.0	---
014	8/12/2019 07:51:20	0.0	---
015	8/12/2019 07:52:20	0.0	0.1
016	8/12/2019 07:53:20	0.0	0.1
017	8/12/2019 07:54:20	0.0	0.1
018	8/12/2019 07:55:20	0.0	0.1
019	8/12/2019 07:56:20	0.0	0.1
020	8/12/2019 07:57:20	0.0	0.1
021	8/12/2019 07:58:20	0.0	0.1
022	8/12/2019 07:59:20	0.0	0.1
023	8/12/2019 08:00:20	0.0	0.1
024	8/12/2019 08:01:20	0.0	0.1
025	8/12/2019 08:02:20	0.0	0.1
026	8/12/2019 08:03:20	0.0	0.1
027	8/12/2019 08:04:20	0.0	0.1
028	8/12/2019 08:05:20	0.0	0.1
029	8/12/2019 08:06:20	0.0	0.1
030	8/12/2019 08:07:20	0.0	0.1
031	8/12/2019 08:08:20	0.0	0.1
032	8/12/2019 08:09:20	0.0	0.1
033	8/12/2019 08:10:20	0.0	0.1
034	8/12/2019 08:11:20	0.0	0.1
035	8/12/2019 08:12:20	0.0	0.1
036	8/12/2019 08:13:20	0.0	0.0
037	8/12/2019 08:14:20	0.0	0.0
038	8/12/2019 08:15:20	0.0	0.0
039	8/12/2019 08:16:20	0.0	0.0
040	8/12/2019 08:17:20	0.0	0.0
041	8/12/2019 08:18:20	0.0	0.0

042	8/12/2019 08:19:20	0.0	0.0
043	8/12/2019 08:20:20	0.0	0.0
044	8/12/2019 08:21:20	0.0	0.0
045	8/12/2019 08:22:20	0.0	0.0
046	8/12/2019 08:23:20	0.0	0.0
047	8/12/2019 08:24:20	0.0	0.0
048	8/12/2019 08:25:20	0.0	0.0
049	8/12/2019 08:26:20	0.0	0.0
050	8/12/2019 08:27:20	0.0	0.0
051	8/12/2019 08:28:20	0.0	0.0
052	8/12/2019 08:29:20	0.0	0.0
053	8/12/2019 08:30:20	0.0	0.0
054	8/12/2019 08:31:20	0.0	0.0
055	8/12/2019 08:32:20	0.0	0.0
056	8/12/2019 08:33:20	0.0	0.0
057	8/12/2019 08:34:20	0.0	0.0
058	8/12/2019 08:35:20	0.0	0.0
059	8/12/2019 08:36:20	0.0	0.0
060	8/12/2019 08:37:20	0.0	0.0
061	8/12/2019 08:38:20	0.0	0.0
062	8/12/2019 08:39:20	0.0	0.0
063	8/12/2019 08:40:20	0.0	0.0
064	8/12/2019 08:41:20	0.0	0.0
065	8/12/2019 08:42:20	0.0	0.0
066	8/12/2019 08:43:20	0.0	0.0
067	8/12/2019 08:44:20	0.0	0.0
068	8/12/2019 08:45:20	0.0	0.0
069	8/12/2019 08:46:20	0.0	0.0
070	8/12/2019 08:47:20	0.0	0.0
071	8/12/2019 08:48:20	0.0	0.0
072	8/12/2019 08:49:20	0.0	0.0
073	8/12/2019 08:50:20	0.0	0.0
074	8/12/2019 08:51:20	0.0	0.0
075	8/12/2019 08:52:20	0.0	0.0
076	8/12/2019 08:53:20	0.0	0.0
077	8/12/2019 08:54:20	0.0	0.0
078	8/12/2019 08:55:20	0.0	0.0
079	8/12/2019 08:56:20	0.0	0.0
080	8/12/2019 08:57:20	0.0	0.0
081	8/12/2019 08:58:20	0.0	0.0
082	8/12/2019 08:59:20	0.0	0.0
083	8/12/2019 09:00:20	0.0	0.0
084	8/12/2019 09:01:20	0.0	0.0
085	8/12/2019 09:02:20	0.0	0.0
086	8/12/2019 09:03:20	0.0	0.0
087	8/12/2019 09:04:20	0.0	0.0
088	8/12/2019 09:05:20	0.0	0.0
089	8/12/2019 09:06:20	0.0	0.0

090	8/12/2019 09:07:20	0.0	0.0
091	8/12/2019 09:08:20	0.0	0.0
092	8/12/2019 09:09:20	0.0	0.0
093	8/12/2019 09:10:20	0.0	0.0
094	8/12/2019 09:11:20	0.0	0.0
095	8/12/2019 09:12:20	0.0	0.0
096	8/12/2019 09:13:20	0.0	0.0
097	8/12/2019 09:14:20	0.0	0.0
098	8/12/2019 09:15:20	0.0	0.0
099	8/12/2019 09:16:20	0.0	0.0
100	8/12/2019 09:17:20	0.0	0.0
101	8/12/2019 09:18:20	0.0	0.0
102	8/12/2019 09:19:20	0.0	0.0
103	8/12/2019 09:20:20	0.0	0.0
104	8/12/2019 09:21:20	0.0	0.0
105	8/12/2019 09:22:20	0.0	0.0
106	8/12/2019 09:23:20	0.0	0.0
107	8/12/2019 09:24:20	0.0	0.0
108	8/12/2019 09:25:20	0.0	0.0
109	8/12/2019 09:26:20	0.0	0.0
110	8/12/2019 09:27:20	0.0	0.0
111	8/12/2019 09:28:20	0.0	0.0
112	8/12/2019 09:29:20	0.0	0.0
113	8/12/2019 09:30:20	0.0	0.0
114	8/12/2019 09:31:20	0.0	0.0
115	8/12/2019 09:32:20	0.0	0.0
116	8/12/2019 09:33:20	0.0	0.0
117	8/12/2019 09:34:20	0.0	0.0
118	8/12/2019 09:35:20	0.0	0.0
119	8/12/2019 09:36:20	0.0	0.0
120	8/12/2019 09:37:20	0.0	0.0
121	8/12/2019 09:38:20	0.0	0.1
122	8/12/2019 09:39:20	0.0	0.1
123	8/12/2019 09:40:20	0.0	0.1
124	8/12/2019 09:41:20	0.0	0.1
125	8/12/2019 09:42:20	0.0	0.1
126	8/12/2019 09:43:20	0.0	0.1
127	8/12/2019 09:44:20	0.0	0.1
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129	8/12/2019 09:46:20	0.0	0.1
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131	8/12/2019 09:48:20	0.0	0.1
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133	8/12/2019 09:50:20	0.0	0.1
134	8/12/2019 09:51:20	0.0	0.1
135	8/12/2019 09:52:20	0.0	0.1
136	8/12/2019 09:53:20	0.0	0.1
137	8/12/2019 09:54:20	0.0	0.1

138	8/12/2019 09:55:20	0.0	0.1
139	8/12/2019 09:56:20	0.0	0.1
140	8/12/2019 09:57:20	0.0	0.0
141	8/12/2019 09:58:20	0.0	0.0
142	8/12/2019 09:59:20	0.0	0.0
143	8/12/2019 10:00:20	0.0	0.0
144	8/12/2019 10:01:20	0.0	0.0
145	8/12/2019 10:02:20	0.0	0.0
146	8/12/2019 10:03:20	0.0	0.0
147	8/12/2019 10:04:20	0.0	0.0
148	8/12/2019 10:05:20	0.0	0.0
149	8/12/2019 10:06:20	0.0	0.0
150	8/12/2019 10:07:20	0.0	0.0
151	8/12/2019 10:08:20	0.0	0.0
152	8/12/2019 10:09:20	0.0	0.0
153	8/12/2019 10:10:20	0.0	0.0
154	8/12/2019 10:11:20	0.0	0.0
155	8/12/2019 10:12:20	0.0	0.0
156	8/12/2019 10:13:20	0.0	0.0
157	8/12/2019 10:14:20	0.0	0.0
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159	8/12/2019 10:16:20	0.0	0.0
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161	8/12/2019 10:18:20	0.0	0.0
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163	8/12/2019 10:20:20	0.0	0.0
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165	8/12/2019 10:22:20	0.0	0.0
166	8/12/2019 10:23:20	0.0	0.0
167	8/12/2019 10:24:20	0.0	0.0
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169	8/12/2019 10:26:20	0.0	0.0
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173	8/12/2019 10:30:20	0.0	0.0
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189	8/12/2019 10:46:20	0.0	0.0
190	8/12/2019 10:47:20	0.0	0.0
191	8/12/2019 10:48:20	0.0	0.0
192	8/12/2019 10:49:20	0.0	0.0
193	8/12/2019 10:50:20	0.0	0.0
194	8/12/2019 10:51:20	0.0	0.0
195	8/12/2019 10:52:20	0.0	0.0
196	8/12/2019 10:53:20	0.0	0.0
197	8/12/2019 10:54:20	0.0	0.0
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199	8/12/2019 10:56:20	0.0	0.0
200	8/12/2019 10:57:20	0.0	0.0
201	8/12/2019 10:58:20	0.0	0.0
202	8/12/2019 10:59:20	0.0	0.0
203	8/12/2019 11:00:20	0.0	0.0
204	8/12/2019 11:01:20	0.0	0.0
205	8/12/2019 11:02:20	0.0	0.0
206	8/12/2019 11:03:20	0.0	0.0
207	8/12/2019 11:04:20	0.0	0.0
208	8/12/2019 11:05:20	0.0	0.0
209	8/12/2019 11:06:20	0.0	0.0
210	8/12/2019 11:07:20	0.0	0.0
211	8/12/2019 11:08:20	0.0	0.0
212	8/12/2019 11:09:20	0.0	0.0
213	8/12/2019 11:10:20	0.0	0.0
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221	8/12/2019 11:18:20	0.0	0.0
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223	8/12/2019 11:20:20	0.0	0.0
224	8/12/2019 11:21:20	0.0	0.0
225	8/12/2019 11:22:20	0.0	0.0
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227	8/12/2019 11:24:20	0.0	0.0
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230	8/12/2019 11:27:20	0.0	0.0
231	8/12/2019 11:28:20	0.0	0.0
232	8/12/2019 11:29:20	0.0	0.0
233	8/12/2019 11:30:20	0.0	0.0

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236	8/12/2019 11:33:20	0.0	0.0
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242	8/12/2019 11:39:20	0.0	0.0
243	8/12/2019 11:40:20	0.0	0.0
244	8/12/2019 11:41:20	0.0	0.0
245	8/12/2019 11:42:20	0.0	0.0
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258	8/12/2019 11:55:20	0.0	0.0
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260	8/12/2019 11:57:20	0.0	0.0
261	8/12/2019 11:58:20	0.0	0.0
262	8/12/2019 11:59:20	0.0	0.0
263	8/12/2019 12:00:20	0.0	0.0
264	8/12/2019 12:01:20	0.0	0.0
265	8/12/2019 12:02:20	0.0	0.0
266	8/12/2019 12:03:20	0.0	0.0
267	8/12/2019 12:04:20	0.0	0.0
268	8/12/2019 12:05:20	0.0	0.0
269	8/12/2019 12:06:20	0.0	0.0
270	8/12/2019 12:07:20	0.0	0.0
271	8/12/2019 12:08:20	0.0	0.0
272	8/12/2019 12:09:20	0.0	0.0
273	8/12/2019 12:10:20	0.0	0.0
274	8/12/2019 12:11:20	0.0	0.0
275	8/12/2019 12:12:20	0.0	0.0
276	8/12/2019 12:13:20	0.0	0.0
277	8/12/2019 12:14:20	0.0	0.0
278	8/12/2019 12:15:20	0.0	0.0
279	8/12/2019 12:16:20	0.0	0.0
280	8/12/2019 12:17:20	0.0	0.0
281	8/12/2019 12:18:20	0.0	0.0

282	8/12/2019 12:19:20	0.0	0.0
283	8/12/2019 12:20:20	0.0	0.0
284	8/12/2019 12:21:20	0.0	0.0
285	8/12/2019 12:22:20	0.0	0.0
286	8/12/2019 12:23:20	0.0	0.0
287	8/12/2019 12:24:20	0.0	0.0
288	8/12/2019 12:25:20	0.0	0.0
289	8/12/2019 12:26:20	0.0	0.0
290	8/12/2019 12:27:20	0.0	0.0
291	8/12/2019 12:28:20	0.0	0.0
292	8/12/2019 12:29:20	0.0	0.0
293	8/12/2019 12:30:20	0.0	0.0
294	8/12/2019 12:31:20	0.0	0.0
295	8/12/2019 12:32:20	0.0	0.0
296	8/12/2019 12:33:20	0.0	0.0
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298	8/12/2019 12:35:20	0.0	0.0
299	8/12/2019 12:36:20	0.0	0.0
300	8/12/2019 12:37:20	0.0	0.0
301	8/12/2019 12:38:20	0.0	0.0
302	8/12/2019 12:39:20	0.0	0.0
303	8/12/2019 12:40:20	0.0	0.0
304	8/12/2019 12:41:20	0.0	0.0
305	8/12/2019 12:42:20	0.0	0.0
306	8/12/2019 12:43:20	0.0	0.0
307	8/12/2019 12:44:20	0.0	0.0
308	8/12/2019 12:45:20	0.0	0.0
309	8/12/2019 12:46:20	0.0	0.0
310	8/12/2019 12:47:20	0.0	0.0
311	8/12/2019 12:48:20	0.0	0.0
312	8/12/2019 12:49:20	0.0	0.0
313	8/12/2019 12:50:20	0.0	0.0
314	8/12/2019 12:51:20	0.0	0.0
315	8/12/2019 12:52:20	0.0	0.0
316	8/12/2019 12:53:20	0.0	0.0
317	8/12/2019 12:54:20	0.0	0.0
318	8/12/2019 12:55:20	0.0	0.0
319	8/12/2019 12:56:20	0.0	0.0
320	8/12/2019 12:57:20	0.0	0.0
321	8/12/2019 12:58:20	0.0	0.0
322	8/12/2019 12:59:20	0.0	0.0
323	8/12/2019 13:00:20	0.0	0.0
324	8/12/2019 13:01:20	0.0	0.0
325	8/12/2019 13:02:20	0.0	0.0
326	8/12/2019 13:03:20	0.0	0.0
327	8/12/2019 13:04:20	0.0	0.0
328	8/12/2019 13:05:20	0.0	0.0
329	8/12/2019 13:06:20	0.0	0.0

330	8/12/2019 13:07:20	0.0	0.0
331	8/12/2019 13:08:20	0.0	0.0
332	8/12/2019 13:09:20	0.0	0.0
333	8/12/2019 13:10:20	0.0	0.0
334	8/12/2019 13:11:20	0.0	0.0
335	8/12/2019 13:12:20	0.0	0.0
336	8/12/2019 13:13:20	0.0	0.0
337	8/12/2019 13:14:20	0.0	0.0
338	8/12/2019 13:15:20	0.0	0.0
339	8/12/2019 13:16:20	0.0	0.0
340	8/12/2019 13:17:20	0.0	0.0
341	8/12/2019 13:18:20	0.0	0.0
342	8/12/2019 13:19:20	0.0	0.0
343	8/12/2019 13:20:20	0.0	0.0
344	8/12/2019 13:21:20	0.0	0.0
345	8/12/2019 13:22:20	0.0	0.0
346	8/12/2019 13:23:20	0.0	0.0
347	8/12/2019 13:24:20	0.0	0.0
348	8/12/2019 13:25:20	0.0	0.0
349	8/12/2019 13:26:20	0.0	0.0
350	8/12/2019 13:27:20	0.0	0.0
351	8/12/2019 13:28:20	0.0	0.0
352	8/12/2019 13:29:20	0.0	0.0
353	8/12/2019 13:30:20	0.0	0.0
354	8/12/2019 13:31:20	0.0	0.0
355	8/12/2019 13:32:20	0.0	0.0
356	8/12/2019 13:33:20	0.0	0.0
357	8/12/2019 13:34:20	0.0	0.0
358	8/12/2019 13:35:20	0.0	0.0
359	8/12/2019 13:36:20	0.0	0.0
360	8/12/2019 13:37:20	0.0	0.0
361	8/12/2019 13:38:20	0.0	0.0
362	8/12/2019 13:39:20	0.0	0.0
363	8/12/2019 13:40:20	0.0	0.0
364	8/12/2019 13:41:20	0.0	0.0
365	8/12/2019 13:42:20	0.0	0.0
366	8/12/2019 13:43:20	0.0	0.0
367	8/12/2019 13:44:20	0.0	0.0
368	8/12/2019 13:45:20	0.0	0.0
369	8/12/2019 13:46:20	0.0	0.0
370	8/12/2019 13:47:20	0.0	0.0
371	8/12/2019 13:48:20	0.0	0.0
372	8/12/2019 13:49:20	0.0	0.0
373	8/12/2019 13:50:20	0.0	0.0
374	8/12/2019 13:51:20	0.0	0.0
375	8/12/2019 13:52:20	0.0	0.0
376	8/12/2019 13:53:20	0.0	0.0
377	8/12/2019 13:54:20	0.0	0.0

378	8/12/2019 13:55:20	0.0	0.0
379	8/12/2019 13:56:20	0.0	0.0
380	8/12/2019 13:57:20	0.0	0.0
381	8/12/2019 13:58:20	0.0	0.0
382	8/12/2019 13:59:20	0.0	0.0
383	8/12/2019 14:00:20	0.0	0.0
384	8/12/2019 14:01:20	0.0	0.0
385	8/12/2019 14:02:20	0.0	0.0
386	8/12/2019 14:03:20	0.0	0.0
387	8/12/2019 14:04:20	0.0	0.0
388	8/12/2019 14:05:20	0.0	0.0
389	8/12/2019 14:06:20	0.0	0.0
390	8/12/2019 14:07:20	0.0	0.0
391	8/12/2019 14:08:20	0.0	0.0
392	8/12/2019 14:09:20	0.0	0.0
393	8/12/2019 14:10:20	0.0	0.0
394	8/12/2019 14:11:20	0.0	0.0
395	8/12/2019 14:12:20	0.0	0.0
396	8/12/2019 14:13:20	0.0	0.0
397	8/12/2019 14:14:20	0.0	0.0
398	8/12/2019 14:15:20	0.0	0.0
399	8/12/2019 14:16:20	0.0	0.0
400	8/12/2019 14:17:20	0.0	0.0
401	8/12/2019 14:18:20	0.0	0.0
402	8/12/2019 14:19:20	0.0	0.0
403	8/12/2019 14:20:20	0.0	0.0
404	8/12/2019 14:21:20	0.0	0.0

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19/08/13 06:13

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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-909007
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Pause in Menu Mode

Site ID 12345678
User ID 12345678

Begin 8/13/2019 06:13:18
End 8/13/2019 06:16:29
Sample Period(s) 60
Number of Records 3

```
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030105U9
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      25.0
TWA Alarm       10.0
Measurement Gas Isobutylene
Calibration Time        8/12/2019 07:29
Peak    0.0
Min     0.0
Average 0.0

************************************************************
Datalog
                PID(ppm)        PID(ppm)        PID(ppm)
Index   Date/Time       (Avg)   (Max)   (Real)
001     8/13/2019 06:14:18      0.0     0.0     0.0
002     8/13/2019 06:15:18      0.0     0.0     0.0
003     8/13/2019 06:16:18      0.0     0.0     0.0
Peak            0.0     0.0     0.0
Min             0.0     0.0     0.0
Average         0.0     0.0     0.0

************************************************************
TWA/STEL
                PID(ppm)        PID(ppm)
Index   Date/Time       (TWA)   (STEL)
001     8/13/2019 06:14:18      0.0     ---
002     8/13/2019 06:15:18      0.0     ---
003     8/13/2019 06:16:18      0.0     ---
============================================================
19/08/13 06:22
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000(PGM-7320)
Unit SN 592-909007
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Power Down
```

```
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/13/2019 06:22:40
End     8/13/2019 09:59:12
Sample Period(s)        60
Number of Records       216
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030105U9
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      25.0
TWA Alarm       10.0
Measurement Gas Isobutylene
Calibration Time        8/13/2019 06:18
Peak    0.1
Min     0.0
Average 0.1

************************************************************
Datalog
                PID(ppm)        PID(ppm)        PID(ppm)
Index   Date/Time       (Avg)   (Max)   (Real)
001     8/13/2019 06:23:40      0.1     0.1     0.1
002     8/13/2019 06:24:40      0.1     0.1     0.1
003     8/13/2019 06:25:40      0.1     0.1     0.1
004     8/13/2019 06:26:40      0.1     0.1     0.1
005     8/13/2019 06:27:40      0.1     0.1     0.1
006     8/13/2019 06:28:40      0.1     0.1     0.1
007     8/13/2019 06:29:40      0.1     0.1     0.1
008     8/13/2019 06:30:40      0.1     0.1     0.1
009     8/13/2019 06:31:40      0.1     0.1     0.1
010     8/13/2019 06:32:40      0.1     0.1     0.1
011     8/13/2019 06:33:40      0.1     0.1     0.1
012     8/13/2019 06:34:40      0.1     0.1     0.1
013     8/13/2019 06:35:40      0.1     0.1     0.1
014     8/13/2019 06:36:40      0.1     0.1     0.1
015     8/13/2019 06:37:40      0.1     0.1     0.1
016     8/13/2019 06:38:40      0.1     0.1     0.1
017     8/13/2019 06:39:40      0.1     0.1     0.1
018     8/13/2019 06:40:40      0.1     0.1     0.1
019     8/13/2019 06:41:40      0.1     0.1     0.1
```

020	8/13/2019 06:42:40	0.1	0.1	0.1
021	8/13/2019 06:43:40	0.1	0.1	0.1
022	8/13/2019 06:44:40	0.1	0.1	0.1
023	8/13/2019 06:45:40	0.1	0.1	0.1
024	8/13/2019 06:46:40	0.1	0.1	0.1
025	8/13/2019 06:47:40	0.1	0.1	0.1
026	8/13/2019 06:48:40	0.1	0.1	0.1
027	8/13/2019 06:49:40	0.1	0.1	0.1
028	8/13/2019 06:50:40	0.1	0.1	0.1
029	8/13/2019 06:51:40	0.1	0.1	0.1
030	8/13/2019 06:52:40	0.1	0.1	0.1
031	8/13/2019 06:53:40	0.1	0.1	0.1
032	8/13/2019 06:54:40	0.1	0.1	0.1
033	8/13/2019 06:55:40	0.1	0.1	0.1
034	8/13/2019 06:56:40	0.1	0.1	0.1
035	8/13/2019 06:57:40	0.1	0.1	0.1
036	8/13/2019 06:58:40	0.1	0.1	0.1
037	8/13/2019 06:59:40	0.1	0.1	0.1
038	8/13/2019 07:00:40	0.1	0.1	0.1
039	8/13/2019 07:01:40	0.1	0.1	0.1
040	8/13/2019 07:02:40	0.1	0.1	0.1
041	8/13/2019 07:03:40	0.1	0.1	0.1
042	8/13/2019 07:04:40	0.1	0.1	0.1
043	8/13/2019 07:05:40	0.1	0.1	0.1
044	8/13/2019 07:06:40	0.1	0.1	0.1
045	8/13/2019 07:07:40	0.1	0.1	0.1
046	8/13/2019 07:08:40	0.1	0.1	0.1
047	8/13/2019 07:09:40	0.1	0.1	0.1
048	8/13/2019 07:10:40	0.1	0.1	0.1
049	8/13/2019 07:11:40	0.1	0.1	0.1
050	8/13/2019 07:12:40	0.1	0.1	0.1
051	8/13/2019 07:13:40	0.1	0.1	0.1
052	8/13/2019 07:14:40	0.1	0.1	0.1
053	8/13/2019 07:15:40	0.1	0.1	0.1
054	8/13/2019 07:16:40	0.1	0.1	0.1
055	8/13/2019 07:17:40	0.1	0.1	0.1
056	8/13/2019 07:18:40	0.1	0.1	0.1
057	8/13/2019 07:19:40	0.1	0.1	0.1
058	8/13/2019 07:20:40	0.1	0.1	0.1
059	8/13/2019 07:21:40	0.1	0.1	0.1
060	8/13/2019 07:22:40	0.1	0.1	0.1
061	8/13/2019 07:23:40	0.1	0.1	0.1
062	8/13/2019 07:24:40	0.1	0.1	0.1
063	8/13/2019 07:25:40	0.1	0.1	0.1
064	8/13/2019 07:26:40	0.1	0.1	0.1
065	8/13/2019 07:27:40	0.1	0.1	0.1
066	8/13/2019 07:28:40	0.1	0.1	0.1
067	8/13/2019 07:29:40	0.1	0.1	0.1

068	8/13/2019 07:30:40	0.1	0.1	0.1
069	8/13/2019 07:31:40	0.1	0.1	0.1
070	8/13/2019 07:32:40	0.1	0.1	0.1
071	8/13/2019 07:33:40	0.1	0.1	0.1
072	8/13/2019 07:34:40	0.1	0.1	0.1
073	8/13/2019 07:35:40	0.1	0.1	0.1
074	8/13/2019 07:36:40	0.1	0.1	0.1
075	8/13/2019 07:37:40	0.1	0.1	0.1
076	8/13/2019 07:38:40	0.1	0.1	0.1
077	8/13/2019 07:39:40	0.1	0.1	0.1
078	8/13/2019 07:40:40	0.1	0.1	0.1
079	8/13/2019 07:41:40	0.1	0.1	0.1
080	8/13/2019 07:42:40	0.1	0.1	0.1
081	8/13/2019 07:43:40	0.1	0.1	0.1
082	8/13/2019 07:44:40	0.1	0.1	0.1
083	8/13/2019 07:45:40	0.1	0.1	0.1
084	8/13/2019 07:46:40	0.1	0.1	0.1
085	8/13/2019 07:47:40	0.1	0.1	0.1
086	8/13/2019 07:48:40	0.1	0.1	0.1
087	8/13/2019 07:49:40	0.1	0.1	0.1
088	8/13/2019 07:50:40	0.1	0.1	0.1
089	8/13/2019 07:51:40	0.1	0.1	0.1
090	8/13/2019 07:52:40	0.1	0.1	0.1
091	8/13/2019 07:53:40	0.1	0.1	0.1
092	8/13/2019 07:54:40	0.1	0.1	0.1
093	8/13/2019 07:55:40	0.1	0.1	0.1
094	8/13/2019 07:56:40	0.1	0.1	0.1
095	8/13/2019 07:57:40	0.1	0.1	0.1
096	8/13/2019 07:58:40	0.1	0.1	0.1
097	8/13/2019 07:59:40	0.1	0.1	0.1
098	8/13/2019 08:00:40	0.1	0.1	0.1
099	8/13/2019 08:01:40	0.1	0.1	0.1
100	8/13/2019 08:02:40	0.1	0.1	0.1
101	8/13/2019 08:03:40	0.1	0.1	0.1
102	8/13/2019 08:04:40	0.1	0.1	0.1
103	8/13/2019 08:05:40	0.1	0.1	0.1
104	8/13/2019 08:06:40	0.1	0.1	0.1
105	8/13/2019 08:07:40	0.1	0.1	0.1
106	8/13/2019 08:08:40	0.1	0.1	0.1
107	8/13/2019 08:09:40	0.1	0.1	0.1
108	8/13/2019 08:10:40	0.1	0.1	0.1
109	8/13/2019 08:11:40	0.1	0.1	0.1
110	8/13/2019 08:12:40	0.1	0.1	0.1
111	8/13/2019 08:13:40	0.1	0.1	0.1
112	8/13/2019 08:14:40	0.1	0.1	0.1
113	8/13/2019 08:15:40	0.1	0.1	0.1
114	8/13/2019 08:16:40	0.1	0.1	0.1
115	8/13/2019 08:17:40	0.1	0.1	0.1

116	8/13/2019 08:18:40	0.1	0.1	0.1
117	8/13/2019 08:19:40	0.1	0.1	0.1
118	8/13/2019 08:20:40	0.1	0.1	0.1
119	8/13/2019 08:21:40	0.1	0.1	0.1
120	8/13/2019 08:22:40	0.1	0.1	0.1
121	8/13/2019 08:23:40	0.1	0.1	0.1
122	8/13/2019 08:24:40	0.1	0.1	0.1
123	8/13/2019 08:25:40	0.1	0.1	0.1
124	8/13/2019 08:26:40	0.1	0.1	0.1
125	8/13/2019 08:27:40	0.1	0.1	0.1
126	8/13/2019 08:28:40	0.1	0.1	0.1
127	8/13/2019 08:29:40	0.1	0.1	0.1
128	8/13/2019 08:30:40	0.1	0.1	0.1
129	8/13/2019 08:31:40	0.1	0.1	0.1
130	8/13/2019 08:32:40	0.1	0.1	0.1
131	8/13/2019 08:33:40	0.1	0.1	0.1
132	8/13/2019 08:34:40	0.1	0.1	0.1
133	8/13/2019 08:35:40	0.1	0.1	0.1
134	8/13/2019 08:36:40	0.1	0.1	0.1
135	8/13/2019 08:37:40	0.1	0.1	0.1
136	8/13/2019 08:38:40	0.1	0.1	0.1
137	8/13/2019 08:39:40	0.1	0.1	0.1
138	8/13/2019 08:40:40	0.1	0.1	0.1
139	8/13/2019 08:41:40	0.1	0.1	0.1
140	8/13/2019 08:42:40	0.1	0.1	0.1
141	8/13/2019 08:43:40	0.1	0.1	0.1
142	8/13/2019 08:44:40	0.1	0.1	0.1
143	8/13/2019 08:45:40	0.1	0.1	0.1
144	8/13/2019 08:46:40	0.1	0.1	0.1
145	8/13/2019 08:47:40	0.1	0.1	0.1
146	8/13/2019 08:48:40	0.1	0.1	0.1
147	8/13/2019 08:49:40	0.1	0.1	0.1
148	8/13/2019 08:50:40	0.1	0.1	0.1
149	8/13/2019 08:51:40	0.1	0.1	0.1
150	8/13/2019 08:52:40	0.1	0.1	0.1
151	8/13/2019 08:53:40	0.1	0.1	0.1
152	8/13/2019 08:54:40	0.1	0.1	0.1
153	8/13/2019 08:55:40	0.1	0.1	0.1
154	8/13/2019 08:56:40	0.1	0.1	0.1
155	8/13/2019 08:57:40	0.1	0.1	0.1
156	8/13/2019 08:58:40	0.1	0.1	0.1
157	8/13/2019 08:59:40	0.1	0.1	0.1
158	8/13/2019 09:00:40	0.1	0.1	0.1
159	8/13/2019 09:01:40	0.1	0.1	0.1
160	8/13/2019 09:02:40	0.1	0.1	0.1
161	8/13/2019 09:03:40	0.1	0.1	0.1
162	8/13/2019 09:04:40	0.1	0.1	0.1
163	8/13/2019 09:05:40	0.1	0.1	0.1

164	8/13/2019 09:06:40	0.1	0.1	0.0
165	8/13/2019 09:07:40	0.0	0.0	0.0
166	8/13/2019 09:08:40	0.0	0.0	0.0
167	8/13/2019 09:09:40	0.0	0.0	0.0
168	8/13/2019 09:10:40	0.0	0.0	0.0
169	8/13/2019 09:11:40	0.0	0.0	0.0
170	8/13/2019 09:12:40	0.0	0.0	0.0
171	8/13/2019 09:13:40	0.0	0.0	0.0
172	8/13/2019 09:14:40	0.0	0.0	0.0
173	8/13/2019 09:15:40	0.0	0.0	0.0
174	8/13/2019 09:16:40	0.0	0.0	0.0
175	8/13/2019 09:17:40	0.0	0.0	0.0
176	8/13/2019 09:18:40	0.0	0.0	0.0
177	8/13/2019 09:19:40	0.0	0.0	0.0
178	8/13/2019 09:20:40	0.0	0.0	0.0
179	8/13/2019 09:21:40	0.0	0.0	0.0
180	8/13/2019 09:22:40	0.0	0.0	0.0
181	8/13/2019 09:23:40	0.0	0.0	0.0
182	8/13/2019 09:24:40	0.0	0.0	0.0
183	8/13/2019 09:25:40	0.0	0.0	0.0
184	8/13/2019 09:26:40	0.0	0.0	0.0
185	8/13/2019 09:27:40	0.0	0.0	0.0
186	8/13/2019 09:28:40	0.0	0.0	0.0
187	8/13/2019 09:29:40	0.0	0.0	0.0
188	8/13/2019 09:30:40	0.0	0.0	0.0
189	8/13/2019 09:31:40	0.0	0.0	0.0
190	8/13/2019 09:32:40	0.0	0.0	0.0
191	8/13/2019 09:33:40	0.0	0.0	0.0
192	8/13/2019 09:34:40	0.0	0.0	0.0
193	8/13/2019 09:35:40	0.0	0.0	0.0
194	8/13/2019 09:36:40	0.0	0.0	0.0
195	8/13/2019 09:37:40	0.0	0.0	0.0
196	8/13/2019 09:38:40	0.0	0.0	0.0
197	8/13/2019 09:39:40	0.0	0.0	0.0
198	8/13/2019 09:40:40	0.0	0.0	0.0
199	8/13/2019 09:41:40	0.0	0.0	0.0
200	8/13/2019 09:42:40	0.0	0.0	0.0
201	8/13/2019 09:43:40	0.0	0.0	0.0
202	8/13/2019 09:44:40	0.0	0.0	0.0
203	8/13/2019 09:45:40	0.0	0.0	0.0
204	8/13/2019 09:46:40	0.0	0.0	0.0
205	8/13/2019 09:47:40	0.0	0.0	0.0
206	8/13/2019 09:48:40	0.0	0.0	0.0
207	8/13/2019 09:49:40	0.0	0.0	0.0
208	8/13/2019 09:50:40	0.0	0.0	0.0
209	8/13/2019 09:51:40	0.0	0.1	0.0
210	8/13/2019 09:52:40	0.0	0.1	0.0
211	8/13/2019 09:53:40	0.0	0.1	0.0

212	8/13/2019 09:54:40	0.0	0.1	0.0
213	8/13/2019 09:55:40	0.1	0.1	0.1
214	8/13/2019 09:56:40	0.1	0.1	0.1
215	8/13/2019 09:57:40	0.1	0.1	0.1
216	8/13/2019 09:58:40	0.1	0.1	0.1
Peak		0.1	0.1	0.1
Min		0.0	0.0	0.0
Average		0.1	0.1	0.1

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/13/2019 06:23:40	0.0	---
002	8/13/2019 06:24:40	0.0	---
003	8/13/2019 06:25:40	0.0	---
004	8/13/2019 06:26:40	0.0	---
005	8/13/2019 06:27:40	0.0	---
006	8/13/2019 06:28:40	0.0	---
007	8/13/2019 06:29:40	0.0	---
008	8/13/2019 06:30:40	0.0	---
009	8/13/2019 06:31:40	0.0	---
010	8/13/2019 06:32:40	0.0	---
011	8/13/2019 06:33:40	0.0	---
012	8/13/2019 06:34:40	0.0	---
013	8/13/2019 06:35:40	0.0	---
014	8/13/2019 06:36:40	0.0	---
015	8/13/2019 06:37:40	0.0	0.1
016	8/13/2019 06:38:40	0.0	0.1
017	8/13/2019 06:39:40	0.0	0.1
018	8/13/2019 06:40:40	0.0	0.1
019	8/13/2019 06:41:40	0.0	0.1
020	8/13/2019 06:42:40	0.0	0.1
021	8/13/2019 06:43:40	0.0	0.1
022	8/13/2019 06:44:40	0.0	0.1
023	8/13/2019 06:45:40	0.0	0.1
024	8/13/2019 06:46:40	0.0	0.1
025	8/13/2019 06:47:40	0.0	0.1
026	8/13/2019 06:48:40	0.0	0.1
027	8/13/2019 06:49:40	0.0	0.1
028	8/13/2019 06:50:40	0.0	0.1
029	8/13/2019 06:51:40	0.0	0.1
030	8/13/2019 06:52:40	0.0	0.1
031	8/13/2019 06:53:40	0.0	0.1
032	8/13/2019 06:54:40	0.0	0.1
033	8/13/2019 06:55:40	0.0	0.1
034	8/13/2019 06:56:40	0.0	0.1
035	8/13/2019 06:57:40	0.0	0.1

036	8/13/2019 06:58:40	0.0	0.1
037	8/13/2019 06:59:40	0.0	0.1
038	8/13/2019 07:00:40	0.0	0.1
039	8/13/2019 07:01:40	0.0	0.1
040	8/13/2019 07:02:40	0.0	0.1
041	8/13/2019 07:03:40	0.0	0.1
042	8/13/2019 07:04:40	0.0	0.1
043	8/13/2019 07:05:40	0.0	0.1
044	8/13/2019 07:06:40	0.0	0.1
045	8/13/2019 07:07:40	0.0	0.1
046	8/13/2019 07:08:40	0.0	0.1
047	8/13/2019 07:09:40	0.0	0.1
048	8/13/2019 07:10:40	0.0	0.1
049	8/13/2019 07:11:40	0.0	0.1
050	8/13/2019 07:12:40	0.0	0.1
051	8/13/2019 07:13:40	0.0	0.1
052	8/13/2019 07:14:40	0.0	0.1
053	8/13/2019 07:15:40	0.0	0.1
054	8/13/2019 07:16:40	0.0	0.1
055	8/13/2019 07:17:40	0.0	0.1
056	8/13/2019 07:18:40	0.0	0.1
057	8/13/2019 07:19:40	0.0	0.1
058	8/13/2019 07:20:40	0.0	0.1
059	8/13/2019 07:21:40	0.0	0.1
060	8/13/2019 07:22:40	0.0	0.1
061	8/13/2019 07:23:40	0.0	0.1
062	8/13/2019 07:24:40	0.0	0.1
063	8/13/2019 07:25:40	0.0	0.1
064	8/13/2019 07:26:40	0.0	0.1
065	8/13/2019 07:27:40	0.0	0.1
066	8/13/2019 07:28:40	0.0	0.1
067	8/13/2019 07:29:40	0.0	0.1
068	8/13/2019 07:30:40	0.0	0.1
069	8/13/2019 07:31:40	0.0	0.1
070	8/13/2019 07:32:40	0.0	0.1
071	8/13/2019 07:33:40	0.0	0.1
072	8/13/2019 07:34:40	0.0	0.1
073	8/13/2019 07:35:40	0.0	0.1
074	8/13/2019 07:36:40	0.0	0.1
075	8/13/2019 07:37:40	0.0	0.1
076	8/13/2019 07:38:40	0.0	0.1
077	8/13/2019 07:39:40	0.0	0.1
078	8/13/2019 07:40:40	0.0	0.1
079	8/13/2019 07:41:40	0.0	0.1
080	8/13/2019 07:42:40	0.0	0.1
081	8/13/2019 07:43:40	0.0	0.1
082	8/13/2019 07:44:40	0.0	0.1
083	8/13/2019 07:45:40	0.0	0.1

084	8/13/2019 07:46:40	0.0	0.1
085	8/13/2019 07:47:40	0.0	0.1
086	8/13/2019 07:48:40	0.0	0.1
087	8/13/2019 07:49:40	0.0	0.1
088	8/13/2019 07:50:40	0.0	0.1
089	8/13/2019 07:51:40	0.0	0.1
090	8/13/2019 07:52:40	0.0	0.1
091	8/13/2019 07:53:40	0.0	0.1
092	8/13/2019 07:54:40	0.0	0.1
093	8/13/2019 07:55:40	0.0	0.1
094	8/13/2019 07:56:40	0.0	0.1
095	8/13/2019 07:57:40	0.0	0.1
096	8/13/2019 07:58:40	0.0	0.1
097	8/13/2019 07:59:40	0.0	0.1
098	8/13/2019 08:00:40	0.0	0.1
099	8/13/2019 08:01:40	0.0	0.1
100	8/13/2019 08:02:40	0.0	0.1
101	8/13/2019 08:03:40	0.0	0.1
102	8/13/2019 08:04:40	0.0	0.1
103	8/13/2019 08:05:40	0.0	0.1
104	8/13/2019 08:06:40	0.0	0.1
105	8/13/2019 08:07:40	0.0	0.1
106	8/13/2019 08:08:40	0.0	0.1
107	8/13/2019 08:09:40	0.0	0.1
108	8/13/2019 08:10:40	0.0	0.1
109	8/13/2019 08:11:40	0.0	0.1
110	8/13/2019 08:12:40	0.0	0.1
111	8/13/2019 08:13:40	0.0	0.1
112	8/13/2019 08:14:40	0.0	0.1
113	8/13/2019 08:15:40	0.0	0.1
114	8/13/2019 08:16:40	0.0	0.1
115	8/13/2019 08:17:40	0.0	0.1
116	8/13/2019 08:18:40	0.0	0.1
117	8/13/2019 08:19:40	0.0	0.1
118	8/13/2019 08:20:40	0.0	0.1
119	8/13/2019 08:21:40	0.0	0.1
120	8/13/2019 08:22:40	0.0	0.1
121	8/13/2019 08:23:40	0.0	0.1
122	8/13/2019 08:24:40	0.0	0.1
123	8/13/2019 08:25:40	0.0	0.1
124	8/13/2019 08:26:40	0.0	0.1
125	8/13/2019 08:27:40	0.0	0.1
126	8/13/2019 08:28:40	0.0	0.1
127	8/13/2019 08:29:40	0.0	0.1
128	8/13/2019 08:30:40	0.0	0.1
129	8/13/2019 08:31:40	0.0	0.1
130	8/13/2019 08:32:40	0.0	0.1
131	8/13/2019 08:33:40	0.0	0.1

132	8/13/2019 08:34:40	0.0	0.1
133	8/13/2019 08:35:40	0.0	0.1
134	8/13/2019 08:36:40	0.0	0.1
135	8/13/2019 08:37:40	0.0	0.1
136	8/13/2019 08:38:40	0.0	0.1
137	8/13/2019 08:39:40	0.0	0.1
138	8/13/2019 08:40:40	0.0	0.1
139	8/13/2019 08:41:40	0.0	0.1
140	8/13/2019 08:42:40	0.0	0.1
141	8/13/2019 08:43:40	0.0	0.1
142	8/13/2019 08:44:40	0.0	0.1
143	8/13/2019 08:45:40	0.0	0.1
144	8/13/2019 08:46:40	0.0	0.1
145	8/13/2019 08:47:40	0.0	0.1
146	8/13/2019 08:48:40	0.0	0.1
147	8/13/2019 08:49:40	0.0	0.1
148	8/13/2019 08:50:40	0.0	0.1
149	8/13/2019 08:51:40	0.0	0.1
150	8/13/2019 08:52:40	0.0	0.1
151	8/13/2019 08:53:40	0.0	0.1
152	8/13/2019 08:54:40	0.0	0.1
153	8/13/2019 08:55:40	0.0	0.1
154	8/13/2019 08:56:40	0.0	0.1
155	8/13/2019 08:57:40	0.0	0.1
156	8/13/2019 08:58:40	0.0	0.1
157	8/13/2019 08:59:40	0.0	0.1
158	8/13/2019 09:00:40	0.0	0.1
159	8/13/2019 09:01:40	0.0	0.1
160	8/13/2019 09:02:40	0.0	0.1
161	8/13/2019 09:03:40	0.0	0.1
162	8/13/2019 09:04:40	0.0	0.1
163	8/13/2019 09:05:40	0.0	0.1
164	8/13/2019 09:06:40	0.0	0.1
165	8/13/2019 09:07:40	0.0	0.1
166	8/13/2019 09:08:40	0.0	0.1
167	8/13/2019 09:09:40	0.0	0.1
168	8/13/2019 09:10:40	0.0	0.1
169	8/13/2019 09:11:40	0.0	0.1
170	8/13/2019 09:12:40	0.0	0.1
171	8/13/2019 09:13:40	0.0	0.1
172	8/13/2019 09:14:40	0.0	0.0
173	8/13/2019 09:15:40	0.0	0.0
174	8/13/2019 09:16:40	0.0	0.0
175	8/13/2019 09:17:40	0.0	0.0
176	8/13/2019 09:18:40	0.0	0.0
177	8/13/2019 09:19:40	0.0	0.0
178	8/13/2019 09:20:40	0.0	0.0
179	8/13/2019 09:21:40	0.0	0.0

180	8/13/2019 09:22:40	0.0	0.0
181	8/13/2019 09:23:40	0.0	0.0
182	8/13/2019 09:24:40	0.0	0.0
183	8/13/2019 09:25:40	0.0	0.0
184	8/13/2019 09:26:40	0.0	0.0
185	8/13/2019 09:27:40	0.0	0.0
186	8/13/2019 09:28:40	0.0	0.0
187	8/13/2019 09:29:40	0.0	0.0
188	8/13/2019 09:30:40	0.0	0.0
189	8/13/2019 09:31:40	0.0	0.0
190	8/13/2019 09:32:40	0.0	0.0
191	8/13/2019 09:33:40	0.0	0.0
192	8/13/2019 09:34:40	0.0	0.0
193	8/13/2019 09:35:40	0.0	0.0
194	8/13/2019 09:36:40	0.0	0.0
195	8/13/2019 09:37:40	0.0	0.0
196	8/13/2019 09:38:40	0.0	0.0
197	8/13/2019 09:39:40	0.0	0.0
198	8/13/2019 09:40:40	0.0	0.0
199	8/13/2019 09:41:40	0.0	0.0
200	8/13/2019 09:42:40	0.0	0.0
201	8/13/2019 09:43:40	0.0	0.0
202	8/13/2019 09:44:40	0.0	0.0
203	8/13/2019 09:45:40	0.0	0.0
204	8/13/2019 09:46:40	0.0	0.0
205	8/13/2019 09:47:40	0.0	0.0
206	8/13/2019 09:48:40	0.0	0.0
207	8/13/2019 09:49:40	0.0	0.0
208	8/13/2019 09:50:40	0.0	0.0
209	8/13/2019 09:51:40	0.0	0.0
210	8/13/2019 09:52:40	0.0	0.0
211	8/13/2019 09:53:40	0.0	0.0
212	8/13/2019 09:54:40	0.0	0.0
213	8/13/2019 09:55:40	0.0	0.0
214	8/13/2019 09:56:40	0.0	0.0
215	8/13/2019 09:57:40	0.0	0.0
216	8/13/2019 09:58:40	0.0	0.0

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19/08/13 09:59

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Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-909007

Unit Firmware Ver V2.20A

Running Mode Hygiene Mode

Datalog Mode Auto

Diagnostic Mode No
Stop Reason Power Down

Site ID 12345678
User ID 12345678

Begin 8/13/2019 09:59:40
End 8/13/2019 11:13:30
Sample Period(s) 60
Number of Records 73

Sensor PID(ppm)
Sensor SN S023030105U9
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 25.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/13/2019 06:18
Peak 0.1
Min 0.0
Average 0.1

****

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	PID(ppm)
001	8/13/2019 10:00:40		0.1	0.1	0.1
002	8/13/2019 10:01:40		0.1	0.1	0.1
003	8/13/2019 10:02:40		0.1	0.1	0.1
004	8/13/2019 10:03:40		0.1	0.1	0.1
005	8/13/2019 10:04:40		0.1	0.1	0.1
006	8/13/2019 10:05:40		0.1	0.1	0.1
007	8/13/2019 10:06:40		0.1	0.1	0.1
008	8/13/2019 10:07:40		0.1	0.1	0.1
009	8/13/2019 10:08:40		0.1	0.1	0.1
010	8/13/2019 10:09:40		0.1	0.1	0.1
011	8/13/2019 10:10:40		0.1	0.1	0.1
012	8/13/2019 10:11:40		0.1	0.1	0.1
013	8/13/2019 10:12:40		0.1	0.1	0.1
014	8/13/2019 10:13:40		0.1	0.1	0.1
015	8/13/2019 10:14:40		0.1	0.1	0.1
016	8/13/2019 10:15:40		0.1	0.1	0.1
017	8/13/2019 10:16:40		0.1	0.1	0.1

018	8/13/2019 10:17:40	0.1	0.1	0.1
019	8/13/2019 10:18:40	0.1	0.1	0.1
020	8/13/2019 10:19:40	0.1	0.1	0.1
021	8/13/2019 10:20:40	0.1	0.1	0.1
022	8/13/2019 10:21:40	0.1	0.1	0.1
023	8/13/2019 10:22:40	0.1	0.1	0.1
024	8/13/2019 10:23:40	0.1	0.1	0.1
025	8/13/2019 10:24:40	0.1	0.1	0.1
026	8/13/2019 10:25:40	0.1	0.1	0.1
027	8/13/2019 10:26:40	0.1	0.1	0.1
028	8/13/2019 10:27:40	0.1	0.1	0.1
029	8/13/2019 10:28:40	0.1	0.1	0.1
030	8/13/2019 10:29:40	0.1	0.1	0.1
031	8/13/2019 10:30:40	0.1	0.1	0.1
032	8/13/2019 10:31:40	0.1	0.1	0.1
033	8/13/2019 10:32:40	0.1	0.1	0.1
034	8/13/2019 10:33:40	0.1	0.1	0.1
035	8/13/2019 10:34:40	0.1	0.1	0.1
036	8/13/2019 10:35:40	0.1	0.1	0.1
037	8/13/2019 10:36:40	0.1	0.1	0.1
038	8/13/2019 10:37:40	0.1	0.1	0.1
039	8/13/2019 10:38:40	0.1	0.1	0.1
040	8/13/2019 10:39:40	0.1	0.1	0.1
041	8/13/2019 10:40:40	0.1	0.1	0.1
042	8/13/2019 10:41:40	0.1	0.1	0.1
043	8/13/2019 10:42:40	0.1	0.1	0.1
044	8/13/2019 10:43:40	0.1	0.1	0.1
045	8/13/2019 10:44:40	0.1	0.1	0.1
046	8/13/2019 10:45:40	0.1	0.1	0.1
047	8/13/2019 10:46:40	0.1	0.1	0.1
048	8/13/2019 10:47:40	0.1	0.1	0.1
049	8/13/2019 10:48:40	0.1	0.1	0.1
050	8/13/2019 10:49:40	0.1	0.1	0.1
051	8/13/2019 10:50:40	0.1	0.1	0.1
052	8/13/2019 10:51:40	0.1	0.1	0.1
053	8/13/2019 10:52:40	0.0	0.1	0.0
054	8/13/2019 10:53:40	0.0	0.0	0.0
055	8/13/2019 10:54:40	0.0	0.0	0.0
056	8/13/2019 10:55:40	0.0	0.0	0.0
057	8/13/2019 10:56:40	0.0	0.0	0.0
058	8/13/2019 10:57:40	0.0	0.0	0.0
059	8/13/2019 10:58:40	0.0	0.0	0.0
060	8/13/2019 10:59:40	0.0	0.0	0.0
061	8/13/2019 11:00:40	0.0	0.0	0.0
062	8/13/2019 11:01:40	0.0	0.0	0.0
063	8/13/2019 11:02:40	0.0	0.0	0.0
064	8/13/2019 11:03:40	0.0	0.0	0.0
065	8/13/2019 11:04:40	0.0	0.0	0.0

066	8/13/2019 11:05:40	0.0	0.0	0.0
067	8/13/2019 11:06:40	0.0	0.0	0.0
068	8/13/2019 11:07:40	0.0	0.0	0.0
069	8/13/2019 11:08:40	0.0	0.1	0.1
070	8/13/2019 11:09:40	0.1	0.1	0.1
071	8/13/2019 11:10:40	0.1	0.1	0.1
072	8/13/2019 11:11:40	0.1	0.1	0.1
073	8/13/2019 11:12:40	0.1	0.1	0.1
Peak		0.1	0.1	0.1
Min		0.0	0.0	0.0
Average		0.1	0.1	0.1

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/13/2019 10:00:40	0.0	---
002	8/13/2019 10:01:40	0.0	---
003	8/13/2019 10:02:40	0.0	---
004	8/13/2019 10:03:40	0.0	---
005	8/13/2019 10:04:40	0.0	---
006	8/13/2019 10:05:40	0.0	---
007	8/13/2019 10:06:40	0.0	---
008	8/13/2019 10:07:40	0.0	---
009	8/13/2019 10:08:40	0.0	---
010	8/13/2019 10:09:40	0.0	---
011	8/13/2019 10:10:40	0.0	---
012	8/13/2019 10:11:40	0.0	---
013	8/13/2019 10:12:40	0.0	---
014	8/13/2019 10:13:40	0.0	---
015	8/13/2019 10:14:40	0.0	0.1
016	8/13/2019 10:15:40	0.0	0.1
017	8/13/2019 10:16:40	0.0	0.1
018	8/13/2019 10:17:40	0.0	0.1
019	8/13/2019 10:18:40	0.0	0.1
020	8/13/2019 10:19:40	0.0	0.1
021	8/13/2019 10:20:40	0.0	0.1
022	8/13/2019 10:21:40	0.0	0.1
023	8/13/2019 10:22:40	0.0	0.1
024	8/13/2019 10:23:40	0.0	0.1
025	8/13/2019 10:24:40	0.0	0.1
026	8/13/2019 10:25:40	0.0	0.1
027	8/13/2019 10:26:40	0.0	0.1
028	8/13/2019 10:27:40	0.0	0.1
029	8/13/2019 10:28:40	0.0	0.1
030	8/13/2019 10:29:40	0.0	0.1
031	8/13/2019 10:30:40	0.0	0.1
032	8/13/2019 10:31:40	0.0	0.1

033	8/13/2019 10:32:40	0.0	0.1
034	8/13/2019 10:33:40	0.0	0.1
035	8/13/2019 10:34:40	0.0	0.1
036	8/13/2019 10:35:40	0.0	0.1
037	8/13/2019 10:36:40	0.0	0.1
038	8/13/2019 10:37:40	0.0	0.1
039	8/13/2019 10:38:40	0.0	0.1
040	8/13/2019 10:39:40	0.0	0.1
041	8/13/2019 10:40:40	0.0	0.1
042	8/13/2019 10:41:40	0.0	0.1
043	8/13/2019 10:42:40	0.0	0.1
044	8/13/2019 10:43:40	0.0	0.1
045	8/13/2019 10:44:40	0.0	0.1
046	8/13/2019 10:45:40	0.0	0.1
047	8/13/2019 10:46:40	0.0	0.1
048	8/13/2019 10:47:40	0.0	0.1
049	8/13/2019 10:48:40	0.0	0.1
050	8/13/2019 10:49:40	0.0	0.1
051	8/13/2019 10:50:40	0.0	0.1
052	8/13/2019 10:51:40	0.0	0.1
053	8/13/2019 10:52:40	0.0	0.1
054	8/13/2019 10:53:40	0.0	0.1
055	8/13/2019 10:54:40	0.0	0.1
056	8/13/2019 10:55:40	0.0	0.1
057	8/13/2019 10:56:40	0.0	0.1
058	8/13/2019 10:57:40	0.0	0.1
059	8/13/2019 10:58:40	0.0	0.1
060	8/13/2019 10:59:40	0.0	0.1
061	8/13/2019 11:00:40	0.0	0.0
062	8/13/2019 11:01:40	0.0	0.0
063	8/13/2019 11:02:40	0.0	0.0
064	8/13/2019 11:03:40	0.0	0.0
065	8/13/2019 11:04:40	0.0	0.0
066	8/13/2019 11:05:40	0.0	0.0
067	8/13/2019 11:06:40	0.0	0.0
068	8/13/2019 11:07:40	0.0	0.0
069	8/13/2019 11:08:40	0.0	0.0
070	8/13/2019 11:09:40	0.0	0.0
071	8/13/2019 11:10:40	0.0	0.0
072	8/13/2019 11:11:40	0.0	0.0
073	8/13/2019 11:12:40	0.0	0.0

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19/08/13 11:13

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Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-909007

Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 12345678
User ID 12345678

Begin 8/13/2019 11:13:58
End 8/13/2019 14:16:27
Sample Period(s) 60
Number of Records 182

Sensor PID(ppm)
Sensor SN S023030105U9
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 25.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/13/2019 06:18
Peak 0.4
Min 0.0
Average 0.1

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Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	PID(ppm)
001	8/13/2019 11:14:58		0.1	0.4	0.4
002	8/13/2019 11:15:58		0.1	0.4	0.1
003	8/13/2019 11:16:58		0.1	0.1	0.1
004	8/13/2019 11:17:58		0.1	0.1	0.1
005	8/13/2019 11:18:58		0.1	0.1	0.1
006	8/13/2019 11:19:58		0.1	0.1	0.1
007	8/13/2019 11:20:58		0.1	0.1	0.1
008	8/13/2019 11:21:58		0.1	0.1	0.1
009	8/13/2019 11:22:58		0.1	0.1	0.1
010	8/13/2019 11:23:58		0.1	0.1	0.1
011	8/13/2019 11:24:58		0.1	0.1	0.1
012	8/13/2019 11:25:58		0.1	0.1	0.1
013	8/13/2019 11:26:58		0.1	0.1	0.1

014	8/13/2019 11:27:58	0.1	0.1	0.1
015	8/13/2019 11:28:58	0.1	0.1	0.1
016	8/13/2019 11:29:58	0.1	0.1	0.1
017	8/13/2019 11:30:58	0.1	0.1	0.1
018	8/13/2019 11:31:58	0.1	0.1	0.1
019	8/13/2019 11:32:58	0.1	0.1	0.1
020	8/13/2019 11:33:58	0.1	0.1	0.1
021	8/13/2019 11:34:58	0.1	0.1	0.1
022	8/13/2019 11:35:58	0.1	0.1	0.1
023	8/13/2019 11:36:58	0.1	0.1	0.1
024	8/13/2019 11:37:58	0.1	0.1	0.1
025	8/13/2019 11:38:58	0.1	0.1	0.1
026	8/13/2019 11:39:58	0.1	0.1	0.1
027	8/13/2019 11:40:58	0.1	0.1	0.1
028	8/13/2019 11:41:58	0.1	0.1	0.1
029	8/13/2019 11:42:58	0.1	0.1	0.1
030	8/13/2019 11:43:58	0.1	0.1	0.1
031	8/13/2019 11:44:58	0.1	0.1	0.1
032	8/13/2019 11:45:58	0.1	0.1	0.1
033	8/13/2019 11:46:58	0.1	0.1	0.1
034	8/13/2019 11:47:58	0.1	0.1	0.1
035	8/13/2019 11:48:58	0.1	0.1	0.1
036	8/13/2019 11:49:58	0.1	0.1	0.1
037	8/13/2019 11:50:58	0.1	0.1	0.1
038	8/13/2019 11:51:58	0.1	0.1	0.1
039	8/13/2019 11:52:58	0.1	0.1	0.1
040	8/13/2019 11:53:58	0.1	0.1	0.1
041	8/13/2019 11:54:58	0.1	0.1	0.1
042	8/13/2019 11:55:58	0.1	0.1	0.1
043	8/13/2019 11:56:58	0.1	0.1	0.1
044	8/13/2019 11:57:58	0.1	0.1	0.1
045	8/13/2019 11:58:58	0.1	0.1	0.1
046	8/13/2019 11:59:58	0.1	0.1	0.1
047	8/13/2019 12:00:58	0.1	0.1	0.1
048	8/13/2019 12:01:58	0.1	0.1	0.1
049	8/13/2019 12:02:58	0.1	0.1	0.1
050	8/13/2019 12:03:58	0.1	0.1	0.1
051	8/13/2019 12:04:58	0.1	0.1	0.1
052	8/13/2019 12:05:58	0.1	0.1	0.1
053	8/13/2019 12:06:58	0.1	0.1	0.1
054	8/13/2019 12:07:58	0.1	0.1	0.1
055	8/13/2019 12:08:58	0.1	0.1	0.1
056	8/13/2019 12:09:58	0.1	0.1	0.1
057	8/13/2019 12:10:58	0.1	0.1	0.1
058	8/13/2019 12:11:58	0.1	0.1	0.1
059	8/13/2019 12:12:58	0.1	0.1	0.1
060	8/13/2019 12:13:58	0.1	0.2	0.1
061	8/13/2019 12:14:58	0.1	0.2	0.1

062	8/13/2019 12:15:58	0.1	0.2	0.1
063	8/13/2019 12:16:58	0.2	0.2	0.2
064	8/13/2019 12:17:58	0.1	0.2	0.1
065	8/13/2019 12:18:58	0.1	0.2	0.2
066	8/13/2019 12:19:58	0.2	0.2	0.2
067	8/13/2019 12:20:58	0.2	0.2	0.2
068	8/13/2019 12:21:58	0.2	0.2	0.2
069	8/13/2019 12:22:58	0.2	0.2	0.2
070	8/13/2019 12:23:58	0.2	0.2	0.2
071	8/13/2019 12:24:58	0.2	0.2	0.2
072	8/13/2019 12:25:58	0.2	0.2	0.1
073	8/13/2019 12:26:58	0.2	0.2	0.1
074	8/13/2019 12:27:58	0.2	0.2	0.2
075	8/13/2019 12:28:58	0.2	0.2	0.2
076	8/13/2019 12:29:58	0.2	0.2	0.1
077	8/13/2019 12:30:58	0.2	0.2	0.1
078	8/13/2019 12:31:58	0.2	0.2	0.2
079	8/13/2019 12:32:58	0.2	0.2	0.2
080	8/13/2019 12:33:58	0.2	0.2	0.2
081	8/13/2019 12:34:58	0.2	0.2	0.2
082	8/13/2019 12:35:58	0.2	0.2	0.2
083	8/13/2019 12:36:58	0.2	0.2	0.2
084	8/13/2019 12:37:58	0.2	0.2	0.2
085	8/13/2019 12:38:58	0.2	0.2	0.2
086	8/13/2019 12:39:58	0.2	0.2	0.2
087	8/13/2019 12:40:58	0.2	0.2	0.2
088	8/13/2019 12:41:58	0.2	0.2	0.2
089	8/13/2019 12:42:58	0.2	0.2	0.2
090	8/13/2019 12:43:58	0.2	0.2	0.2
091	8/13/2019 12:44:58	0.2	0.2	0.2
092	8/13/2019 12:45:58	0.2	0.2	0.2
093	8/13/2019 12:46:58	0.2	0.2	0.2
094	8/13/2019 12:47:58	0.2	0.2	0.2
095	8/13/2019 12:48:58	0.2	0.2	0.2
096	8/13/2019 12:49:58	0.2	0.2	0.2
097	8/13/2019 12:50:58	0.2	0.2	0.2
098	8/13/2019 12:51:58	0.2	0.2	0.2
099	8/13/2019 12:52:58	0.2	0.2	0.2
100	8/13/2019 12:53:58	0.2	0.2	0.2
101	8/13/2019 12:54:58	0.2	0.2	0.2
102	8/13/2019 12:55:58	0.2	0.2	0.2
103	8/13/2019 12:56:58	0.2	0.2	0.2
104	8/13/2019 12:57:58	0.2	0.2	0.2
105	8/13/2019 12:58:58	0.2	0.2	0.2
106	8/13/2019 12:59:58	0.2	0.2	0.2
107	8/13/2019 13:00:58	0.2	0.2	0.2
108	8/13/2019 13:01:58	0.2	0.2	0.2
109	8/13/2019 13:02:58	0.2	0.2	0.2

110	8/13/2019 13:03:58	0.2	0.2	0.2
111	8/13/2019 13:04:58	0.2	0.2	0.2
112	8/13/2019 13:05:58	0.2	0.2	0.2
113	8/13/2019 13:06:58	0.2	0.2	0.2
114	8/13/2019 13:07:58	0.2	0.2	0.2
115	8/13/2019 13:08:58	0.2	0.2	0.2
116	8/13/2019 13:09:58	0.2	0.2	0.1
117	8/13/2019 13:10:58	0.1	0.2	0.2
118	8/13/2019 13:11:58	0.1	0.2	0.1
119	8/13/2019 13:12:58	0.2	0.2	0.1
120	8/13/2019 13:13:58	0.2	0.2	0.1
121	8/13/2019 13:14:58	0.1	0.2	0.1
122	8/13/2019 13:15:58	0.2	0.2	0.2
123	8/13/2019 13:16:58	0.2	0.2	0.2
124	8/13/2019 13:17:58	0.2	0.2	0.1
125	8/13/2019 13:18:58	0.2	0.2	0.2
126	8/13/2019 13:19:58	0.2	0.2	0.1
127	8/13/2019 13:20:58	0.1	0.2	0.2
128	8/13/2019 13:21:58	0.1	0.2	0.1
129	8/13/2019 13:22:58	0.1	0.2	0.1
130	8/13/2019 13:23:58	0.1	0.2	0.1
131	8/13/2019 13:24:58	0.1	0.2	0.1
132	8/13/2019 13:25:58	0.1	0.1	0.1
133	8/13/2019 13:26:58	0.1	0.1	0.1
134	8/13/2019 13:27:58	0.1	0.2	0.1
135	8/13/2019 13:28:58	0.1	0.1	0.1
136	8/13/2019 13:29:58	0.1	0.1	0.1
137	8/13/2019 13:30:58	0.1	0.1	0.1
138	8/13/2019 13:31:58	0.1	0.1	0.1
139	8/13/2019 13:32:58	0.1	0.1	0.1
140	8/13/2019 13:33:58	0.1	0.1	0.1
141	8/13/2019 13:34:58	0.1	0.1	0.1
142	8/13/2019 13:35:58	0.1	0.1	0.1
143	8/13/2019 13:36:58	0.1	0.2	0.1
144	8/13/2019 13:37:58	0.1	0.1	0.1
145	8/13/2019 13:38:58	0.1	0.2	0.2
146	8/13/2019 13:39:58	0.2	0.2	0.2
147	8/13/2019 13:40:58	0.2	0.2	0.2
148	8/13/2019 13:41:58	0.2	0.2	0.1
149	8/13/2019 13:42:58	0.2	0.2	0.2
150	8/13/2019 13:43:58	0.2	0.2	0.2
151	8/13/2019 13:44:58	0.2	0.2	0.2
152	8/13/2019 13:45:58	0.2	0.2	0.2
153	8/13/2019 13:46:58	0.2	0.2	0.2
154	8/13/2019 13:47:58	0.2	0.2	0.2
155	8/13/2019 13:48:58	0.2	0.2	0.2
156	8/13/2019 13:49:58	0.2	0.2	0.2
157	8/13/2019 13:50:58	0.2	0.2	0.2

158	8/13/2019 13:51:58	0.2	0.2	0.2
159	8/13/2019 13:52:58	0.2	0.2	0.2
160	8/13/2019 13:53:58	0.2	0.2	0.2
161	8/13/2019 13:54:58	0.2	0.2	0.2
162	8/13/2019 13:55:58	0.2	0.2	0.2
163	8/13/2019 13:56:58	0.2	0.2	0.2
164	8/13/2019 13:57:58	0.2	0.2	0.2
165	8/13/2019 13:58:58	0.2	0.2	0.2
166	8/13/2019 13:59:58	0.2	0.2	0.2
167	8/13/2019 14:00:58	0.1	0.2	0.1
168	8/13/2019 14:01:58	0.1	0.1	0.0
169	8/13/2019 14:02:58	0.0	0.0	0.0
170	8/13/2019 14:03:58	0.0	0.0	0.0
171	8/13/2019 14:04:58	0.0	0.0	0.0
172	8/13/2019 14:05:58	0.0	0.0	0.0
173	8/13/2019 14:06:58	0.0	0.0	0.0
174	8/13/2019 14:07:58	0.0	0.0	0.0
175	8/13/2019 14:08:58	0.0	0.0	0.0
176	8/13/2019 14:09:58	0.0	0.0	0.0
177	8/13/2019 14:10:58	0.0	0.0	0.0
178	8/13/2019 14:11:58	0.0	0.0	0.0
179	8/13/2019 14:12:58	0.0	0.0	0.0
180	8/13/2019 14:13:58	0.0	0.1	0.1
181	8/13/2019 14:14:58	0.1	0.1	0.1
182	8/13/2019 14:15:58	0.1	0.1	0.1
Peak		0.2	0.4	0.4
Min		0.0	0.0	0.0
Average		0.1	0.2	0.1

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TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/13/2019 11:14:58	0.0	---
002	8/13/2019 11:15:58	0.0	---
003	8/13/2019 11:16:58	0.0	---
004	8/13/2019 11:17:58	0.0	---
005	8/13/2019 11:18:58	0.0	---
006	8/13/2019 11:19:58	0.0	---
007	8/13/2019 11:20:58	0.0	---
008	8/13/2019 11:21:58	0.0	---
009	8/13/2019 11:22:58	0.0	---
010	8/13/2019 11:23:58	0.0	---
011	8/13/2019 11:24:58	0.0	---
012	8/13/2019 11:25:58	0.0	---
013	8/13/2019 11:26:58	0.0	---
014	8/13/2019 11:27:58	0.0	---
015	8/13/2019 11:28:58	0.0	0.1

016	8/13/2019 11:29:58	0.0	0.1
017	8/13/2019 11:30:58	0.0	0.1
018	8/13/2019 11:31:58	0.0	0.1
019	8/13/2019 11:32:58	0.0	0.1
020	8/13/2019 11:33:58	0.0	0.1
021	8/13/2019 11:34:58	0.0	0.1
022	8/13/2019 11:35:58	0.0	0.1
023	8/13/2019 11:36:58	0.0	0.1
024	8/13/2019 11:37:58	0.0	0.1
025	8/13/2019 11:38:58	0.0	0.1
026	8/13/2019 11:39:58	0.0	0.1
027	8/13/2019 11:40:58	0.0	0.1
028	8/13/2019 11:41:58	0.0	0.1
029	8/13/2019 11:42:58	0.0	0.1
030	8/13/2019 11:43:58	0.0	0.1
031	8/13/2019 11:44:58	0.0	0.1
032	8/13/2019 11:45:58	0.0	0.1
033	8/13/2019 11:46:58	0.0	0.1
034	8/13/2019 11:47:58	0.0	0.1
035	8/13/2019 11:48:58	0.0	0.1
036	8/13/2019 11:49:58	0.0	0.1
037	8/13/2019 11:50:58	0.0	0.1
038	8/13/2019 11:51:58	0.0	0.1
039	8/13/2019 11:52:58	0.0	0.1
040	8/13/2019 11:53:58	0.0	0.1
041	8/13/2019 11:54:58	0.0	0.1
042	8/13/2019 11:55:58	0.0	0.1
043	8/13/2019 11:56:58	0.0	0.1
044	8/13/2019 11:57:58	0.0	0.1
045	8/13/2019 11:58:58	0.0	0.1
046	8/13/2019 11:59:58	0.0	0.1
047	8/13/2019 12:00:58	0.0	0.1
048	8/13/2019 12:01:58	0.0	0.1
049	8/13/2019 12:02:58	0.0	0.1
050	8/13/2019 12:03:58	0.0	0.1
051	8/13/2019 12:04:58	0.0	0.1
052	8/13/2019 12:05:58	0.0	0.1
053	8/13/2019 12:06:58	0.0	0.1
054	8/13/2019 12:07:58	0.0	0.1
055	8/13/2019 12:08:58	0.0	0.1
056	8/13/2019 12:09:58	0.0	0.1
057	8/13/2019 12:10:58	0.0	0.1
058	8/13/2019 12:11:58	0.0	0.1
059	8/13/2019 12:12:58	0.0	0.1
060	8/13/2019 12:13:58	0.0	0.1
061	8/13/2019 12:14:58	0.0	0.1
062	8/13/2019 12:15:58	0.0	0.1
063	8/13/2019 12:16:58	0.0	0.1

064	8/13/2019 12:17:58	0.0	0.1
065	8/13/2019 12:18:58	0.0	0.1
066	8/13/2019 12:19:58	0.0	0.1
067	8/13/2019 12:20:58	0.0	0.1
068	8/13/2019 12:21:58	0.0	0.1
069	8/13/2019 12:22:58	0.0	0.1
070	8/13/2019 12:23:58	0.0	0.2
071	8/13/2019 12:24:58	0.0	0.2
072	8/13/2019 12:25:58	0.0	0.2
073	8/13/2019 12:26:58	0.0	0.2
074	8/13/2019 12:27:58	0.0	0.2
075	8/13/2019 12:28:58	0.0	0.2
076	8/13/2019 12:29:58	0.0	0.2
077	8/13/2019 12:30:58	0.0	0.2
078	8/13/2019 12:31:58	0.0	0.2
079	8/13/2019 12:32:58	0.0	0.2
080	8/13/2019 12:33:58	0.0	0.2
081	8/13/2019 12:34:58	0.0	0.2
082	8/13/2019 12:35:58	0.0	0.2
083	8/13/2019 12:36:58	0.0	0.2
084	8/13/2019 12:37:58	0.0	0.2
085	8/13/2019 12:38:58	0.0	0.2
086	8/13/2019 12:39:58	0.0	0.2
087	8/13/2019 12:40:58	0.0	0.2
088	8/13/2019 12:41:58	0.0	0.2
089	8/13/2019 12:42:58	0.0	0.2
090	8/13/2019 12:43:58	0.0	0.2
091	8/13/2019 12:44:58	0.0	0.2
092	8/13/2019 12:45:58	0.0	0.2
093	8/13/2019 12:46:58	0.0	0.2
094	8/13/2019 12:47:58	0.0	0.2
095	8/13/2019 12:48:58	0.0	0.2
096	8/13/2019 12:49:58	0.0	0.2
097	8/13/2019 12:50:58	0.0	0.2
098	8/13/2019 12:51:58	0.0	0.2
099	8/13/2019 12:52:58	0.0	0.2
100	8/13/2019 12:53:58	0.0	0.2
101	8/13/2019 12:54:58	0.0	0.2
102	8/13/2019 12:55:58	0.0	0.2
103	8/13/2019 12:56:58	0.0	0.2
104	8/13/2019 12:57:58	0.0	0.2
105	8/13/2019 12:58:58	0.0	0.2
106	8/13/2019 12:59:58	0.0	0.2
107	8/13/2019 13:00:58	0.0	0.2
108	8/13/2019 13:01:58	0.0	0.2
109	8/13/2019 13:02:58	0.0	0.2
110	8/13/2019 13:03:58	0.0	0.2
111	8/13/2019 13:04:58	0.0	0.2

112	8/13/2019 13:05:58	0.0	0.2
113	8/13/2019 13:06:58	0.0	0.2
114	8/13/2019 13:07:58	0.0	0.2
115	8/13/2019 13:08:58	0.0	0.2
116	8/13/2019 13:09:58	0.0	0.2
117	8/13/2019 13:10:58	0.0	0.2
118	8/13/2019 13:11:58	0.0	0.2
119	8/13/2019 13:12:58	0.0	0.2
120	8/13/2019 13:13:58	0.0	0.2
121	8/13/2019 13:14:58	0.0	0.2
122	8/13/2019 13:15:58	0.0	0.2
123	8/13/2019 13:16:58	0.0	0.2
124	8/13/2019 13:17:58	0.0	0.2
125	8/13/2019 13:18:58	0.0	0.2
126	8/13/2019 13:19:58	0.0	0.2
127	8/13/2019 13:20:58	0.0	0.2
128	8/13/2019 13:21:58	0.0	0.2
129	8/13/2019 13:22:58	0.0	0.2
130	8/13/2019 13:23:58	0.0	0.1
131	8/13/2019 13:24:58	0.0	0.1
132	8/13/2019 13:25:58	0.0	0.1
133	8/13/2019 13:26:58	0.0	0.1
134	8/13/2019 13:27:58	0.0	0.1
135	8/13/2019 13:28:58	0.0	0.1
136	8/13/2019 13:29:58	0.0	0.1
137	8/13/2019 13:30:58	0.0	0.1
138	8/13/2019 13:31:58	0.0	0.1
139	8/13/2019 13:32:58	0.0	0.1
140	8/13/2019 13:33:58	0.0	0.1
141	8/13/2019 13:34:58	0.0	0.1
142	8/13/2019 13:35:58	0.0	0.1
143	8/13/2019 13:36:58	0.0	0.1
144	8/13/2019 13:37:58	0.0	0.1
145	8/13/2019 13:38:58	0.0	0.1
146	8/13/2019 13:39:58	0.0	0.1
147	8/13/2019 13:40:58	0.0	0.1
148	8/13/2019 13:41:58	0.0	0.1
149	8/13/2019 13:42:58	0.0	0.1
150	8/13/2019 13:43:58	0.0	0.1
151	8/13/2019 13:44:58	0.0	0.1
152	8/13/2019 13:45:58	0.0	0.2
153	8/13/2019 13:46:58	0.0	0.2
154	8/13/2019 13:47:58	0.0	0.2
155	8/13/2019 13:48:58	0.0	0.2
156	8/13/2019 13:49:58	0.0	0.2
157	8/13/2019 13:50:58	0.0	0.2
158	8/13/2019 13:51:58	0.0	0.2
159	8/13/2019 13:52:58	0.0	0.2

160	8/13/2019 13:53:58	0.0	0.2
161	8/13/2019 13:54:58	0.0	0.2
162	8/13/2019 13:55:58	0.0	0.2
163	8/13/2019 13:56:58	0.0	0.2
164	8/13/2019 13:57:58	0.0	0.2
165	8/13/2019 13:58:58	0.1	0.2
166	8/13/2019 13:59:58	0.1	0.2
167	8/13/2019 14:00:58	0.1	0.2
168	8/13/2019 14:01:58	0.1	0.2
169	8/13/2019 14:02:58	0.1	0.2
170	8/13/2019 14:03:58	0.1	0.2
171	8/13/2019 14:04:58	0.1	0.2
172	8/13/2019 14:05:58	0.1	0.1
173	8/13/2019 14:06:58	0.1	0.1
174	8/13/2019 14:07:58	0.1	0.1
175	8/13/2019 14:08:58	0.1	0.1
176	8/13/2019 14:09:58	0.1	0.1
177	8/13/2019 14:10:58	0.1	0.1
178	8/13/2019 14:11:58	0.1	0.1
179	8/13/2019 14:12:58	0.1	0.0
180	8/13/2019 14:13:58	0.1	0.0
181	8/13/2019 14:14:58	0.1	0.0
182	8/13/2019 14:15:58	0.1	0.0

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19/08/14 06:38

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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-909007
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 12345678
User ID 12345678

Begin 8/14/2019 06:38:39
End 8/14/2019 06:39:02
Sample Period(s) 60
Number of Records 0

Sensor PID(ppm)
Sensor SN S023030105U9
Measure Type Avg; Max; Real

Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 25.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/13/2019 06:18

****

Datalog

0 record.

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19/08/14 06:39

****

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-909007
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 12345678
User ID 12345678

Begin 8/14/2019 06:39:33
End 8/14/2019 06:39:48
Sample Period(s) 60
Number of Records 0

Sensor PID(ppm)
Sensor SN S023030105U9
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 25.0
TWA Alarm 10.0
Measurement Gas Isobutylene

Calibration Time 8/13/2019 06:18

****
Datalog

0 record.

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19/08/16 10:33
****
Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-909007
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 12345678
User ID 12345678

Begin 8/16/2019 10:33:27
End 8/16/2019 10:33:41
Sample Period(s) 60
Number of Records 0

Sensor PID(ppm)
Sensor SN S023030105U9
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 25.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/13/2019 06:18

****
Datalog

0 record.

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19/08/19 10:58

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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-909007
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Pause in Communication Mode

Site ID 12345678
User ID 12345678

Begin 8/19/2019 10:58:57
End 8/19/2019 10:59:02
Sample Period(s) 60
Number of Records 0

Sensor PID(ppm)
Sensor SN S023030105U9
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 25.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/13/2019 06:18

****

Datalog

0 record.

TrakPro Version 4.70 ASCII Data File

Model:,DustTrak II
Model Number:,8530
Serial Number:,8530162808
Test ID:,001
Test Abbreviation:,MANUAL_001
Start Date:,08/08/2019
Start Time:,08:55:04
Duration (dd:hh:mm:ss):,0:02:25:00
Log Interval (mm:ss):,01:00
Number of points:,145
Notes:,

Statistics,Channel:,AEROSOL
,Units:,mg/m^3
,Average:,0.013
,Minimum:,0.012
,Time of Minimum:,09:32:04
,Date of Minimum:,08/08/2019
,Maximum:,0.015
,Time of Maximum:,08:56:04
,Date of Maximum:,08/08/2019

Calibration,Sensor:,AEROSOL
,Cal. date,11/14/2018

Date,Time,AEROSOL
MM/dd/yyyy,hh:mm:ss,mg/m^3
08/08/2019,08:56:04,0.015
08/08/2019,08:57:04,0.014
08/08/2019,08:58:04,0.015
08/08/2019,08:59:04,0.014
08/08/2019,09:00:04,0.014
08/08/2019,09:01:04,0.014
08/08/2019,09:02:04,0.014
08/08/2019,09:03:04,0.014
08/08/2019,09:04:04,0.014
08/08/2019,09:05:04,0.014
08/08/2019,09:06:04,0.014
08/08/2019,09:07:04,0.014
08/08/2019,09:08:04,0.014
08/08/2019,09:09:04,0.014
08/08/2019,09:10:04,0.014
08/08/2019,09:11:04,0.014
08/08/2019,09:12:04,0.014
08/08/2019,09:13:04,0.014
08/08/2019,09:14:04,0.014

08/08/2019,09:15:04,0.014
08/08/2019,09:16:04,0.013
08/08/2019,09:17:04,0.014
08/08/2019,09:18:04,0.014
08/08/2019,09:19:04,0.014
08/08/2019,09:20:04,0.014
08/08/2019,09:21:04,0.013
08/08/2019,09:22:04,0.013
08/08/2019,09:23:04,0.014
08/08/2019,09:24:04,0.013
08/08/2019,09:25:04,0.013
08/08/2019,09:26:04,0.013
08/08/2019,09:27:04,0.013
08/08/2019,09:28:04,0.013
08/08/2019,09:29:04,0.014
08/08/2019,09:30:04,0.013
08/08/2019,09:31:04,0.013
08/08/2019,09:32:04,0.012
08/08/2019,09:33:04,0.012
08/08/2019,09:34:04,0.012
08/08/2019,09:35:04,0.012
08/08/2019,09:36:04,0.013
08/08/2019,09:37:04,0.012
08/08/2019,09:38:04,0.012
08/08/2019,09:39:04,0.012
08/08/2019,09:40:04,0.012
08/08/2019,09:41:04,0.012
08/08/2019,09:42:04,0.012
08/08/2019,09:43:04,0.013
08/08/2019,09:44:04,0.012
08/08/2019,09:45:04,0.014
08/08/2019,09:46:04,0.013
08/08/2019,09:47:04,0.013
08/08/2019,09:48:04,0.013
08/08/2019,09:49:04,0.013
08/08/2019,09:50:04,0.012
08/08/2019,09:51:04,0.012
08/08/2019,09:52:04,0.012
08/08/2019,09:53:04,0.013
08/08/2019,09:54:04,0.013
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08/08/2019,09:56:04,0.013
08/08/2019,09:57:04,0.013
08/08/2019,09:58:04,0.013
08/08/2019,09:59:04,0.013
08/08/2019,10:00:04,0.013
08/08/2019,10:01:04,0.013
08/08/2019,10:02:04,0.013

08/08/2019,10:03:04,0.013
08/08/2019,10:04:04,0.013
08/08/2019,10:05:04,0.013
08/08/2019,10:06:04,0.013
08/08/2019,10:07:04,0.013
08/08/2019,10:08:04,0.013
08/08/2019,10:09:04,0.013
08/08/2019,10:10:04,0.013
08/08/2019,10:11:04,0.013
08/08/2019,10:12:04,0.013
08/08/2019,10:13:04,0.013
08/08/2019,10:14:04,0.013
08/08/2019,10:15:04,0.013
08/08/2019,10:16:04,0.013
08/08/2019,10:17:04,0.013
08/08/2019,10:18:04,0.013
08/08/2019,10:19:04,0.013
08/08/2019,10:20:04,0.013
08/08/2019,10:21:04,0.013
08/08/2019,10:22:04,0.013
08/08/2019,10:23:04,0.014
08/08/2019,10:24:04,0.013
08/08/2019,10:25:04,0.014
08/08/2019,10:26:04,0.014
08/08/2019,10:27:04,0.014
08/08/2019,10:28:04,0.013
08/08/2019,10:29:04,0.013
08/08/2019,10:30:04,0.014
08/08/2019,10:31:04,0.013
08/08/2019,10:32:04,0.014
08/08/2019,10:33:04,0.014
08/08/2019,10:34:04,0.014
08/08/2019,10:35:04,0.013
08/08/2019,10:36:04,0.014
08/08/2019,10:37:04,0.014
08/08/2019,10:38:04,0.013
08/08/2019,10:39:04,0.013
08/08/2019,10:40:04,0.014
08/08/2019,10:41:04,0.014
08/08/2019,10:42:04,0.013
08/08/2019,10:43:04,0.013
08/08/2019,10:44:04,0.015
08/08/2019,10:45:04,0.014
08/08/2019,10:46:04,0.014
08/08/2019,10:47:04,0.014
08/08/2019,10:48:04,0.014
08/08/2019,10:49:04,0.014
08/08/2019,10:50:04,0.014

08/08/2019,10:51:04,0.014
08/08/2019,10:52:04,0.014
08/08/2019,10:53:04,0.013
08/08/2019,10:54:04,0.014
08/08/2019,10:55:04,0.013
08/08/2019,10:56:04,0.014
08/08/2019,10:57:04,0.014
08/08/2019,10:58:04,0.014
08/08/2019,10:59:04,0.014
08/08/2019,11:00:04,0.014
08/08/2019,11:01:04,0.014
08/08/2019,11:02:04,0.014
08/08/2019,11:03:04,0.014
08/08/2019,11:04:04,0.014
08/08/2019,11:05:04,0.014
08/08/2019,11:06:04,0.014
08/08/2019,11:07:04,0.014
08/08/2019,11:08:04,0.014
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08/08/2019,11:12:04,0.013
08/08/2019,11:13:04,0.013
08/08/2019,11:14:04,0.013
08/08/2019,11:15:04,0.014
08/08/2019,11:16:04,0.014
08/08/2019,11:17:04,0.013
08/08/2019,11:18:04,0.014
08/08/2019,11:19:04,0.014
08/08/2019,11:20:04,0.013

Model:,DustTrak II
Model Number:,8530
Serial Number:,8530162808
Test ID:,002
Test Abbreviation:,MANUAL_002
Start Date:,08/08/2019
Start Time:,14:58:14
Duration (dd:hh:mm:ss):,0:01:12:00
Log Interval (mm:ss):,01:00
Number of points:,72
Notes:,

Statistics,Channel:,AEROSOL
,Units:,mg/m^3
,Average:,0.014
,Minimum:,0.014
,Time of Minimum:,15:01:14

,Date of Minimum:,08/08/2019
,Maximum:,0.015
,Time of Maximum:,14:59:14
,Date of Maximum:,08/08/2019

Calibration,Sensor:,AEROSOL
,Cal. date,11/14/2018

Date,Time,AEROSOL
MM/dd/yyyy,hh:mm:ss,mg/m^3
08/08/2019,14:59:14,0.015
08/08/2019,15:00:14,0.015
08/08/2019,15:01:14,0.014
08/08/2019,15:02:14,0.014
08/08/2019,15:03:14,0.014
08/08/2019,15:04:14,0.015
08/08/2019,15:05:14,0.014
08/08/2019,15:06:14,0.014
08/08/2019,15:07:14,0.014
08/08/2019,15:08:14,0.014
08/08/2019,15:09:14,0.014
08/08/2019,15:10:14,0.014
08/08/2019,15:11:14,0.014
08/08/2019,15:12:14,0.014
08/08/2019,15:13:14,0.014
08/08/2019,15:14:14,0.014
08/08/2019,15:15:14,0.014
08/08/2019,15:16:14,0.014
08/08/2019,15:17:14,0.014
08/08/2019,15:18:14,0.014
08/08/2019,15:19:14,0.014
08/08/2019,15:20:14,0.014
08/08/2019,15:21:14,0.014
08/08/2019,15:22:14,0.014
08/08/2019,15:23:14,0.014
08/08/2019,15:24:14,0.014
08/08/2019,15:25:14,0.014
08/08/2019,15:26:14,0.014
08/08/2019,15:27:14,0.014
08/08/2019,15:28:14,0.014
08/08/2019,15:29:14,0.014
08/08/2019,15:30:14,0.014
08/08/2019,15:31:14,0.014
08/08/2019,15:32:14,0.014
08/08/2019,15:33:14,0.014
08/08/2019,15:34:14,0.014
08/08/2019,15:35:14,0.014
08/08/2019,15:36:14,0.014

08/08/2019,15:37:14,0.014
08/08/2019,15:38:14,0.014
08/08/2019,15:39:14,0.014
08/08/2019,15:40:14,0.014
08/08/2019,15:41:14,0.014
08/08/2019,15:42:14,0.014
08/08/2019,15:43:14,0.014
08/08/2019,15:44:14,0.015
08/08/2019,15:45:14,0.014
08/08/2019,15:46:14,0.014
08/08/2019,15:47:14,0.014
08/08/2019,15:48:14,0.014
08/08/2019,15:49:14,0.014
08/08/2019,15:50:14,0.014
08/08/2019,15:51:14,0.014
08/08/2019,15:52:14,0.014
08/08/2019,15:53:14,0.014
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08/08/2019,15:56:14,0.014
08/08/2019,15:57:14,0.014
08/08/2019,15:58:14,0.014
08/08/2019,15:59:14,0.014
08/08/2019,16:00:14,0.014
08/08/2019,16:01:14,0.014
08/08/2019,16:02:14,0.014
08/08/2019,16:03:14,0.014
08/08/2019,16:04:14,0.014
08/08/2019,16:05:14,0.014
08/08/2019,16:06:14,0.014
08/08/2019,16:07:14,0.014
08/08/2019,16:08:14,0.014
08/08/2019,16:09:14,0.015
08/08/2019,16:10:14,0.014

Model:,DustTrak II
Model Number:,8530
Serial Number:,8530162808
Test ID:,003
Test Abbreviation:,MANUAL_003
Start Date:,08/12/2019
Start Time:,08:05:19
Duration (dd:hh:mm:ss):,0:08:27:00
Log Interval (mm:ss):,01:00
Number of points:,366
Notes:,

Statistics,Channel:,AEROSOL

,Units:,mg/m^3
,Average:,0.018
,Minimum:,0.000
,Time of Minimum:,15:21:19
,Date of Minimum:,08/12/2019
,Maximum:,0.033
,Time of Maximum:,16:29:19
,Date of Maximum:,08/12/2019

Calibration,Sensor:,AEROSOL
,Cal. date,11/14/2018

Date,Time,AEROSOL
MM/dd/yyyy,hh:mm:ss,mg/m^3
08/12/2019,08:06:19,0.016
08/12/2019,08:07:19,0.017
08/12/2019,08:08:19,0.017
08/12/2019,08:09:19,0.017
08/12/2019,08:10:19,0.017
08/12/2019,08:11:19,0.027
08/12/2019,08:12:19,0.027
08/12/2019,08:13:19,0.021
08/12/2019,08:14:19,0.018
08/12/2019,08:15:19,0.017
08/12/2019,08:16:19,0.017
08/12/2019,08:17:19,0.017
08/12/2019,08:18:19,0.017
08/12/2019,08:19:19,0.017
08/12/2019,08:20:19,0.017
08/12/2019,08:21:19,0.017
08/12/2019,08:22:19,0.016
08/12/2019,08:23:19,0.017
08/12/2019,08:24:19,0.017
08/12/2019,08:25:19,0.017
08/12/2019,08:26:19,0.017
08/12/2019,08:27:19,0.017
08/12/2019,08:28:19,0.017
08/12/2019,08:29:19,0.017
08/12/2019,08:30:19,0.016
08/12/2019,08:31:19,0.017
08/12/2019,08:32:19,0.017
08/12/2019,08:33:19,0.017
08/12/2019,08:34:19,0.017
08/12/2019,08:35:19,0.017
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Model:,DustTrak II
Model Number:,8530
Serial Number:,8530162808

Test ID:,004
Test Abbreviation:,MANUAL_004
Start Date:,08/13/2019
Start Time:,06:49:01
Duration (dd:hh:mm:ss):,0:07:52:00
Log Interval (mm:ss):,01:00
Number of points:,472
Notes:,

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,Time of Minimum:,14:23:01
,Date of Minimum:,08/13/2019
,Maximum:,0.044
,Time of Maximum:,14:41:01
,Date of Maximum:,08/13/2019

Calibration,Sensor:,AEROSOL
,Cal. date,11/14/2018

Date,Time,AEROSOL
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Model Number:,8530
Serial Number:,8530162808
Test ID:,005
Test Abbreviation:,MANUAL_005
Start Date:,08/14/2019
Start Time:,07:14:48
Duration (dd:hh:mm:ss):,0:02:20:00
Log Interval (mm:ss):,01:00
Number of points:,140
Notes:,

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,Minimum:,0.006
,Time of Minimum:,09:06:48
,Date of Minimum:,08/14/2019
,Maximum:,0.023
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,Date of Maximum:,08/14/2019

Calibration,Sensor:,AEROSOL
,Cal. date,11/14/2018

Date,Time,AEROSOL
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08/14/2019,09:15:48,0.007
08/14/2019,09:16:48,0.007
08/14/2019,09:17:48,0.006
08/14/2019,09:18:48,0.007
08/14/2019,09:19:48,0.007
08/14/2019,09:20:48,0.007
08/14/2019,09:21:48,0.007
08/14/2019,09:22:48,0.007
08/14/2019,09:23:48,0.007
08/14/2019,09:24:48,0.007
08/14/2019,09:25:48,0.007
08/14/2019,09:26:48,0.007
08/14/2019,09:27:48,0.007
08/14/2019,09:28:48,0.006
08/14/2019,09:29:48,0.006
08/14/2019,09:30:48,0.006
08/14/2019,09:31:48,0.007
08/14/2019,09:32:48,0.006
08/14/2019,09:33:48,0.006
08/14/2019,09:34:48,0.006

```
============================================================
19/08/05 10:37
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Pause in Menu Mode
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/5/2019 10:37:08
End     8/5/2019 10:37:50
Sample Period(s)        60
Number of Records       0
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030282W4
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      100.0
TWA Alarm       50.0
Measurement Gas Isobutylene
Calibration Time        7/26/2019 08:36

************************************************************
Datalog

0 record.

============================================================
19/08/05 10:40
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver       V2.20A
```

```
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Power Down
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/5/2019 10:40:05
End     8/5/2019 10:40:44
Sample Period(s)        60
Number of Records       0
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030282W4
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      100.0
TWA Alarm       50.0
Measurement Gas Isobutylene
Calibration Time        8/5/2019 10:39

************************************************************
Datalog

0 record.

============================================================
19/08/05 12:17
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Pause in Menu Mode
------------------------------------------------------------
Site ID 12345678
User ID 12345678
```

Begin 8/5/2019 12:17:06
End 8/5/2019 12:44:54
Sample Period(s) 60
Number of Records 27

Sensor PID(ppm)
Sensor SN S023030282W4
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 100.0
TWA Alarm 50.0
Measurement Gas Isobutylene
Calibration Time 8/5/2019 10:39
Peak 0.9
Min 0.0
Average 0.3

****

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	PID(ppm)
001	8/5/2019 12:18:06		0.1	0.1	0.1
002	8/5/2019 12:19:06		0.1	0.1	0.1
003	8/5/2019 12:20:06		0.1	0.2	0.0
004	8/5/2019 12:21:06		0.1	0.1	0.1
005	8/5/2019 12:22:06		0.1	0.1	0.1
006	8/5/2019 12:23:06		0.1	0.2	0.1
007	8/5/2019 12:24:06		0.1	0.2	0.2
008	8/5/2019 12:25:06		0.1	0.2	0.1
009	8/5/2019 12:26:06		0.0	0.1	0.0
010	8/5/2019 12:27:06		0.1	0.2	0.1
011	8/5/2019 12:28:06		0.2	0.3	0.3
012	8/5/2019 12:29:06		0.3	0.4	0.4
013	8/5/2019 12:30:06		0.4	0.5	0.5
014	8/5/2019 12:31:06		0.5	0.5	0.5
015	8/5/2019 12:32:06		0.6	0.6	0.6
016	8/5/2019 12:33:06		0.6	0.6	0.6
017	8/5/2019 12:34:06		0.7	0.7	0.7
018	8/5/2019 12:35:06		0.7	0.7	0.7
019	8/5/2019 12:36:06		0.7	0.8	0.8
020	8/5/2019 12:37:06		0.8	0.8	0.8
021	8/5/2019 12:38:06		0.8	0.8	0.8
022	8/5/2019 12:39:06		0.9	0.9	0.9

023	8/5/2019 12:40:06	0.6	0.9	0.1
024	8/5/2019 12:41:06	0.2	0.5	0.2
025	8/5/2019 12:42:06	0.2	0.2	0.1
026	8/5/2019 12:43:06	0.1	0.2	0.1
027	8/5/2019 12:44:06	0.1	0.3	0.1
Peak		0.9	0.9	0.9
Min		0.0	0.1	0.0
Average		0.3	0.4	0.3

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/5/2019 12:18:06	0.0	---
002	8/5/2019 12:19:06	0.0	---
003	8/5/2019 12:20:06	0.0	---
004	8/5/2019 12:21:06	0.0	---
005	8/5/2019 12:22:06	0.0	---
006	8/5/2019 12:23:06	0.0	---
007	8/5/2019 12:24:06	0.0	---
008	8/5/2019 12:25:06	0.0	---
009	8/5/2019 12:26:06	0.0	---
010	8/5/2019 12:27:06	0.0	---
011	8/5/2019 12:28:06	0.0	---
012	8/5/2019 12:29:06	0.0	---
013	8/5/2019 12:30:06	0.0	---
014	8/5/2019 12:31:06	0.0	---
015	8/5/2019 12:32:06	0.0	0.2
016	8/5/2019 12:33:06	0.0	0.3
017	8/5/2019 12:34:06	0.0	0.3
018	8/5/2019 12:35:06	0.0	0.3
019	8/5/2019 12:36:06	0.0	0.4
020	8/5/2019 12:37:06	0.0	0.4
021	8/5/2019 12:38:06	0.0	0.5
022	8/5/2019 12:39:06	0.0	0.5
023	8/5/2019 12:40:06	0.0	0.5
024	8/5/2019 12:41:06	0.0	0.5
025	8/5/2019 12:42:06	0.0	0.5
026	8/5/2019 12:43:06	0.0	0.5
027	8/5/2019 12:44:06	0.0	0.5

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19/08/05 12:48

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Summary

Unit Name MiniRAE 3000 +(PGM-7320)

Unit SN 592-927993

Unit Firmware Ver V2.20A

```
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Power Down
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/5/2019 12:48:55
End     8/5/2019 12:51:14
Sample Period(s)        60
Number of Records       2
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030282W4
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      100.0
TWA Alarm       50.0
Measurement Gas Isobutylene
Calibration Time        8/5/2019 12:48
Peak    0.3
Min     0.1
Average 0.2

************************************************************
Datalog
                PID(ppm)        PID(ppm)        PID(ppm)
Index   Date/Time       (Avg)   (Max)   (Real)
001     8/5/2019 12:49:55       52.0    104.6   0.3
002     8/5/2019 12:50:55       0.2     0.3     0.1
Peak            52.0    104.6   0.3
Min             0.2     0.3     0.1
Average         26.1    52.5    0.2

************************************************************
TWA/STEL
                PID(ppm)        PID(ppm)
Index   Date/Time       (TWA)   (STEL)
001     8/5/2019 12:49:55       0.0     ---
002     8/5/2019 12:50:55       0.0     ---
============================================================
19/08/06 14:01
```

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Summary

Unit Name MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Pause in Menu Mode

Site ID 12345678
User ID 12345678

Begin 8/6/2019 14:01:41
End 8/6/2019 14:02:36
Sample Period(s) 60
Number of Records 0

Sensor PID(ppm)
Sensor SN S023030282W4
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 100.0
TWA Alarm 50.0
Measurement Gas Isobutylene
Calibration Time 8/5/2019 12:48

****
Datalog

0 record.

==========
19/08/06 14:05
****
Summary

Unit Name MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode

```
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Power Down
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/6/2019 14:05:18
End     8/6/2019 14:06:24
Sample Period(s)        60
Number of Records       1
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030282W4
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      100.0
TWA Alarm       50.0
Measurement Gas Isobutylene
Calibration Time        8/6/2019 14:04
Peak    1.5
Min     1.5
Average 1.5

************************************************************
Datalog
                PID(ppm)        PID(ppm)        PID(ppm)
Index   Date/Time       (Avg)   (Max)   (Real)
001     8/6/2019 14:06:18       32.4    107.7   1.5
Peak            32.4    107.7   1.5
Min             32.4    107.7   1.5
Average         32.4    107.7   1.5

************************************************************
TWA/STEL
                PID(ppm)        PID(ppm)
Index   Date/Time       (TWA)   (STEL)
001     8/6/2019 14:06:18       0.0     ---
============================================================
19/08/08 08:07
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000 +(PGM-7320)
```

Unit SN 592-927993
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Pause in Menu Mode

Site ID 12345678
User ID 12345678

Begin 8/8/2019 08:07:33
End 8/8/2019 08:07:40
Sample Period(s) 60
Number of Records 0

Sensor PID(ppm)
Sensor SN S023030282W4
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 100.0
TWA Alarm 50.0
Measurement Gas Isobutylene
Calibration Time 8/6/2019 14:04

****
Datalog

0 record.

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19/08/08 08:10
****
Summary

Unit Name MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 12345678
User ID 12345678

Begin 8/8/2019 08:10:47
End 8/8/2019 08:12:03
Sample Period(s) 60
Number of Records 1

Sensor PID(ppm)
Sensor SN S023030282W4
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 100.0
TWA Alarm 50.0
Measurement Gas Isobutylene
Calibration Time 8/8/2019 08:10
Peak 0.0
Min 0.0
Average 0.0

****

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	8/8/2019 08:11:47	0.1	0.7	0.0
Peak		0.1	0.7	0.0
Min		0.1	0.7	0.0
Average		0.1	0.7	0.0

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/8/2019 08:11:47	0.0	---

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19/08/08 09:12

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Summary

Unit Name MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode

Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 12345678
User ID 12345678

Begin 8/8/2019 09:12:11
End 8/8/2019 11:38:26
Sample Period(s) 60
Number of Records 146

Sensor PID(ppm)
Sensor SN S023030282W4
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 100.0
TWA Alarm 50.0
Measurement Gas Isobutylene
Calibration Time 8/8/2019 08:10
Peak 0.4
Min 0.1
Average 0.3

****

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	PID(ppm)
001	8/8/2019 09:13:11		0.1	0.1	0.1
002	8/8/2019 09:14:11		0.1	0.1	0.1
003	8/8/2019 09:15:11		0.1	0.1	0.1
004	8/8/2019 09:16:11		0.1	0.1	0.1
005	8/8/2019 09:17:11		0.1	0.1	0.1
006	8/8/2019 09:18:11		0.1	0.1	0.1
007	8/8/2019 09:19:11		0.1	0.1	0.1
008	8/8/2019 09:20:11		0.1	0.1	0.1
009	8/8/2019 09:21:11		0.1	0.1	0.1
010	8/8/2019 09:22:11		0.1	0.1	0.1
011	8/8/2019 09:23:11		0.1	0.1	0.1
012	8/8/2019 09:24:11		0.1	0.1	0.1
013	8/8/2019 09:25:11		0.1	0.1	0.1
014	8/8/2019 09:26:11		0.1	0.1	0.1
015	8/8/2019 09:27:11		0.1	0.1	0.1
016	8/8/2019 09:28:11		0.1	0.1	0.1

017	8/8/2019 09:29:11	0.1	0.1	0.1
018	8/8/2019 09:30:11	0.1	0.1	0.1
019	8/8/2019 09:31:11	0.1	0.1	0.1
020	8/8/2019 09:32:11	0.1	0.1	0.1
021	8/8/2019 09:33:11	0.1	0.2	0.1
022	8/8/2019 09:34:11	0.1	0.2	0.2
023	8/8/2019 09:35:11	0.2	0.2	0.2
024	8/8/2019 09:36:11	0.2	0.2	0.2
025	8/8/2019 09:37:11	0.2	0.2	0.2
026	8/8/2019 09:38:11	0.2	0.2	0.2
027	8/8/2019 09:39:11	0.2	0.2	0.2
028	8/8/2019 09:40:11	0.2	0.2	0.2
029	8/8/2019 09:41:11	0.2	0.2	0.2
030	8/8/2019 09:42:11	0.2	0.2	0.2
031	8/8/2019 09:43:11	0.2	0.2	0.2
032	8/8/2019 09:44:11	0.2	0.2	0.2
033	8/8/2019 09:45:11	0.2	0.2	0.2
034	8/8/2019 09:46:11	0.2	0.2	0.2
035	8/8/2019 09:47:11	0.2	0.2	0.2
036	8/8/2019 09:48:11	0.2	0.2	0.2
037	8/8/2019 09:49:11	0.2	0.2	0.2
038	8/8/2019 09:50:11	0.2	0.3	0.2
039	8/8/2019 09:51:11	0.2	0.3	0.2
040	8/8/2019 09:52:11	0.2	0.2	0.2
041	8/8/2019 09:53:11	0.2	0.3	0.2
042	8/8/2019 09:54:11	0.2	0.3	0.2
043	8/8/2019 09:55:11	0.2	0.2	0.2
044	8/8/2019 09:56:11	0.2	0.3	0.3
045	8/8/2019 09:57:11	0.3	0.3	0.2
046	8/8/2019 09:58:11	0.3	0.3	0.3
047	8/8/2019 09:59:11	0.3	0.3	0.3
048	8/8/2019 10:00:11	0.3	0.3	0.3
049	8/8/2019 10:01:11	0.3	0.3	0.3
050	8/8/2019 10:02:11	0.3	0.3	0.3
051	8/8/2019 10:03:11	0.3	0.3	0.3
052	8/8/2019 10:04:11	0.3	0.3	0.3
053	8/8/2019 10:05:11	0.3	0.4	0.4
054	8/8/2019 10:06:11	0.4	0.4	0.4
055	8/8/2019 10:07:11	0.4	0.4	0.4
056	8/8/2019 10:08:11	0.3	0.4	0.3
057	8/8/2019 10:09:11	0.3	0.3	0.3
058	8/8/2019 10:10:11	0.3	0.3	0.3
059	8/8/2019 10:11:11	0.3	0.3	0.3
060	8/8/2019 10:12:11	0.3	0.3	0.3
061	8/8/2019 10:13:11	0.3	0.3	0.3
062	8/8/2019 10:14:11	0.3	0.3	0.3
063	8/8/2019 10:15:11	0.3	0.3	0.3
064	8/8/2019 10:16:11	0.3	0.3	0.3

065	8/8/2019 10:17:11	0.3	0.3	0.3
066	8/8/2019 10:18:11	0.3	0.3	0.3
067	8/8/2019 10:19:11	0.3	0.3	0.3
068	8/8/2019 10:20:11	0.3	0.4	0.3
069	8/8/2019 10:21:11	0.3	0.4	0.3
070	8/8/2019 10:22:11	0.3	0.3	0.3
071	8/8/2019 10:23:11	0.3	0.3	0.3
072	8/8/2019 10:24:11	0.3	0.3	0.3
073	8/8/2019 10:25:11	0.3	0.3	0.3
074	8/8/2019 10:26:11	0.3	0.3	0.3
075	8/8/2019 10:27:11	0.3	0.3	0.3
076	8/8/2019 10:28:11	0.3	0.3	0.3
077	8/8/2019 10:29:11	0.3	0.3	0.3
078	8/8/2019 10:30:11	0.3	0.3	0.3
079	8/8/2019 10:31:11	0.3	0.3	0.3
080	8/8/2019 10:32:11	0.3	0.3	0.3
081	8/8/2019 10:33:11	0.3	0.3	0.3
082	8/8/2019 10:34:11	0.3	0.3	0.3
083	8/8/2019 10:35:11	0.3	0.3	0.3
084	8/8/2019 10:36:11	0.3	0.3	0.3
085	8/8/2019 10:37:11	0.3	0.3	0.3
086	8/8/2019 10:38:11	0.3	0.3	0.3
087	8/8/2019 10:39:11	0.3	0.3	0.3
088	8/8/2019 10:40:11	0.3	0.3	0.3
089	8/8/2019 10:41:11	0.3	0.3	0.3
090	8/8/2019 10:42:11	0.3	0.3	0.3
091	8/8/2019 10:43:11	0.3	0.3	0.3
092	8/8/2019 10:44:11	0.3	0.3	0.3
093	8/8/2019 10:45:11	0.3	0.3	0.3
094	8/8/2019 10:46:11	0.3	0.3	0.3
095	8/8/2019 10:47:11	0.3	0.3	0.3
096	8/8/2019 10:48:11	0.3	0.4	0.3
097	8/8/2019 10:49:11	0.3	0.3	0.3
098	8/8/2019 10:50:11	0.3	0.3	0.3
099	8/8/2019 10:51:11	0.3	0.3	0.3
100	8/8/2019 10:52:11	0.3	0.3	0.3
101	8/8/2019 10:53:11	0.3	0.3	0.3
102	8/8/2019 10:54:11	0.3	0.3	0.3
103	8/8/2019 10:55:11	0.3	0.3	0.3
104	8/8/2019 10:56:11	0.3	0.3	0.3
105	8/8/2019 10:57:11	0.3	0.3	0.3
106	8/8/2019 10:58:11	0.3	0.3	0.3
107	8/8/2019 10:59:11	0.3	0.3	0.3
108	8/8/2019 11:00:11	0.3	0.3	0.3
109	8/8/2019 11:01:11	0.3	0.3	0.3
110	8/8/2019 11:02:11	0.3	0.3	0.3
111	8/8/2019 11:03:11	0.3	0.3	0.3
112	8/8/2019 11:04:11	0.3	0.3	0.3

113	8/8/2019 11:05:11	0.3	0.3	0.3
114	8/8/2019 11:06:11	0.3	0.3	0.3
115	8/8/2019 11:07:11	0.3	0.3	0.3
116	8/8/2019 11:08:11	0.3	0.3	0.3
117	8/8/2019 11:09:11	0.3	0.3	0.3
118	8/8/2019 11:10:11	0.3	0.3	0.3
119	8/8/2019 11:11:11	0.3	0.3	0.3
120	8/8/2019 11:12:11	0.3	0.3	0.3
121	8/8/2019 11:13:11	0.3	0.3	0.3
122	8/8/2019 11:14:11	0.3	0.3	0.3
123	8/8/2019 11:15:11	0.3	0.3	0.3
124	8/8/2019 11:16:11	0.3	0.3	0.3
125	8/8/2019 11:17:11	0.3	0.3	0.3
126	8/8/2019 11:18:11	0.3	0.3	0.3
127	8/8/2019 11:19:11	0.3	0.3	0.3
128	8/8/2019 11:20:11	0.3	0.3	0.3
129	8/8/2019 11:21:11	0.3	0.3	0.3
130	8/8/2019 11:22:11	0.3	0.3	0.3
131	8/8/2019 11:23:11	0.3	0.3	0.3
132	8/8/2019 11:24:11	0.3	0.3	0.3
133	8/8/2019 11:25:11	0.3	0.3	0.3
134	8/8/2019 11:26:11	0.3	0.3	0.3
135	8/8/2019 11:27:11	0.3	0.3	0.3
136	8/8/2019 11:28:11	0.3	0.3	0.3
137	8/8/2019 11:29:11	0.3	0.3	0.3
138	8/8/2019 11:30:11	0.3	0.3	0.3
139	8/8/2019 11:31:11	0.3	0.3	0.3
140	8/8/2019 11:32:11	0.3	0.3	0.3
141	8/8/2019 11:33:11	0.3	0.3	0.3
142	8/8/2019 11:34:11	0.3	0.3	0.3
143	8/8/2019 11:35:11	0.3	0.3	0.3
144	8/8/2019 11:36:11	0.3	0.3	0.3
145	8/8/2019 11:37:11	0.3	0.3	0.3
146	8/8/2019 11:38:11	0.3	0.3	0.3
Peak		0.4	0.4	0.4
Min		0.1	0.1	0.1
Average		0.3	0.3	0.3

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/8/2019 09:13:11	0.0	---
002	8/8/2019 09:14:11	0.0	---
003	8/8/2019 09:15:11	0.0	---
004	8/8/2019 09:16:11	0.0	---
005	8/8/2019 09:17:11	0.0	---
006	8/8/2019 09:18:11	0.0	---

007	8/8/2019 09:19:11	0.0	---
008	8/8/2019 09:20:11	0.0	---
009	8/8/2019 09:21:11	0.0	---
010	8/8/2019 09:22:11	0.0	---
011	8/8/2019 09:23:11	0.0	---
012	8/8/2019 09:24:11	0.0	---
013	8/8/2019 09:25:11	0.0	---
014	8/8/2019 09:26:11	0.0	---
015	8/8/2019 09:27:11	0.0	0.1
016	8/8/2019 09:28:11	0.0	0.1
017	8/8/2019 09:29:11	0.0	0.1
018	8/8/2019 09:30:11	0.0	0.1
019	8/8/2019 09:31:11	0.0	0.1
020	8/8/2019 09:32:11	0.0	0.1
021	8/8/2019 09:33:11	0.0	0.1
022	8/8/2019 09:34:11	0.0	0.1
023	8/8/2019 09:35:11	0.0	0.1
024	8/8/2019 09:36:11	0.0	0.1
025	8/8/2019 09:37:11	0.0	0.1
026	8/8/2019 09:38:11	0.0	0.1
027	8/8/2019 09:39:11	0.0	0.1
028	8/8/2019 09:40:11	0.0	0.2
029	8/8/2019 09:41:11	0.0	0.2
030	8/8/2019 09:42:11	0.0	0.2
031	8/8/2019 09:43:11	0.0	0.2
032	8/8/2019 09:44:11	0.0	0.2
033	8/8/2019 09:45:11	0.0	0.2
034	8/8/2019 09:46:11	0.0	0.2
035	8/8/2019 09:47:11	0.0	0.2
036	8/8/2019 09:48:11	0.0	0.2
037	8/8/2019 09:49:11	0.0	0.2
038	8/8/2019 09:50:11	0.0	0.2
039	8/8/2019 09:51:11	0.0	0.2
040	8/8/2019 09:52:11	0.0	0.2
041	8/8/2019 09:53:11	0.0	0.2
042	8/8/2019 09:54:11	0.0	0.2
043	8/8/2019 09:55:11	0.0	0.2
044	8/8/2019 09:56:11	0.0	0.2
045	8/8/2019 09:57:11	0.0	0.2
046	8/8/2019 09:58:11	0.0	0.2
047	8/8/2019 09:59:11	0.0	0.2
048	8/8/2019 10:00:11	0.0	0.2
049	8/8/2019 10:01:11	0.0	0.2
050	8/8/2019 10:02:11	0.0	0.3
051	8/8/2019 10:03:11	0.0	0.3
052	8/8/2019 10:04:11	0.0	0.3
053	8/8/2019 10:05:11	0.0	0.3
054	8/8/2019 10:06:11	0.0	0.3

055	8/8/2019 10:07:11	0.0	0.3
056	8/8/2019 10:08:11	0.0	0.3
057	8/8/2019 10:09:11	0.0	0.3
058	8/8/2019 10:10:11	0.0	0.3
059	8/8/2019 10:11:11	0.0	0.3
060	8/8/2019 10:12:11	0.0	0.3
061	8/8/2019 10:13:11	0.0	0.3
062	8/8/2019 10:14:11	0.0	0.3
063	8/8/2019 10:15:11	0.0	0.3
064	8/8/2019 10:16:11	0.0	0.3
065	8/8/2019 10:17:11	0.0	0.3
066	8/8/2019 10:18:11	0.0	0.3
067	8/8/2019 10:19:11	0.0	0.3
068	8/8/2019 10:20:11	0.0	0.3
069	8/8/2019 10:21:11	0.0	0.3
070	8/8/2019 10:22:11	0.0	0.3
071	8/8/2019 10:23:11	0.0	0.3
072	8/8/2019 10:24:11	0.0	0.3
073	8/8/2019 10:25:11	0.0	0.3
074	8/8/2019 10:26:11	0.0	0.3
075	8/8/2019 10:27:11	0.0	0.3
076	8/8/2019 10:28:11	0.0	0.3
077	8/8/2019 10:29:11	0.0	0.3
078	8/8/2019 10:30:11	0.0	0.3
079	8/8/2019 10:31:11	0.0	0.3
080	8/8/2019 10:32:11	0.0	0.3
081	8/8/2019 10:33:11	0.0	0.3
082	8/8/2019 10:34:11	0.0	0.3
083	8/8/2019 10:35:11	0.0	0.3
084	8/8/2019 10:36:11	0.0	0.3
085	8/8/2019 10:37:11	0.0	0.3
086	8/8/2019 10:38:11	0.0	0.3
087	8/8/2019 10:39:11	0.0	0.3
088	8/8/2019 10:40:11	0.0	0.3
089	8/8/2019 10:41:11	0.0	0.3
090	8/8/2019 10:42:11	0.0	0.3
091	8/8/2019 10:43:11	0.0	0.3
092	8/8/2019 10:44:11	0.0	0.3
093	8/8/2019 10:45:11	0.0	0.3
094	8/8/2019 10:46:11	0.0	0.3
095	8/8/2019 10:47:11	0.0	0.3
096	8/8/2019 10:48:11	0.0	0.3
097	8/8/2019 10:49:11	0.0	0.3
098	8/8/2019 10:50:11	0.0	0.3
099	8/8/2019 10:51:11	0.0	0.3
100	8/8/2019 10:52:11	0.0	0.3
101	8/8/2019 10:53:11	0.1	0.3
102	8/8/2019 10:54:11	0.1	0.3

103	8/8/2019 10:55:11	0.1	0.3
104	8/8/2019 10:56:11	0.1	0.3
105	8/8/2019 10:57:11	0.1	0.3
106	8/8/2019 10:58:11	0.1	0.3
107	8/8/2019 10:59:11	0.1	0.3
108	8/8/2019 11:00:11	0.1	0.3
109	8/8/2019 11:01:11	0.1	0.3
110	8/8/2019 11:02:11	0.1	0.3
111	8/8/2019 11:03:11	0.1	0.3
112	8/8/2019 11:04:11	0.1	0.3
113	8/8/2019 11:05:11	0.1	0.3
114	8/8/2019 11:06:11	0.1	0.3
115	8/8/2019 11:07:11	0.1	0.3
116	8/8/2019 11:08:11	0.1	0.3
117	8/8/2019 11:09:11	0.1	0.3
118	8/8/2019 11:10:11	0.1	0.3
119	8/8/2019 11:11:11	0.1	0.3
120	8/8/2019 11:12:11	0.1	0.3
121	8/8/2019 11:13:11	0.1	0.3
122	8/8/2019 11:14:11	0.1	0.3
123	8/8/2019 11:15:11	0.1	0.3
124	8/8/2019 11:16:11	0.1	0.3
125	8/8/2019 11:17:11	0.1	0.3
126	8/8/2019 11:18:11	0.1	0.3
127	8/8/2019 11:19:11	0.1	0.3
128	8/8/2019 11:20:11	0.1	0.3
129	8/8/2019 11:21:11	0.1	0.3
130	8/8/2019 11:22:11	0.1	0.3
131	8/8/2019 11:23:11	0.1	0.3
132	8/8/2019 11:24:11	0.1	0.3
133	8/8/2019 11:25:11	0.1	0.3
134	8/8/2019 11:26:11	0.1	0.3
135	8/8/2019 11:27:11	0.1	0.3
136	8/8/2019 11:28:11	0.1	0.3
137	8/8/2019 11:29:11	0.1	0.3
138	8/8/2019 11:30:11	0.1	0.3
139	8/8/2019 11:31:11	0.1	0.3
140	8/8/2019 11:32:11	0.1	0.3
141	8/8/2019 11:33:11	0.1	0.3
142	8/8/2019 11:34:11	0.1	0.3
143	8/8/2019 11:35:11	0.1	0.3
144	8/8/2019 11:36:11	0.1	0.3
145	8/8/2019 11:37:11	0.1	0.3
146	8/8/2019 11:38:11	0.1	0.3

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19/08/08 15:15

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Summary

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------------------------------------------------------------
Unit Name       MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Power Down
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/8/2019 15:15:03
End     8/8/2019 16:28:13
Sample Period(s)        60
Number of Records       73
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030282W4
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      100.0
TWA Alarm       50.0
Measurement Gas Isobutylene
Calibration Time        8/8/2019 08:10
Peak    0.3
Min     0.2
Average 0.3

************************************************************
Datalog
                PID(ppm)        PID(ppm)        PID(ppm)
Index   Date/Time       (Avg)   (Max)   (Real)
001     8/8/2019 15:16:03       0.2     0.3     0.2
002     8/8/2019 15:17:03       0.2     0.2     0.2
003     8/8/2019 15:18:03       0.2     0.2     0.2
004     8/8/2019 15:19:03       0.2     0.2     0.2
005     8/8/2019 15:20:03       0.2     0.2     0.2
006     8/8/2019 15:21:03       0.2     0.2     0.2
007     8/8/2019 15:22:03       0.2     0.2     0.2
008     8/8/2019 15:23:03       0.2     0.2     0.2
009     8/8/2019 15:24:03       0.2     0.3     0.3
010     8/8/2019 15:25:03       0.2     0.3     0.2
```

011	8/8/2019 15:26:03	0.2	0.3	0.3
012	8/8/2019 15:27:03	0.3	0.3	0.3
013	8/8/2019 15:28:03	0.2	0.3	0.3
014	8/8/2019 15:29:03	0.2	0.3	0.2
015	8/8/2019 15:30:03	0.2	0.3	0.3
016	8/8/2019 15:31:03	0.3	0.3	0.3
017	8/8/2019 15:32:03	0.3	0.3	0.3
018	8/8/2019 15:33:03	0.3	0.3	0.2
019	8/8/2019 15:34:03	0.3	0.3	0.3
020	8/8/2019 15:35:03	0.3	0.3	0.3
021	8/8/2019 15:36:03	0.3	0.3	0.3
022	8/8/2019 15:37:03	0.3	0.3	0.3
023	8/8/2019 15:38:03	0.3	0.3	0.3
024	8/8/2019 15:39:03	0.3	0.3	0.3
025	8/8/2019 15:40:03	0.3	0.3	0.3
026	8/8/2019 15:41:03	0.3	0.3	0.3
027	8/8/2019 15:42:03	0.3	0.3	0.3
028	8/8/2019 15:43:03	0.3	0.3	0.3
029	8/8/2019 15:44:03	0.2	0.3	0.3
030	8/8/2019 15:45:03	0.2	0.2	0.2
031	8/8/2019 15:46:03	0.2	0.3	0.2
032	8/8/2019 15:47:03	0.2	0.3	0.2
033	8/8/2019 15:48:03	0.2	0.3	0.2
034	8/8/2019 15:49:03	0.2	0.3	0.2
035	8/8/2019 15:50:03	0.3	0.3	0.3
036	8/8/2019 15:51:03	0.3	0.3	0.3
037	8/8/2019 15:52:03	0.2	0.3	0.2
038	8/8/2019 15:53:03	0.2	0.3	0.3
039	8/8/2019 15:54:03	0.3	0.3	0.3
040	8/8/2019 15:55:03	0.2	0.3	0.2
041	8/8/2019 15:56:03	0.3	0.3	0.3
042	8/8/2019 15:57:03	0.3	0.3	0.3
043	8/8/2019 15:58:03	0.2	0.3	0.2
044	8/8/2019 15:59:03	0.2	0.3	0.3
045	8/8/2019 16:00:03	0.3	0.3	0.3
046	8/8/2019 16:01:03	0.2	0.3	0.3
047	8/8/2019 16:02:03	0.3	0.3	0.2
048	8/8/2019 16:03:03	0.2	0.3	0.2
049	8/8/2019 16:04:03	0.3	0.3	0.3
050	8/8/2019 16:05:03	0.3	0.3	0.3
051	8/8/2019 16:06:03	0.2	0.3	0.3
052	8/8/2019 16:07:03	0.3	0.3	0.3
053	8/8/2019 16:08:03	0.3	0.3	0.3
054	8/8/2019 16:09:03	0.3	0.3	0.3
055	8/8/2019 16:10:03	0.3	0.3	0.3
056	8/8/2019 16:11:03	0.3	0.3	0.3
057	8/8/2019 16:12:03	0.3	0.3	0.3
058	8/8/2019 16:13:03	0.3	0.3	0.3

059	8/8/2019 16:14:03	0.3	0.3	0.3
060	8/8/2019 16:15:03	0.3	0.3	0.3
061	8/8/2019 16:16:03	0.3	0.3	0.3
062	8/8/2019 16:17:03	0.3	0.3	0.3
063	8/8/2019 16:18:03	0.3	0.3	0.3
064	8/8/2019 16:19:03	0.3	0.3	0.3
065	8/8/2019 16:20:03	0.3	0.3	0.3
066	8/8/2019 16:21:03	0.3	0.3	0.3
067	8/8/2019 16:22:03	0.3	0.3	0.2
068	8/8/2019 16:23:03	0.2	0.3	0.2
069	8/8/2019 16:24:03	0.2	0.3	0.3
070	8/8/2019 16:25:03	0.3	0.3	0.3
071	8/8/2019 16:26:03	0.3	0.3	0.3
072	8/8/2019 16:27:03	0.3	0.3	0.3
073	8/8/2019 16:28:03	0.3	0.3	0.3
Peak		0.3	0.3	0.3
Min		0.2	0.2	0.2
Average		0.3	0.3	0.3

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/8/2019 15:16:03	0.0	---
002	8/8/2019 15:17:03	0.0	---
003	8/8/2019 15:18:03	0.0	---
004	8/8/2019 15:19:03	0.0	---
005	8/8/2019 15:20:03	0.0	---
006	8/8/2019 15:21:03	0.0	---
007	8/8/2019 15:22:03	0.0	---
008	8/8/2019 15:23:03	0.0	---
009	8/8/2019 15:24:03	0.0	---
010	8/8/2019 15:25:03	0.0	---
011	8/8/2019 15:26:03	0.0	---
012	8/8/2019 15:27:03	0.0	---
013	8/8/2019 15:28:03	0.0	---
014	8/8/2019 15:29:03	0.0	---
015	8/8/2019 15:30:03	0.0	0.2
016	8/8/2019 15:31:03	0.0	0.3
017	8/8/2019 15:32:03	0.0	0.3
018	8/8/2019 15:33:03	0.0	0.3
019	8/8/2019 15:34:03	0.0	0.3
020	8/8/2019 15:35:03	0.0	0.3
021	8/8/2019 15:36:03	0.0	0.3
022	8/8/2019 15:37:03	0.0	0.3
023	8/8/2019 15:38:03	0.0	0.3
024	8/8/2019 15:39:03	0.0	0.3
025	8/8/2019 15:40:03	0.0	0.3

026	8/8/2019 15:41:03	0.0	0.3
027	8/8/2019 15:42:03	0.0	0.3
028	8/8/2019 15:43:03	0.0	0.3
029	8/8/2019 15:44:03	0.0	0.3
030	8/8/2019 15:45:03	0.0	0.3
031	8/8/2019 15:46:03	0.0	0.3
032	8/8/2019 15:47:03	0.0	0.3
033	8/8/2019 15:48:03	0.0	0.3
034	8/8/2019 15:49:03	0.0	0.3
035	8/8/2019 15:50:03	0.0	0.3
036	8/8/2019 15:51:03	0.0	0.3
037	8/8/2019 15:52:03	0.0	0.3
038	8/8/2019 15:53:03	0.0	0.3
039	8/8/2019 15:54:03	0.0	0.3
040	8/8/2019 15:55:03	0.0	0.3
041	8/8/2019 15:56:03	0.0	0.3
042	8/8/2019 15:57:03	0.0	0.3
043	8/8/2019 15:58:03	0.0	0.3
044	8/8/2019 15:59:03	0.0	0.3
045	8/8/2019 16:00:03	0.0	0.3
046	8/8/2019 16:01:03	0.0	0.3
047	8/8/2019 16:02:03	0.0	0.3
048	8/8/2019 16:03:03	0.0	0.3
049	8/8/2019 16:04:03	0.0	0.3
050	8/8/2019 16:05:03	0.0	0.3
051	8/8/2019 16:06:03	0.0	0.3
052	8/8/2019 16:07:03	0.0	0.3
053	8/8/2019 16:08:03	0.0	0.3
054	8/8/2019 16:09:03	0.0	0.3
055	8/8/2019 16:10:03	0.0	0.3
056	8/8/2019 16:11:03	0.0	0.3
057	8/8/2019 16:12:03	0.0	0.3
058	8/8/2019 16:13:03	0.0	0.3
059	8/8/2019 16:14:03	0.0	0.3
060	8/8/2019 16:15:03	0.0	0.3
061	8/8/2019 16:16:03	0.0	0.3
062	8/8/2019 16:17:03	0.0	0.3
063	8/8/2019 16:18:03	0.0	0.3
064	8/8/2019 16:19:03	0.0	0.3
065	8/8/2019 16:20:03	0.0	0.3
066	8/8/2019 16:21:03	0.0	0.3
067	8/8/2019 16:22:03	0.0	0.3
068	8/8/2019 16:23:03	0.0	0.3
069	8/8/2019 16:24:03	0.0	0.3
070	8/8/2019 16:25:03	0.0	0.3
071	8/8/2019 16:26:03	0.0	0.3
072	8/8/2019 16:27:03	0.0	0.3
073	8/8/2019 16:28:03	0.0	0.3

```
============================================================
19/08/12 08:03
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Pause in Menu Mode
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/12/2019 08:03:55
End     8/12/2019 08:06:03
Sample Period(s)        60
Number of Records       2
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030282W4
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      100.0
TWA Alarm       50.0
Measurement Gas Isobutylene
Calibration Time        8/8/2019 08:10
Peak    0.1
Min     0.1
Average 0.1

************************************************************
Datalog
                PID(ppm)        PID(ppm)        PID(ppm)
Index   Date/Time       (Avg)   (Max)   (Real)
001     8/12/2019 08:04:55      0.1     0.2     0.1
002     8/12/2019 08:05:55      0.1     0.1     0.1
Peak            0.1     0.2     0.1
Min             0.1     0.1     0.1
Average         0.1     0.2     0.1
```

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/12/2019 08:04:55	0.0	---
002	8/12/2019 08:05:55	0.0	---

==========

19/08/12 08:11

****

Summary

Unit Name	MiniRAE 3000 +(PGM-7320)
Unit SN	592-927993
Unit Firmware Ver	V2.20A

Running Mode	Hygiene Mode
Datalog Mode	Auto
Diagnostic Mode	No
Stop Reason	Power Down

Site ID	12345678
User ID	12345678

Begin	8/12/2019 08:11:31
End	8/12/2019 08:11:39
Sample Period(s)	60
Number of Records	0

Sensor	PID(ppm)
Sensor SN	S023030282W4
Measure Type	Avg; Max; Real
Span	100.0
Span 2	1000.0
Low Alarm	50.0
High Alarm	100.0
Over Alarm	15000.0
STEL Alarm	100.0
TWA Alarm	50.0
Measurement Gas	Isobutylene
Calibration Time	8/12/2019 08:11

****

Datalog

0 record.

==========

19/08/12 08:22

****

Summary

Unit Name MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 12345678
User ID 12345678

Begin 8/12/2019 08:22:27
End 8/12/2019 15:06:14
Sample Period(s) 60
Number of Records 403

Sensor PID(ppm)
Sensor SN S023030282W4
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 100.0
TWA Alarm 50.0
Measurement Gas Isobutylene
Calibration Time 8/12/2019 08:11
Peak 0.2
Min 0.1
Average 0.2

****

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	PID(ppm)
001	8/12/2019 08:23:27	0.1	0.1	0.1	
002	8/12/2019 08:24:27	0.1	0.1	0.1	
003	8/12/2019 08:25:27	0.1	0.1	0.1	
004	8/12/2019 08:26:27	0.1	0.1	0.1	
005	8/12/2019 08:27:27	0.1	0.1	0.1	
006	8/12/2019 08:28:27	0.1	0.1	0.1	
007	8/12/2019 08:29:27	0.1	0.1	0.1	
008	8/12/2019 08:30:27	0.1	0.1	0.1	

009	8/12/2019 08:31:27	0.1	0.1	0.1
010	8/12/2019 08:32:27	0.1	0.1	0.1
011	8/12/2019 08:33:27	0.1	0.1	0.1
012	8/12/2019 08:34:27	0.1	0.1	0.1
013	8/12/2019 08:35:27	0.1	0.1	0.1
014	8/12/2019 08:36:27	0.1	0.1	0.1
015	8/12/2019 08:37:27	0.1	0.1	0.1
016	8/12/2019 08:38:27	0.1	0.1	0.1
017	8/12/2019 08:39:27	0.1	0.1	0.1
018	8/12/2019 08:40:27	0.1	0.1	0.1
019	8/12/2019 08:41:27	0.1	0.1	0.1
020	8/12/2019 08:42:27	0.1	0.1	0.1
021	8/12/2019 08:43:27	0.1	0.1	0.1
022	8/12/2019 08:44:27	0.1	0.1	0.1
023	8/12/2019 08:45:27	0.1	0.1	0.1
024	8/12/2019 08:46:27	0.1	0.1	0.1
025	8/12/2019 08:47:27	0.1	0.1	0.1
026	8/12/2019 08:48:27	0.1	0.1	0.1
027	8/12/2019 08:49:27	0.1	0.1	0.1
028	8/12/2019 08:50:27	0.1	0.1	0.1
029	8/12/2019 08:51:27	0.1	0.1	0.1
030	8/12/2019 08:52:27	0.1	0.1	0.1
031	8/12/2019 08:53:27	0.1	0.1	0.1
032	8/12/2019 08:54:27	0.1	0.1	0.1
033	8/12/2019 08:55:27	0.1	0.1	0.1
034	8/12/2019 08:56:27	0.1	0.1	0.1
035	8/12/2019 08:57:27	0.1	0.1	0.1
036	8/12/2019 08:58:27	0.1	0.1	0.1
037	8/12/2019 08:59:27	0.1	0.1	0.1
038	8/12/2019 09:00:27	0.1	0.1	0.1
039	8/12/2019 09:01:27	0.1	0.1	0.1
040	8/12/2019 09:02:27	0.1	0.1	0.1
041	8/12/2019 09:03:27	0.1	0.1	0.1
042	8/12/2019 09:04:27	0.1	0.1	0.1
043	8/12/2019 09:05:27	0.1	0.1	0.1
044	8/12/2019 09:06:27	0.1	0.1	0.1
045	8/12/2019 09:07:27	0.1	0.1	0.1
046	8/12/2019 09:08:27	0.1	0.1	0.1
047	8/12/2019 09:09:27	0.1	0.1	0.1
048	8/12/2019 09:10:27	0.1	0.1	0.1
049	8/12/2019 09:11:27	0.1	0.1	0.1
050	8/12/2019 09:12:27	0.1	0.1	0.1
051	8/12/2019 09:13:27	0.1	0.1	0.1
052	8/12/2019 09:14:27	0.1	0.1	0.1
053	8/12/2019 09:15:27	0.1	0.1	0.1
054	8/12/2019 09:16:27	0.1	0.1	0.1
055	8/12/2019 09:17:27	0.1	0.1	0.1
056	8/12/2019 09:18:27	0.1	0.1	0.1

057	8/12/2019 09:19:27	0.1	0.1	0.1
058	8/12/2019 09:20:27	0.1	0.2	0.2
059	8/12/2019 09:21:27	0.1	0.2	0.2
060	8/12/2019 09:22:27	0.2	0.2	0.2
061	8/12/2019 09:23:27	0.2	0.2	0.2
062	8/12/2019 09:24:27	0.2	0.2	0.2
063	8/12/2019 09:25:27	0.2	0.2	0.2
064	8/12/2019 09:26:27	0.2	0.2	0.2
065	8/12/2019 09:27:27	0.2	0.2	0.2
066	8/12/2019 09:28:27	0.2	0.2	0.2
067	8/12/2019 09:29:27	0.2	0.2	0.2
068	8/12/2019 09:30:27	0.2	0.2	0.2
069	8/12/2019 09:31:27	0.2	0.2	0.2
070	8/12/2019 09:32:27	0.2	0.2	0.2
071	8/12/2019 09:33:27	0.2	0.2	0.2
072	8/12/2019 09:34:27	0.2	0.2	0.2
073	8/12/2019 09:35:27	0.2	0.2	0.2
074	8/12/2019 09:36:27	0.2	0.2	0.2
075	8/12/2019 09:37:27	0.2	0.2	0.2
076	8/12/2019 09:38:27	0.2	0.2	0.2
077	8/12/2019 09:39:27	0.2	0.2	0.2
078	8/12/2019 09:40:27	0.2	0.2	0.2
079	8/12/2019 09:41:27	0.2	0.2	0.2
080	8/12/2019 09:42:27	0.2	0.2	0.2
081	8/12/2019 09:43:27	0.2	0.2	0.2
082	8/12/2019 09:44:27	0.2	0.2	0.2
083	8/12/2019 09:45:27	0.2	0.2	0.2
084	8/12/2019 09:46:27	0.2	0.2	0.2
085	8/12/2019 09:47:27	0.2	0.2	0.2
086	8/12/2019 09:48:27	0.2	0.2	0.2
087	8/12/2019 09:49:27	0.2	0.2	0.2
088	8/12/2019 09:50:27	0.2	0.2	0.2
089	8/12/2019 09:51:27	0.2	0.2	0.2
090	8/12/2019 09:52:27	0.2	0.2	0.2
091	8/12/2019 09:53:27	0.2	0.2	0.2
092	8/12/2019 09:54:27	0.2	0.2	0.2
093	8/12/2019 09:55:27	0.2	0.2	0.2
094	8/12/2019 09:56:27	0.2	0.2	0.2
095	8/12/2019 09:57:27	0.2	0.2	0.2
096	8/12/2019 09:58:27	0.2	0.2	0.2
097	8/12/2019 09:59:27	0.2	0.2	0.2
098	8/12/2019 10:00:27	0.2	0.2	0.2
099	8/12/2019 10:01:27	0.2	0.2	0.2
100	8/12/2019 10:02:27	0.2	0.2	0.2
101	8/12/2019 10:03:27	0.2	0.2	0.2
102	8/12/2019 10:04:27	0.2	0.2	0.2
103	8/12/2019 10:05:27	0.2	0.2	0.2
104	8/12/2019 10:06:27	0.2	0.2	0.2

105	8/12/2019 10:07:27	0.2	0.2	0.2
106	8/12/2019 10:08:27	0.2	0.2	0.2
107	8/12/2019 10:09:27	0.2	0.2	0.2
108	8/12/2019 10:10:27	0.2	0.2	0.2
109	8/12/2019 10:11:27	0.2	0.2	0.2
110	8/12/2019 10:12:27	0.2	0.2	0.2
111	8/12/2019 10:13:27	0.2	0.2	0.2
112	8/12/2019 10:14:27	0.2	0.2	0.2
113	8/12/2019 10:15:27	0.2	0.2	0.2
114	8/12/2019 10:16:27	0.2	0.2	0.2
115	8/12/2019 10:17:27	0.2	0.2	0.2
116	8/12/2019 10:18:27	0.2	0.2	0.2
117	8/12/2019 10:19:27	0.2	0.2	0.2
118	8/12/2019 10:20:27	0.2	0.2	0.2
119	8/12/2019 10:21:27	0.2	0.2	0.2
120	8/12/2019 10:22:27	0.2	0.2	0.2
121	8/12/2019 10:23:27	0.2	0.2	0.2
122	8/12/2019 10:24:27	0.2	0.2	0.2
123	8/12/2019 10:25:27	0.2	0.2	0.2
124	8/12/2019 10:26:27	0.2	0.2	0.2
125	8/12/2019 10:27:27	0.2	0.2	0.2
126	8/12/2019 10:28:27	0.2	0.2	0.2
127	8/12/2019 10:29:27	0.2	0.2	0.2
128	8/12/2019 10:30:27	0.2	0.2	0.2
129	8/12/2019 10:31:27	0.2	0.2	0.2
130	8/12/2019 10:32:27	0.2	0.2	0.2
131	8/12/2019 10:33:27	0.2	0.2	0.2
132	8/12/2019 10:34:27	0.2	0.2	0.2
133	8/12/2019 10:35:27	0.2	0.2	0.2
134	8/12/2019 10:36:27	0.2	0.2	0.2
135	8/12/2019 10:37:27	0.2	0.2	0.2
136	8/12/2019 10:38:27	0.2	0.2	0.2
137	8/12/2019 10:39:27	0.2	0.2	0.2
138	8/12/2019 10:40:27	0.2	0.2	0.2
139	8/12/2019 10:41:27	0.2	0.2	0.2
140	8/12/2019 10:42:27	0.2	0.2	0.2
141	8/12/2019 10:43:27	0.2	0.2	0.2
142	8/12/2019 10:44:27	0.2	0.2	0.2
143	8/12/2019 10:45:27	0.2	0.2	0.2
144	8/12/2019 10:46:27	0.2	0.2	0.2
145	8/12/2019 10:47:27	0.2	0.2	0.2
146	8/12/2019 10:48:27	0.2	0.2	0.2
147	8/12/2019 10:49:27	0.2	0.2	0.2
148	8/12/2019 10:50:27	0.2	0.2	0.2
149	8/12/2019 10:51:27	0.2	0.2	0.2
150	8/12/2019 10:52:27	0.2	0.2	0.2
151	8/12/2019 10:53:27	0.2	0.2	0.2
152	8/12/2019 10:54:27	0.2	0.2	0.2

153	8/12/2019 10:55:27	0.2	0.2	0.2
154	8/12/2019 10:56:27	0.2	0.2	0.2
155	8/12/2019 10:57:27	0.2	0.2	0.2
156	8/12/2019 10:58:27	0.2	0.2	0.2
157	8/12/2019 10:59:27	0.2	0.2	0.2
158	8/12/2019 11:00:27	0.2	0.2	0.2
159	8/12/2019 11:01:27	0.2	0.2	0.2
160	8/12/2019 11:02:27	0.2	0.2	0.2
161	8/12/2019 11:03:27	0.2	0.2	0.2
162	8/12/2019 11:04:27	0.2	0.2	0.2
163	8/12/2019 11:05:27	0.2	0.2	0.2
164	8/12/2019 11:06:27	0.2	0.2	0.2
165	8/12/2019 11:07:27	0.2	0.2	0.2
166	8/12/2019 11:08:27	0.2	0.2	0.2
167	8/12/2019 11:09:27	0.2	0.2	0.2
168	8/12/2019 11:10:27	0.2	0.2	0.2
169	8/12/2019 11:11:27	0.2	0.2	0.2
170	8/12/2019 11:12:27	0.2	0.2	0.2
171	8/12/2019 11:13:27	0.2	0.2	0.2
172	8/12/2019 11:14:27	0.2	0.2	0.2
173	8/12/2019 11:15:27	0.2	0.2	0.2
174	8/12/2019 11:16:27	0.2	0.2	0.2
175	8/12/2019 11:17:27	0.2	0.2	0.2
176	8/12/2019 11:18:27	0.2	0.2	0.2
177	8/12/2019 11:19:27	0.2	0.2	0.2
178	8/12/2019 11:20:27	0.2	0.2	0.2
179	8/12/2019 11:21:27	0.2	0.2	0.2
180	8/12/2019 11:22:27	0.2	0.2	0.2
181	8/12/2019 11:23:27	0.2	0.2	0.2
182	8/12/2019 11:24:27	0.2	0.2	0.2
183	8/12/2019 11:25:27	0.2	0.2	0.2
184	8/12/2019 11:26:27	0.2	0.2	0.2
185	8/12/2019 11:27:27	0.2	0.2	0.2
186	8/12/2019 11:28:27	0.2	0.2	0.2
187	8/12/2019 11:29:27	0.2	0.2	0.2
188	8/12/2019 11:30:27	0.2	0.2	0.2
189	8/12/2019 11:31:27	0.2	0.2	0.2
190	8/12/2019 11:32:27	0.2	0.2	0.2
191	8/12/2019 11:33:27	0.2	0.2	0.2
192	8/12/2019 11:34:27	0.2	0.2	0.2
193	8/12/2019 11:35:27	0.2	0.2	0.2
194	8/12/2019 11:36:27	0.2	0.2	0.2
195	8/12/2019 11:37:27	0.2	0.2	0.2
196	8/12/2019 11:38:27	0.2	0.2	0.2
197	8/12/2019 11:39:27	0.2	0.2	0.2
198	8/12/2019 11:40:27	0.2	0.2	0.2
199	8/12/2019 11:41:27	0.2	0.2	0.2
200	8/12/2019 11:42:27	0.2	0.2	0.2

201	8/12/2019 11:43:27	0.2	0.2	0.2
202	8/12/2019 11:44:27	0.2	0.2	0.2
203	8/12/2019 11:45:27	0.2	0.2	0.2
204	8/12/2019 11:46:27	0.2	0.2	0.2
205	8/12/2019 11:47:27	0.2	0.2	0.2
206	8/12/2019 11:48:27	0.2	0.2	0.2
207	8/12/2019 11:49:27	0.2	0.2	0.2
208	8/12/2019 11:50:27	0.2	0.2	0.2
209	8/12/2019 11:51:27	0.2	0.2	0.2
210	8/12/2019 11:52:27	0.2	0.2	0.2
211	8/12/2019 11:53:27	0.2	0.2	0.2
212	8/12/2019 11:54:27	0.2	0.2	0.2
213	8/12/2019 11:55:27	0.2	0.2	0.2
214	8/12/2019 11:56:27	0.2	0.2	0.2
215	8/12/2019 11:57:27	0.2	0.2	0.2
216	8/12/2019 11:58:27	0.2	0.2	0.2
217	8/12/2019 11:59:27	0.2	0.2	0.2
218	8/12/2019 12:00:27	0.2	0.2	0.2
219	8/12/2019 12:01:27	0.2	0.2	0.2
220	8/12/2019 12:02:27	0.2	0.2	0.2
221	8/12/2019 12:03:27	0.2	0.2	0.2
222	8/12/2019 12:04:27	0.2	0.2	0.2
223	8/12/2019 12:05:27	0.2	0.2	0.2
224	8/12/2019 12:06:27	0.2	0.2	0.2
225	8/12/2019 12:07:27	0.2	0.2	0.2
226	8/12/2019 12:08:27	0.2	0.2	0.2
227	8/12/2019 12:09:27	0.2	0.2	0.2
228	8/12/2019 12:10:27	0.2	0.2	0.2
229	8/12/2019 12:11:27	0.2	0.2	0.2
230	8/12/2019 12:12:27	0.2	0.2	0.2
231	8/12/2019 12:13:27	0.2	0.2	0.2
232	8/12/2019 12:14:27	0.2	0.2	0.2
233	8/12/2019 12:15:27	0.2	0.2	0.2
234	8/12/2019 12:16:27	0.2	0.2	0.2
235	8/12/2019 12:17:27	0.2	0.2	0.2
236	8/12/2019 12:18:27	0.2	0.2	0.2
237	8/12/2019 12:19:27	0.2	0.2	0.2
238	8/12/2019 12:20:27	0.2	0.2	0.2
239	8/12/2019 12:21:27	0.2	0.2	0.2
240	8/12/2019 12:22:27	0.2	0.2	0.2
241	8/12/2019 12:23:27	0.2	0.2	0.2
242	8/12/2019 12:24:27	0.2	0.2	0.2
243	8/12/2019 12:25:27	0.2	0.2	0.2
244	8/12/2019 12:26:27	0.2	0.2	0.2
245	8/12/2019 12:27:27	0.2	0.2	0.2
246	8/12/2019 12:28:27	0.2	0.2	0.2
247	8/12/2019 12:29:27	0.2	0.2	0.2
248	8/12/2019 12:30:27	0.2	0.2	0.2

249	8/12/2019 12:31:27	0.2	0.2	0.2
250	8/12/2019 12:32:27	0.2	0.2	0.2
251	8/12/2019 12:33:27	0.2	0.2	0.2
252	8/12/2019 12:34:27	0.2	0.2	0.2
253	8/12/2019 12:35:27	0.2	0.2	0.2
254	8/12/2019 12:36:27	0.2	0.2	0.2
255	8/12/2019 12:37:27	0.2	0.2	0.2
256	8/12/2019 12:38:27	0.2	0.2	0.2
257	8/12/2019 12:39:27	0.2	0.2	0.2
258	8/12/2019 12:40:27	0.2	0.2	0.2
259	8/12/2019 12:41:27	0.2	0.2	0.2
260	8/12/2019 12:42:27	0.2	0.2	0.2
261	8/12/2019 12:43:27	0.2	0.2	0.2
262	8/12/2019 12:44:27	0.2	0.2	0.2
263	8/12/2019 12:45:27	0.2	0.2	0.2
264	8/12/2019 12:46:27	0.2	0.2	0.2
265	8/12/2019 12:47:27	0.2	0.2	0.2
266	8/12/2019 12:48:27	0.2	0.2	0.2
267	8/12/2019 12:49:27	0.2	0.2	0.2
268	8/12/2019 12:50:27	0.2	0.2	0.2
269	8/12/2019 12:51:27	0.2	0.2	0.2
270	8/12/2019 12:52:27	0.2	0.2	0.2
271	8/12/2019 12:53:27	0.2	0.2	0.2
272	8/12/2019 12:54:27	0.2	0.2	0.2
273	8/12/2019 12:55:27	0.2	0.2	0.2
274	8/12/2019 12:56:27	0.2	0.2	0.1
275	8/12/2019 12:57:27	0.1	0.2	0.1
276	8/12/2019 12:58:27	0.1	0.1	0.1
277	8/12/2019 12:59:27	0.1	0.1	0.1
278	8/12/2019 13:00:27	0.1	0.1	0.1
279	8/12/2019 13:01:27	0.1	0.1	0.1
280	8/12/2019 13:02:27	0.1	0.1	0.1
281	8/12/2019 13:03:27	0.1	0.1	0.1
282	8/12/2019 13:04:27	0.1	0.1	0.1
283	8/12/2019 13:05:27	0.1	0.1	0.1
284	8/12/2019 13:06:27	0.1	0.1	0.1
285	8/12/2019 13:07:27	0.1	0.1	0.1
286	8/12/2019 13:08:27	0.1	0.1	0.1
287	8/12/2019 13:09:27	0.1	0.1	0.1
288	8/12/2019 13:10:27	0.1	0.1	0.1
289	8/12/2019 13:11:27	0.1	0.1	0.1
290	8/12/2019 13:12:27	0.1	0.1	0.1
291	8/12/2019 13:13:27	0.1	0.1	0.1
292	8/12/2019 13:14:27	0.1	0.1	0.1
293	8/12/2019 13:15:27	0.1	0.1	0.1
294	8/12/2019 13:16:27	0.1	0.1	0.1
295	8/12/2019 13:17:27	0.1	0.1	0.1
296	8/12/2019 13:18:27	0.1	0.1	0.1

297	8/12/2019 13:19:27	0.1	0.1	0.1
298	8/12/2019 13:20:27	0.1	0.1	0.1
299	8/12/2019 13:21:27	0.1	0.1	0.1
300	8/12/2019 13:22:27	0.1	0.1	0.1
301	8/12/2019 13:23:27	0.1	0.1	0.1
302	8/12/2019 13:24:27	0.1	0.1	0.1
303	8/12/2019 13:25:27	0.1	0.1	0.1
304	8/12/2019 13:26:27	0.1	0.1	0.1
305	8/12/2019 13:27:27	0.1	0.2	0.1
306	8/12/2019 13:28:27	0.1	0.1	0.1
307	8/12/2019 13:29:27	0.1	0.1	0.1
308	8/12/2019 13:30:27	0.1	0.1	0.1
309	8/12/2019 13:31:27	0.1	0.1	0.1
310	8/12/2019 13:32:27	0.1	0.1	0.1
311	8/12/2019 13:33:27	0.1	0.1	0.1
312	8/12/2019 13:34:27	0.1	0.1	0.1
313	8/12/2019 13:35:27	0.1	0.1	0.1
314	8/12/2019 13:36:27	0.1	0.1	0.1
315	8/12/2019 13:37:27	0.1	0.1	0.1
316	8/12/2019 13:38:27	0.1	0.1	0.1
317	8/12/2019 13:39:27	0.1	0.1	0.1
318	8/12/2019 13:40:27	0.1	0.1	0.1
319	8/12/2019 13:41:27	0.1	0.1	0.1
320	8/12/2019 13:42:27	0.1	0.1	0.1
321	8/12/2019 13:43:27	0.1	0.1	0.1
322	8/12/2019 13:44:27	0.1	0.1	0.1
323	8/12/2019 13:45:27	0.1	0.1	0.1
324	8/12/2019 13:46:27	0.1	0.1	0.1
325	8/12/2019 13:47:27	0.1	0.1	0.1
326	8/12/2019 13:48:27	0.2	0.3	0.1
327	8/12/2019 13:49:27	0.1	0.1	0.1
328	8/12/2019 13:50:27	0.1	0.1	0.1
329	8/12/2019 13:51:27	0.1	0.1	0.1
330	8/12/2019 13:52:27	0.1	0.1	0.1
331	8/12/2019 13:53:27	0.1	0.1	0.1
332	8/12/2019 13:54:27	0.1	0.1	0.1
333	8/12/2019 13:55:27	0.1	0.1	0.1
334	8/12/2019 13:56:27	0.1	0.1	0.1
335	8/12/2019 13:57:27	0.1	0.1	0.1
336	8/12/2019 13:58:27	0.1	0.1	0.1
337	8/12/2019 13:59:27	0.1	0.1	0.1
338	8/12/2019 14:00:27	0.1	0.1	0.1
339	8/12/2019 14:01:27	0.1	0.1	0.1
340	8/12/2019 14:02:27	0.1	0.1	0.1
341	8/12/2019 14:03:27	0.1	0.1	0.1
342	8/12/2019 14:04:27	0.1	0.1	0.1
343	8/12/2019 14:05:27	0.1	0.1	0.1
344	8/12/2019 14:06:27	0.1	0.1	0.1

345	8/12/2019 14:07:27	0.1	0.1	0.1
346	8/12/2019 14:08:27	0.1	0.1	0.1
347	8/12/2019 14:09:27	0.1	0.1	0.1
348	8/12/2019 14:10:27	0.1	0.1	0.1
349	8/12/2019 14:11:27	0.1	0.1	0.1
350	8/12/2019 14:12:27	0.1	0.1	0.1
351	8/12/2019 14:13:27	0.1	0.1	0.1
352	8/12/2019 14:14:27	0.1	0.1	0.1
353	8/12/2019 14:15:27	0.1	0.1	0.1
354	8/12/2019 14:16:27	0.1	0.1	0.1
355	8/12/2019 14:17:27	0.1	0.1	0.1
356	8/12/2019 14:18:27	0.1	0.1	0.1
357	8/12/2019 14:19:27	0.1	0.1	0.1
358	8/12/2019 14:20:27	0.1	0.1	0.1
359	8/12/2019 14:21:27	0.1	0.1	0.1
360	8/12/2019 14:22:27	0.1	0.1	0.1
361	8/12/2019 14:23:27	0.1	0.1	0.1
362	8/12/2019 14:24:27	0.1	0.1	0.1
363	8/12/2019 14:25:27	0.1	0.1	0.1
364	8/12/2019 14:26:27	0.1	0.1	0.1
365	8/12/2019 14:27:27	0.1	0.1	0.1
366	8/12/2019 14:28:27	0.1	0.1	0.1
367	8/12/2019 14:29:27	0.1	0.1	0.1
368	8/12/2019 14:30:27	0.1	0.1	0.1
369	8/12/2019 14:31:27	0.1	0.1	0.1
370	8/12/2019 14:32:27	0.1	0.1	0.1
371	8/12/2019 14:33:27	0.1	0.1	0.1
372	8/12/2019 14:34:27	0.1	0.1	0.1
373	8/12/2019 14:35:27	0.1	0.1	0.1
374	8/12/2019 14:36:27	0.1	0.1	0.1
375	8/12/2019 14:37:27	0.1	0.1	0.1
376	8/12/2019 14:38:27	0.1	0.1	0.1
377	8/12/2019 14:39:27	0.1	0.1	0.1
378	8/12/2019 14:40:27	0.1	0.1	0.1
379	8/12/2019 14:41:27	0.1	0.1	0.1
380	8/12/2019 14:42:27	0.1	0.1	0.1
381	8/12/2019 14:43:27	0.1	0.1	0.1
382	8/12/2019 14:44:27	0.1	0.1	0.1
383	8/12/2019 14:45:27	0.1	0.1	0.1
384	8/12/2019 14:46:27	0.1	0.1	0.1
385	8/12/2019 14:47:27	0.1	0.1	0.1
386	8/12/2019 14:48:27	0.1	0.1	0.1
387	8/12/2019 14:49:27	0.1	0.1	0.1
388	8/12/2019 14:50:27	0.1	0.1	0.1
389	8/12/2019 14:51:27	0.1	0.1	0.1
390	8/12/2019 14:52:27	0.1	0.1	0.1
391	8/12/2019 14:53:27	0.1	0.1	0.1
392	8/12/2019 14:54:27	0.1	0.1	0.1

393	8/12/2019 14:55:27	0.1	0.1	0.1
394	8/12/2019 14:56:27	0.1	0.1	0.1
395	8/12/2019 14:57:27	0.1	0.1	0.1
396	8/12/2019 14:58:27	0.1	0.1	0.1
397	8/12/2019 14:59:27	0.1	0.1	0.1
398	8/12/2019 15:00:27	0.1	0.1	0.1
399	8/12/2019 15:01:27	0.1	0.1	0.1
400	8/12/2019 15:02:27	0.1	0.1	0.1
401	8/12/2019 15:03:27	0.1	0.1	0.1
402	8/12/2019 15:04:27	0.1	0.1	0.1
403	8/12/2019 15:05:27	0.1	0.1	0.1
Peak		0.2	0.3	0.2
Min		0.1	0.1	0.1
Average		0.2	0.2	0.2

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)	
001	8/12/2019 08:23:27	0.0	---	
002	8/12/2019 08:24:27	0.0	---	
003	8/12/2019 08:25:27	0.0	---	
004	8/12/2019 08:26:27	0.0	---	
005	8/12/2019 08:27:27	0.0	---	
006	8/12/2019 08:28:27	0.0	---	
007	8/12/2019 08:29:27	0.0	---	
008	8/12/2019 08:30:27	0.0	---	
009	8/12/2019 08:31:27	0.0	---	
010	8/12/2019 08:32:27	0.0	---	
011	8/12/2019 08:33:27	0.0	---	
012	8/12/2019 08:34:27	0.0	---	
013	8/12/2019 08:35:27	0.0	---	
014	8/12/2019 08:36:27	0.0	---	
015	8/12/2019 08:37:27	0.0	0.1	
016	8/12/2019 08:38:27	0.0	0.1	
017	8/12/2019 08:39:27	0.0	0.1	
018	8/12/2019 08:40:27	0.0	0.1	
019	8/12/2019 08:41:27	0.0	0.1	
020	8/12/2019 08:42:27	0.0	0.1	
021	8/12/2019 08:43:27	0.0	0.1	
022	8/12/2019 08:44:27	0.0	0.1	
023	8/12/2019 08:45:27	0.0	0.1	
024	8/12/2019 08:46:27	0.0	0.1	
025	8/12/2019 08:47:27	0.0	0.1	
026	8/12/2019 08:48:27	0.0	0.1	
027	8/12/2019 08:49:27	0.0	0.1	
028	8/12/2019 08:50:27	0.0	0.1	
029	8/12/2019 08:51:27	0.0	0.1	

030	8/12/2019 08:52:27	0.0	0.1
031	8/12/2019 08:53:27	0.0	0.1
032	8/12/2019 08:54:27	0.0	0.1
033	8/12/2019 08:55:27	0.0	0.1
034	8/12/2019 08:56:27	0.0	0.1
035	8/12/2019 08:57:27	0.0	0.1
036	8/12/2019 08:58:27	0.0	0.1
037	8/12/2019 08:59:27	0.0	0.1
038	8/12/2019 09:00:27	0.0	0.1
039	8/12/2019 09:01:27	0.0	0.1
040	8/12/2019 09:02:27	0.0	0.1
041	8/12/2019 09:03:27	0.0	0.1
042	8/12/2019 09:04:27	0.0	0.1
043	8/12/2019 09:05:27	0.0	0.1
044	8/12/2019 09:06:27	0.0	0.1
045	8/12/2019 09:07:27	0.0	0.1
046	8/12/2019 09:08:27	0.0	0.1
047	8/12/2019 09:09:27	0.0	0.1
048	8/12/2019 09:10:27	0.0	0.1
049	8/12/2019 09:11:27	0.0	0.1
050	8/12/2019 09:12:27	0.0	0.1
051	8/12/2019 09:13:27	0.0	0.1
052	8/12/2019 09:14:27	0.0	0.1
053	8/12/2019 09:15:27	0.0	0.1
054	8/12/2019 09:16:27	0.0	0.1
055	8/12/2019 09:17:27	0.0	0.1
056	8/12/2019 09:18:27	0.0	0.1
057	8/12/2019 09:19:27	0.0	0.1
058	8/12/2019 09:20:27	0.0	0.1
059	8/12/2019 09:21:27	0.0	0.1
060	8/12/2019 09:22:27	0.0	0.1
061	8/12/2019 09:23:27	0.0	0.1
062	8/12/2019 09:24:27	0.0	0.1
063	8/12/2019 09:25:27	0.0	0.1
064	8/12/2019 09:26:27	0.0	0.2
065	8/12/2019 09:27:27	0.0	0.2
066	8/12/2019 09:28:27	0.0	0.2
067	8/12/2019 09:29:27	0.0	0.2
068	8/12/2019 09:30:27	0.0	0.2
069	8/12/2019 09:31:27	0.0	0.2
070	8/12/2019 09:32:27	0.0	0.2
071	8/12/2019 09:33:27	0.0	0.2
072	8/12/2019 09:34:27	0.0	0.2
073	8/12/2019 09:35:27	0.0	0.2
074	8/12/2019 09:36:27	0.0	0.2
075	8/12/2019 09:37:27	0.0	0.2
076	8/12/2019 09:38:27	0.0	0.2
077	8/12/2019 09:39:27	0.0	0.2

078	8/12/2019 09:40:27	0.0	0.2
079	8/12/2019 09:41:27	0.0	0.2
080	8/12/2019 09:42:27	0.0	0.2
081	8/12/2019 09:43:27	0.0	0.2
082	8/12/2019 09:44:27	0.0	0.2
083	8/12/2019 09:45:27	0.0	0.2
084	8/12/2019 09:46:27	0.0	0.2
085	8/12/2019 09:47:27	0.0	0.2
086	8/12/2019 09:48:27	0.0	0.2
087	8/12/2019 09:49:27	0.0	0.2
088	8/12/2019 09:50:27	0.0	0.2
089	8/12/2019 09:51:27	0.0	0.2
090	8/12/2019 09:52:27	0.0	0.2
091	8/12/2019 09:53:27	0.0	0.2
092	8/12/2019 09:54:27	0.0	0.2
093	8/12/2019 09:55:27	0.0	0.2
094	8/12/2019 09:56:27	0.0	0.2
095	8/12/2019 09:57:27	0.0	0.2
096	8/12/2019 09:58:27	0.0	0.2
097	8/12/2019 09:59:27	0.0	0.2
098	8/12/2019 10:00:27	0.0	0.2
099	8/12/2019 10:01:27	0.0	0.2
100	8/12/2019 10:02:27	0.0	0.2
101	8/12/2019 10:03:27	0.0	0.2
102	8/12/2019 10:04:27	0.0	0.2
103	8/12/2019 10:05:27	0.0	0.2
104	8/12/2019 10:06:27	0.0	0.2
105	8/12/2019 10:07:27	0.0	0.2
106	8/12/2019 10:08:27	0.0	0.2
107	8/12/2019 10:09:27	0.0	0.2
108	8/12/2019 10:10:27	0.0	0.2
109	8/12/2019 10:11:27	0.0	0.2
110	8/12/2019 10:12:27	0.0	0.2
111	8/12/2019 10:13:27	0.0	0.2
112	8/12/2019 10:14:27	0.0	0.2
113	8/12/2019 10:15:27	0.0	0.2
114	8/12/2019 10:16:27	0.0	0.2
115	8/12/2019 10:17:27	0.0	0.2
116	8/12/2019 10:18:27	0.0	0.2
117	8/12/2019 10:19:27	0.0	0.2
118	8/12/2019 10:20:27	0.0	0.2
119	8/12/2019 10:21:27	0.0	0.2
120	8/12/2019 10:22:27	0.0	0.2
121	8/12/2019 10:23:27	0.0	0.2
122	8/12/2019 10:24:27	0.0	0.2
123	8/12/2019 10:25:27	0.0	0.2
124	8/12/2019 10:26:27	0.0	0.2
125	8/12/2019 10:27:27	0.0	0.2

126	8/12/2019 10:28:27	0.0	0.2
127	8/12/2019 10:29:27	0.0	0.2
128	8/12/2019 10:30:27	0.0	0.2
129	8/12/2019 10:31:27	0.0	0.2
130	8/12/2019 10:32:27	0.0	0.2
131	8/12/2019 10:33:27	0.0	0.2
132	8/12/2019 10:34:27	0.0	0.2
133	8/12/2019 10:35:27	0.0	0.2
134	8/12/2019 10:36:27	0.0	0.2
135	8/12/2019 10:37:27	0.0	0.2
136	8/12/2019 10:38:27	0.0	0.2
137	8/12/2019 10:39:27	0.0	0.2
138	8/12/2019 10:40:27	0.0	0.2
139	8/12/2019 10:41:27	0.0	0.2
140	8/12/2019 10:42:27	0.0	0.2
141	8/12/2019 10:43:27	0.0	0.2
142	8/12/2019 10:44:27	0.0	0.2
143	8/12/2019 10:45:27	0.0	0.2
144	8/12/2019 10:46:27	0.0	0.2
145	8/12/2019 10:47:27	0.0	0.2
146	8/12/2019 10:48:27	0.0	0.2
147	8/12/2019 10:49:27	0.0	0.2
148	8/12/2019 10:50:27	0.0	0.2
149	8/12/2019 10:51:27	0.1	0.2
150	8/12/2019 10:52:27	0.1	0.2
151	8/12/2019 10:53:27	0.1	0.2
152	8/12/2019 10:54:27	0.1	0.2
153	8/12/2019 10:55:27	0.1	0.2
154	8/12/2019 10:56:27	0.1	0.2
155	8/12/2019 10:57:27	0.1	0.2
156	8/12/2019 10:58:27	0.1	0.2
157	8/12/2019 10:59:27	0.1	0.2
158	8/12/2019 11:00:27	0.1	0.2
159	8/12/2019 11:01:27	0.1	0.2
160	8/12/2019 11:02:27	0.1	0.2
161	8/12/2019 11:03:27	0.1	0.2
162	8/12/2019 11:04:27	0.1	0.2
163	8/12/2019 11:05:27	0.1	0.2
164	8/12/2019 11:06:27	0.1	0.2
165	8/12/2019 11:07:27	0.1	0.2
166	8/12/2019 11:08:27	0.1	0.2
167	8/12/2019 11:09:27	0.1	0.2
168	8/12/2019 11:10:27	0.1	0.2
169	8/12/2019 11:11:27	0.1	0.2
170	8/12/2019 11:12:27	0.1	0.2
171	8/12/2019 11:13:27	0.1	0.2
172	8/12/2019 11:14:27	0.1	0.2
173	8/12/2019 11:15:27	0.1	0.2

174	8/12/2019 11:16:27	0.1	0.2
175	8/12/2019 11:17:27	0.1	0.2
176	8/12/2019 11:18:27	0.1	0.2
177	8/12/2019 11:19:27	0.1	0.2
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180	8/12/2019 11:22:27	0.1	0.2
181	8/12/2019 11:23:27	0.1	0.2
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183	8/12/2019 11:25:27	0.1	0.2
184	8/12/2019 11:26:27	0.1	0.2
185	8/12/2019 11:27:27	0.1	0.2
186	8/12/2019 11:28:27	0.1	0.2
187	8/12/2019 11:29:27	0.1	0.2
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189	8/12/2019 11:31:27	0.1	0.2
190	8/12/2019 11:32:27	0.1	0.2
191	8/12/2019 11:33:27	0.1	0.2
192	8/12/2019 11:34:27	0.1	0.2
193	8/12/2019 11:35:27	0.1	0.2
194	8/12/2019 11:36:27	0.1	0.2
195	8/12/2019 11:37:27	0.1	0.2
196	8/12/2019 11:38:27	0.1	0.2
197	8/12/2019 11:39:27	0.1	0.2
198	8/12/2019 11:40:27	0.1	0.2
199	8/12/2019 11:41:27	0.1	0.2
200	8/12/2019 11:42:27	0.1	0.2
201	8/12/2019 11:43:27	0.1	0.2
202	8/12/2019 11:44:27	0.1	0.2
203	8/12/2019 11:45:27	0.1	0.2
204	8/12/2019 11:46:27	0.1	0.2
205	8/12/2019 11:47:27	0.1	0.2
206	8/12/2019 11:48:27	0.1	0.2
207	8/12/2019 11:49:27	0.1	0.2
208	8/12/2019 11:50:27	0.1	0.2
209	8/12/2019 11:51:27	0.1	0.2
210	8/12/2019 11:52:27	0.1	0.2
211	8/12/2019 11:53:27	0.1	0.2
212	8/12/2019 11:54:27	0.1	0.2
213	8/12/2019 11:55:27	0.1	0.2
214	8/12/2019 11:56:27	0.1	0.2
215	8/12/2019 11:57:27	0.1	0.2
216	8/12/2019 11:58:27	0.1	0.2
217	8/12/2019 11:59:27	0.1	0.2
218	8/12/2019 12:00:27	0.1	0.2
219	8/12/2019 12:01:27	0.1	0.2
220	8/12/2019 12:02:27	0.1	0.2
221	8/12/2019 12:03:27	0.1	0.2

222	8/12/2019 12:04:27	0.1	0.2
223	8/12/2019 12:05:27	0.1	0.2
224	8/12/2019 12:06:27	0.1	0.2
225	8/12/2019 12:07:27	0.1	0.2
226	8/12/2019 12:08:27	0.1	0.2
227	8/12/2019 12:09:27	0.1	0.2
228	8/12/2019 12:10:27	0.1	0.2
229	8/12/2019 12:11:27	0.1	0.2
230	8/12/2019 12:12:27	0.1	0.2
231	8/12/2019 12:13:27	0.1	0.2
232	8/12/2019 12:14:27	0.1	0.2
233	8/12/2019 12:15:27	0.1	0.2
234	8/12/2019 12:16:27	0.1	0.2
235	8/12/2019 12:17:27	0.1	0.2
236	8/12/2019 12:18:27	0.1	0.2
237	8/12/2019 12:19:27	0.1	0.2
238	8/12/2019 12:20:27	0.1	0.2
239	8/12/2019 12:21:27	0.1	0.2
240	8/12/2019 12:22:27	0.1	0.2
241	8/12/2019 12:23:27	0.1	0.2
242	8/12/2019 12:24:27	0.1	0.2
243	8/12/2019 12:25:27	0.1	0.2
244	8/12/2019 12:26:27	0.1	0.2
245	8/12/2019 12:27:27	0.1	0.2
246	8/12/2019 12:28:27	0.1	0.2
247	8/12/2019 12:29:27	0.1	0.2
248	8/12/2019 12:30:27	0.1	0.2
249	8/12/2019 12:31:27	0.1	0.2
250	8/12/2019 12:32:27	0.1	0.2
251	8/12/2019 12:33:27	0.1	0.2
252	8/12/2019 12:34:27	0.1	0.2
253	8/12/2019 12:35:27	0.1	0.2
254	8/12/2019 12:36:27	0.1	0.2
255	8/12/2019 12:37:27	0.1	0.2
256	8/12/2019 12:38:27	0.1	0.2
257	8/12/2019 12:39:27	0.1	0.2
258	8/12/2019 12:40:27	0.1	0.2
259	8/12/2019 12:41:27	0.1	0.2
260	8/12/2019 12:42:27	0.1	0.2
261	8/12/2019 12:43:27	0.1	0.2
262	8/12/2019 12:44:27	0.1	0.2
263	8/12/2019 12:45:27	0.1	0.2
264	8/12/2019 12:46:27	0.1	0.2
265	8/12/2019 12:47:27	0.1	0.2
266	8/12/2019 12:48:27	0.1	0.2
267	8/12/2019 12:49:27	0.1	0.2
268	8/12/2019 12:50:27	0.1	0.2
269	8/12/2019 12:51:27	0.1	0.2

270	8/12/2019 12:52:27	0.1	0.2
271	8/12/2019 12:53:27	0.1	0.2
272	8/12/2019 12:54:27	0.1	0.2
273	8/12/2019 12:55:27	0.1	0.2
274	8/12/2019 12:56:27	0.1	0.2
275	8/12/2019 12:57:27	0.1	0.2
276	8/12/2019 12:58:27	0.1	0.2
277	8/12/2019 12:59:27	0.1	0.2
278	8/12/2019 13:00:27	0.1	0.2
279	8/12/2019 13:01:27	0.1	0.2
280	8/12/2019 13:02:27	0.1	0.2
281	8/12/2019 13:03:27	0.1	0.2
282	8/12/2019 13:04:27	0.1	0.2
283	8/12/2019 13:05:27	0.1	0.1
284	8/12/2019 13:06:27	0.1	0.1
285	8/12/2019 13:07:27	0.1	0.1
286	8/12/2019 13:08:27	0.1	0.1
287	8/12/2019 13:09:27	0.1	0.1
288	8/12/2019 13:10:27	0.1	0.1
289	8/12/2019 13:11:27	0.1	0.1
290	8/12/2019 13:12:27	0.1	0.1
291	8/12/2019 13:13:27	0.1	0.1
292	8/12/2019 13:14:27	0.1	0.1
293	8/12/2019 13:15:27	0.1	0.1
294	8/12/2019 13:16:27	0.1	0.1
295	8/12/2019 13:17:27	0.1	0.1
296	8/12/2019 13:18:27	0.1	0.1
297	8/12/2019 13:19:27	0.1	0.1
298	8/12/2019 13:20:27	0.1	0.1
299	8/12/2019 13:21:27	0.1	0.1
300	8/12/2019 13:22:27	0.1	0.1
301	8/12/2019 13:23:27	0.1	0.1
302	8/12/2019 13:24:27	0.1	0.1
303	8/12/2019 13:25:27	0.1	0.1
304	8/12/2019 13:26:27	0.1	0.1
305	8/12/2019 13:27:27	0.1	0.1
306	8/12/2019 13:28:27	0.1	0.1
307	8/12/2019 13:29:27	0.1	0.1
308	8/12/2019 13:30:27	0.1	0.1
309	8/12/2019 13:31:27	0.1	0.1
310	8/12/2019 13:32:27	0.1	0.1
311	8/12/2019 13:33:27	0.1	0.1
312	8/12/2019 13:34:27	0.1	0.1
313	8/12/2019 13:35:27	0.1	0.1
314	8/12/2019 13:36:27	0.1	0.1
315	8/12/2019 13:37:27	0.1	0.1
316	8/12/2019 13:38:27	0.1	0.1
317	8/12/2019 13:39:27	0.1	0.1

318	8/12/2019 13:40:27	0.1	0.1
319	8/12/2019 13:41:27	0.1	0.1
320	8/12/2019 13:42:27	0.1	0.1
321	8/12/2019 13:43:27	0.1	0.1
322	8/12/2019 13:44:27	0.1	0.1
323	8/12/2019 13:45:27	0.1	0.1
324	8/12/2019 13:46:27	0.1	0.1
325	8/12/2019 13:47:27	0.1	0.1
326	8/12/2019 13:48:27	0.1	0.1
327	8/12/2019 13:49:27	0.1	0.1
328	8/12/2019 13:50:27	0.1	0.1
329	8/12/2019 13:51:27	0.1	0.1
330	8/12/2019 13:52:27	0.1	0.1
331	8/12/2019 13:53:27	0.1	0.1
332	8/12/2019 13:54:27	0.1	0.1
333	8/12/2019 13:55:27	0.1	0.1
334	8/12/2019 13:56:27	0.1	0.1
335	8/12/2019 13:57:27	0.1	0.1
336	8/12/2019 13:58:27	0.1	0.1
337	8/12/2019 13:59:27	0.1	0.1
338	8/12/2019 14:00:27	0.1	0.1
339	8/12/2019 14:01:27	0.1	0.1
340	8/12/2019 14:02:27	0.1	0.1
341	8/12/2019 14:03:27	0.1	0.1
342	8/12/2019 14:04:27	0.1	0.1
343	8/12/2019 14:05:27	0.1	0.1
344	8/12/2019 14:06:27	0.1	0.1
345	8/12/2019 14:07:27	0.1	0.1
346	8/12/2019 14:08:27	0.1	0.1
347	8/12/2019 14:09:27	0.1	0.1
348	8/12/2019 14:10:27	0.1	0.1
349	8/12/2019 14:11:27	0.1	0.1
350	8/12/2019 14:12:27	0.1	0.1
351	8/12/2019 14:13:27	0.1	0.1
352	8/12/2019 14:14:27	0.1	0.1
353	8/12/2019 14:15:27	0.1	0.1
354	8/12/2019 14:16:27	0.1	0.1
355	8/12/2019 14:17:27	0.1	0.1
356	8/12/2019 14:18:27	0.1	0.1
357	8/12/2019 14:19:27	0.1	0.1
358	8/12/2019 14:20:27	0.1	0.1
359	8/12/2019 14:21:27	0.1	0.1
360	8/12/2019 14:22:27	0.1	0.1
361	8/12/2019 14:23:27	0.1	0.1
362	8/12/2019 14:24:27	0.1	0.1
363	8/12/2019 14:25:27	0.1	0.1
364	8/12/2019 14:26:27	0.1	0.1
365	8/12/2019 14:27:27	0.1	0.1

366	8/12/2019 14:28:27	0.1	0.1
367	8/12/2019 14:29:27	0.1	0.1
368	8/12/2019 14:30:27	0.1	0.1
369	8/12/2019 14:31:27	0.1	0.1
370	8/12/2019 14:32:27	0.1	0.1
371	8/12/2019 14:33:27	0.1	0.1
372	8/12/2019 14:34:27	0.1	0.1
373	8/12/2019 14:35:27	0.1	0.1
374	8/12/2019 14:36:27	0.1	0.1
375	8/12/2019 14:37:27	0.1	0.1
376	8/12/2019 14:38:27	0.1	0.1
377	8/12/2019 14:39:27	0.1	0.1
378	8/12/2019 14:40:27	0.1	0.1
379	8/12/2019 14:41:27	0.1	0.1
380	8/12/2019 14:42:27	0.1	0.1
381	8/12/2019 14:43:27	0.1	0.1
382	8/12/2019 14:44:27	0.1	0.1
383	8/12/2019 14:45:27	0.1	0.1
384	8/12/2019 14:46:27	0.1	0.1
385	8/12/2019 14:47:27	0.1	0.1
386	8/12/2019 14:48:27	0.1	0.1
387	8/12/2019 14:49:27	0.1	0.1
388	8/12/2019 14:50:27	0.1	0.1
389	8/12/2019 14:51:27	0.1	0.1
390	8/12/2019 14:52:27	0.1	0.1
391	8/12/2019 14:53:27	0.1	0.1
392	8/12/2019 14:54:27	0.1	0.1
393	8/12/2019 14:55:27	0.1	0.1
394	8/12/2019 14:56:27	0.1	0.1
395	8/12/2019 14:57:27	0.1	0.1
396	8/12/2019 14:58:27	0.1	0.1
397	8/12/2019 14:59:27	0.1	0.1
398	8/12/2019 15:00:27	0.1	0.1
399	8/12/2019 15:01:27	0.1	0.1
400	8/12/2019 15:02:27	0.1	0.1
401	8/12/2019 15:03:27	0.1	0.1
402	8/12/2019 15:04:27	0.1	0.1
403	8/12/2019 15:05:27	0.1	0.1

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19/08/13 06:54

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Summary

Unit Name MiniRAE 3000 +(PGM-7320)

Unit SN 592-927993

Unit Firmware Ver V2.20A

Running Mode Hygiene Mode

```
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Pause in Menu Mode
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/13/2019 06:54:14
End     8/13/2019 06:57:07
Sample Period(s)        60
Number of Records       2
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030282W4
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      100.0
TWA Alarm       50.0
Measurement Gas Isobutylene
Calibration Time        8/12/2019 08:11
Peak    0.0
Min     0.0
Average 0.0

************************************************************
Datalog
                PID(ppm)        PID(ppm)        PID(ppm)
Index   Date/Time       (Avg)   (Max)   (Real)
001     8/13/2019 06:55:14      0.0     0.0     0.0
002     8/13/2019 06:56:14      0.0     0.0     0.0
Peak            0.0     0.0     0.0
Min             0.0     0.0     0.0
Average         0.0     0.0     0.0

************************************************************
TWA/STEL
                PID(ppm)        PID(ppm)
Index   Date/Time       (TWA)   (STEL)
001     8/13/2019 06:55:14      0.0     ---
002     8/13/2019 06:56:14      0.0     ---
============================================================
19/08/13 07:00
************************************************************
Summary
```

```
------------------------------------------------------------
Unit Name       MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Power Down
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/13/2019 07:00:11
End     8/13/2019 15:00:04
Sample Period(s)        60
Number of Records       479
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030282W4
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      100.0
TWA Alarm       50.0
Measurement Gas Isobutylene
Calibration Time        8/13/2019 07:00
Peak    0.3
Min     0.0
Average 0.2

************************************************************
Datalog
                PID(ppm)        PID(ppm)        PID(ppm)
Index   Date/Time       (Avg)   (Max)   (Real)
001     8/13/2019 07:01:11      0.1     0.3     0.1
002     8/13/2019 07:02:11      0.1     0.1     0.0
003     8/13/2019 07:03:11      0.1     0.1     0.1
004     8/13/2019 07:04:11      0.1     0.1     0.1
005     8/13/2019 07:05:11      0.1     0.1     0.1
006     8/13/2019 07:06:11      0.0     0.1     0.0
007     8/13/2019 07:07:11      0.0     0.0     0.0
008     8/13/2019 07:08:11      0.0     0.0     0.0
009     8/13/2019 07:09:11      0.0     0.0     0.0
010     8/13/2019 07:10:11      0.0     0.0     0.0
```

011	8/13/2019 07:11:11	0.0	0.0	0.0
012	8/13/2019 07:12:11	0.0	0.0	0.0
013	8/13/2019 07:13:11	0.0	0.0	0.0
014	8/13/2019 07:14:11	0.0	0.0	0.0
015	8/13/2019 07:15:11	0.0	0.0	0.0
016	8/13/2019 07:16:11	0.0	0.0	0.0
017	8/13/2019 07:17:11	0.0	0.0	0.0
018	8/13/2019 07:18:11	0.0	0.0	0.0
019	8/13/2019 07:19:11	0.0	0.0	0.0
020	8/13/2019 07:20:11	0.0	0.0	0.0
021	8/13/2019 07:21:11	0.0	0.0	0.0
022	8/13/2019 07:22:11	0.0	0.0	0.0
023	8/13/2019 07:23:11	0.0	0.0	0.0
024	8/13/2019 07:24:11	0.0	0.1	0.0
025	8/13/2019 07:25:11	0.0	0.1	0.0
026	8/13/2019 07:26:11	0.1	0.1	0.1
027	8/13/2019 07:27:11	0.1	0.1	0.1
028	8/13/2019 07:28:11	0.1	0.1	0.1
029	8/13/2019 07:29:11	0.1	0.1	0.1
030	8/13/2019 07:30:11	0.1	0.1	0.1
031	8/13/2019 07:31:11	0.1	0.1	0.1
032	8/13/2019 07:32:11	0.1	0.1	0.1
033	8/13/2019 07:33:11	0.1	0.1	0.1
034	8/13/2019 07:34:11	0.1	0.1	0.1
035	8/13/2019 07:35:11	0.1	0.1	0.1
036	8/13/2019 07:36:11	0.1	0.1	0.1
037	8/13/2019 07:37:11	0.1	0.1	0.1
038	8/13/2019 07:38:11	0.1	0.1	0.1
039	8/13/2019 07:39:11	0.1	0.1	0.1
040	8/13/2019 07:40:11	0.1	0.1	0.1
041	8/13/2019 07:41:11	0.1	0.1	0.1
042	8/13/2019 07:42:11	0.1	0.1	0.1
043	8/13/2019 07:43:11	0.1	0.1	0.1
044	8/13/2019 07:44:11	0.1	0.1	0.1
045	8/13/2019 07:45:11	0.1	0.1	0.1
046	8/13/2019 07:46:11	0.1	0.1	0.1
047	8/13/2019 07:47:11	0.1	0.1	0.1
048	8/13/2019 07:48:11	0.1	0.1	0.1
049	8/13/2019 07:49:11	0.1	0.1	0.1
050	8/13/2019 07:50:11	0.1	0.1	0.1
051	8/13/2019 07:51:11	0.1	0.1	0.1
052	8/13/2019 07:52:11	0.1	0.1	0.1
053	8/13/2019 07:53:11	0.1	0.1	0.1
054	8/13/2019 07:54:11	0.1	0.1	0.1
055	8/13/2019 07:55:11	0.1	0.1	0.1
056	8/13/2019 07:56:11	0.1	0.1	0.1
057	8/13/2019 07:57:11	0.1	0.1	0.1
058	8/13/2019 07:58:11	0.1	0.1	0.1

059	8/13/2019 07:59:11	0.1	0.1	0.1
060	8/13/2019 08:00:11	0.1	0.1	0.1
061	8/13/2019 08:01:11	0.1	0.1	0.1
062	8/13/2019 08:02:11	0.1	0.1	0.1
063	8/13/2019 08:03:11	0.1	0.1	0.1
064	8/13/2019 08:04:11	0.1	0.1	0.1
065	8/13/2019 08:05:11	0.1	0.1	0.1
066	8/13/2019 08:06:11	0.1	0.1	0.1
067	8/13/2019 08:07:11	0.1	0.1	0.1
068	8/13/2019 08:08:11	0.1	0.1	0.1
069	8/13/2019 08:09:11	0.1	0.1	0.1
070	8/13/2019 08:10:11	0.1	0.1	0.1
071	8/13/2019 08:11:11	0.1	0.1	0.1
072	8/13/2019 08:12:11	0.1	0.1	0.1
073	8/13/2019 08:13:11	0.1	0.1	0.1
074	8/13/2019 08:14:11	0.1	0.1	0.1
075	8/13/2019 08:15:11	0.1	0.1	0.1
076	8/13/2019 08:16:11	0.1	0.1	0.1
077	8/13/2019 08:17:11	0.1	0.1	0.1
078	8/13/2019 08:18:11	0.1	0.1	0.1
079	8/13/2019 08:19:11	0.1	0.1	0.1
080	8/13/2019 08:20:11	0.1	0.1	0.1
081	8/13/2019 08:21:11	0.1	0.1	0.1
082	8/13/2019 08:22:11	0.1	0.1	0.1
083	8/13/2019 08:23:11	0.1	0.1	0.1
084	8/13/2019 08:24:11	0.1	0.1	0.1
085	8/13/2019 08:25:11	0.1	0.1	0.1
086	8/13/2019 08:26:11	0.1	0.1	0.1
087	8/13/2019 08:27:11	0.1	0.1	0.1
088	8/13/2019 08:28:11	0.1	0.1	0.1
089	8/13/2019 08:29:11	0.1	0.1	0.1
090	8/13/2019 08:30:11	0.1	0.1	0.1
091	8/13/2019 08:31:11	0.1	0.1	0.1
092	8/13/2019 08:32:11	0.1	0.1	0.1
093	8/13/2019 08:33:11	0.1	0.1	0.1
094	8/13/2019 08:34:11	0.1	0.1	0.1
095	8/13/2019 08:35:11	0.1	0.1	0.1
096	8/13/2019 08:36:11	0.1	0.1	0.1
097	8/13/2019 08:37:11	0.1	0.1	0.1
098	8/13/2019 08:38:11	0.1	0.1	0.1
099	8/13/2019 08:39:11	0.1	0.1	0.1
100	8/13/2019 08:40:11	0.1	0.1	0.1
101	8/13/2019 08:41:11	0.1	0.1	0.1
102	8/13/2019 08:42:11	0.1	0.1	0.1
103	8/13/2019 08:43:11	0.1	0.1	0.1
104	8/13/2019 08:44:11	0.1	0.1	0.1
105	8/13/2019 08:45:11	0.1	0.1	0.1
106	8/13/2019 08:46:11	0.1	0.1	0.1

107	8/13/2019 08:47:11	0.1	0.1	0.1
108	8/13/2019 08:48:11	0.1	0.1	0.1
109	8/13/2019 08:49:11	0.1	0.1	0.1
110	8/13/2019 08:50:11	0.1	0.1	0.1
111	8/13/2019 08:51:11	0.1	0.1	0.1
112	8/13/2019 08:52:11	0.1	0.1	0.1
113	8/13/2019 08:53:11	0.1	0.1	0.1
114	8/13/2019 08:54:11	0.1	0.1	0.1
115	8/13/2019 08:55:11	0.1	0.1	0.1
116	8/13/2019 08:56:11	0.1	0.1	0.1
117	8/13/2019 08:57:11	0.1	0.1	0.1
118	8/13/2019 08:58:11	0.1	0.1	0.1
119	8/13/2019 08:59:11	0.1	0.1	0.1
120	8/13/2019 09:00:11	0.1	0.1	0.1
121	8/13/2019 09:01:11	0.1	0.1	0.1
122	8/13/2019 09:02:11	0.1	0.1	0.1
123	8/13/2019 09:03:11	0.1	0.1	0.1
124	8/13/2019 09:04:11	0.1	0.1	0.1
125	8/13/2019 09:05:11	0.1	0.1	0.1
126	8/13/2019 09:06:11	0.1	0.1	0.1
127	8/13/2019 09:07:11	0.1	0.1	0.1
128	8/13/2019 09:08:11	0.1	0.1	0.1
129	8/13/2019 09:09:11	0.1	0.1	0.1
130	8/13/2019 09:10:11	0.1	0.1	0.1
131	8/13/2019 09:11:11	0.1	0.1	0.1
132	8/13/2019 09:12:11	0.1	0.1	0.1
133	8/13/2019 09:13:11	0.1	0.1	0.1
134	8/13/2019 09:14:11	0.1	0.1	0.1
135	8/13/2019 09:15:11	0.1	0.1	0.1
136	8/13/2019 09:16:11	0.1	0.1	0.1
137	8/13/2019 09:17:11	0.1	0.1	0.1
138	8/13/2019 09:18:11	0.1	0.1	0.1
139	8/13/2019 09:19:11	0.1	0.1	0.1
140	8/13/2019 09:20:11	0.1	0.1	0.1
141	8/13/2019 09:21:11	0.1	0.1	0.1
142	8/13/2019 09:22:11	0.1	0.1	0.1
143	8/13/2019 09:23:11	0.1	0.1	0.1
144	8/13/2019 09:24:11	0.1	0.1	0.1
145	8/13/2019 09:25:11	0.1	0.1	0.1
146	8/13/2019 09:26:11	0.1	0.1	0.1
147	8/13/2019 09:27:11	0.1	0.1	0.1
148	8/13/2019 09:28:11	0.1	0.1	0.1
149	8/13/2019 09:29:11	0.1	0.1	0.1
150	8/13/2019 09:30:11	0.1	0.1	0.1
151	8/13/2019 09:31:11	0.1	0.1	0.1
152	8/13/2019 09:32:11	0.1	0.1	0.1
153	8/13/2019 09:33:11	0.1	0.1	0.1
154	8/13/2019 09:34:11	0.1	0.1	0.1

155	8/13/2019 09:35:11	0.1	0.1	0.1
156	8/13/2019 09:36:11	0.1	0.1	0.1
157	8/13/2019 09:37:11	0.1	0.1	0.1
158	8/13/2019 09:38:11	0.1	0.1	0.1
159	8/13/2019 09:39:11	0.1	0.1	0.1
160	8/13/2019 09:40:11	0.1	0.2	0.1
161	8/13/2019 09:41:11	0.1	0.2	0.1
162	8/13/2019 09:42:11	0.1	0.2	0.2
163	8/13/2019 09:43:11	0.2	0.2	0.2
164	8/13/2019 09:44:11	0.1	0.2	0.2
165	8/13/2019 09:45:11	0.2	0.2	0.1
166	8/13/2019 09:46:11	0.1	0.2	0.2
167	8/13/2019 09:47:11	0.2	0.2	0.2
168	8/13/2019 09:48:11	0.2	0.2	0.2
169	8/13/2019 09:49:11	0.2	0.2	0.2
170	8/13/2019 09:50:11	0.2	0.2	0.2
171	8/13/2019 09:51:11	0.2	0.2	0.2
172	8/13/2019 09:52:11	0.2	0.2	0.2
173	8/13/2019 09:53:11	0.2	0.2	0.2
174	8/13/2019 09:54:11	0.2	0.2	0.2
175	8/13/2019 09:55:11	0.2	0.2	0.2
176	8/13/2019 09:56:11	0.2	0.2	0.2
177	8/13/2019 09:57:11	0.2	0.2	0.2
178	8/13/2019 09:58:11	0.2	0.2	0.2
179	8/13/2019 09:59:11	0.2	0.2	0.2
180	8/13/2019 10:00:11	0.2	0.2	0.2
181	8/13/2019 10:01:11	0.2	0.2	0.2
182	8/13/2019 10:02:11	0.2	0.2	0.2
183	8/13/2019 10:03:11	0.2	0.2	0.2
184	8/13/2019 10:04:11	0.2	0.2	0.2
185	8/13/2019 10:05:11	0.2	0.2	0.2
186	8/13/2019 10:06:11	0.2	0.2	0.2
187	8/13/2019 10:07:11	0.2	0.2	0.2
188	8/13/2019 10:08:11	0.2	0.2	0.2
189	8/13/2019 10:09:11	0.2	0.2	0.2
190	8/13/2019 10:10:11	0.2	0.2	0.2
191	8/13/2019 10:11:11	0.2	0.2	0.2
192	8/13/2019 10:12:11	0.2	0.2	0.2
193	8/13/2019 10:13:11	0.2	0.2	0.2
194	8/13/2019 10:14:11	0.2	0.2	0.2
195	8/13/2019 10:15:11	0.2	0.2	0.2
196	8/13/2019 10:16:11	0.2	0.2	0.2
197	8/13/2019 10:17:11	0.2	0.2	0.2
198	8/13/2019 10:18:11	0.2	0.2	0.2
199	8/13/2019 10:19:11	0.2	0.2	0.2
200	8/13/2019 10:20:11	0.2	0.2	0.2
201	8/13/2019 10:21:11	0.2	0.2	0.2
202	8/13/2019 10:22:11	0.2	0.2	0.2

203	8/13/2019 10:23:11	0.2	0.2	0.2
204	8/13/2019 10:24:11	0.2	0.2	0.2
205	8/13/2019 10:25:11	0.2	0.2	0.2
206	8/13/2019 10:26:11	0.2	0.2	0.2
207	8/13/2019 10:27:11	0.2	0.2	0.2
208	8/13/2019 10:28:11	0.2	0.2	0.2
209	8/13/2019 10:29:11	0.2	0.2	0.2
210	8/13/2019 10:30:11	0.2	0.2	0.2
211	8/13/2019 10:31:11	0.2	0.2	0.2
212	8/13/2019 10:32:11	0.2	0.2	0.2
213	8/13/2019 10:33:11	0.2	0.2	0.2
214	8/13/2019 10:34:11	0.2	0.2	0.2
215	8/13/2019 10:35:11	0.2	0.2	0.2
216	8/13/2019 10:36:11	0.2	0.2	0.2
217	8/13/2019 10:37:11	0.2	0.2	0.2
218	8/13/2019 10:38:11	0.2	0.2	0.2
219	8/13/2019 10:39:11	0.2	0.2	0.2
220	8/13/2019 10:40:11	0.2	0.2	0.2
221	8/13/2019 10:41:11	0.2	0.2	0.2
222	8/13/2019 10:42:11	0.2	0.2	0.2
223	8/13/2019 10:43:11	0.2	0.2	0.2
224	8/13/2019 10:44:11	0.2	0.2	0.2
225	8/13/2019 10:45:11	0.2	0.2	0.2
226	8/13/2019 10:46:11	0.2	0.2	0.2
227	8/13/2019 10:47:11	0.2	0.2	0.2
228	8/13/2019 10:48:11	0.2	0.2	0.2
229	8/13/2019 10:49:11	0.2	0.2	0.2
230	8/13/2019 10:50:11	0.2	0.2	0.2
231	8/13/2019 10:51:11	0.2	0.2	0.2
232	8/13/2019 10:52:11	0.2	0.2	0.2
233	8/13/2019 10:53:11	0.2	0.2	0.2
234	8/13/2019 10:54:11	0.2	0.2	0.2
235	8/13/2019 10:55:11	0.2	0.2	0.2
236	8/13/2019 10:56:11	0.2	0.2	0.2
237	8/13/2019 10:57:11	0.2	0.2	0.2
238	8/13/2019 10:58:11	0.2	0.2	0.2
239	8/13/2019 10:59:11	0.2	0.2	0.2
240	8/13/2019 11:00:11	0.2	0.2	0.2
241	8/13/2019 11:01:11	0.2	0.2	0.2
242	8/13/2019 11:02:11	0.2	0.2	0.2
243	8/13/2019 11:03:11	0.2	0.2	0.2
244	8/13/2019 11:04:11	0.2	0.2	0.2
245	8/13/2019 11:05:11	0.2	0.2	0.2
246	8/13/2019 11:06:11	0.2	0.2	0.2
247	8/13/2019 11:07:11	0.2	0.2	0.2
248	8/13/2019 11:08:11	0.2	0.2	0.2
249	8/13/2019 11:09:11	0.2	0.2	0.2
250	8/13/2019 11:10:11	0.2	0.2	0.2

251	8/13/2019 11:11:11	0.2	0.2	0.2
252	8/13/2019 11:12:11	0.2	0.2	0.2
253	8/13/2019 11:13:11	0.2	0.2	0.2
254	8/13/2019 11:14:11	0.2	0.2	0.2
255	8/13/2019 11:15:11	0.2	0.2	0.2
256	8/13/2019 11:16:11	0.2	0.2	0.2
257	8/13/2019 11:17:11	0.2	0.2	0.2
258	8/13/2019 11:18:11	0.2	0.2	0.2
259	8/13/2019 11:19:11	0.2	0.2	0.2
260	8/13/2019 11:20:11	0.2	0.2	0.2
261	8/13/2019 11:21:11	0.2	0.2	0.2
262	8/13/2019 11:22:11	0.2	0.2	0.2
263	8/13/2019 11:23:11	0.2	0.2	0.2
264	8/13/2019 11:24:11	0.2	0.2	0.2
265	8/13/2019 11:25:11	0.2	0.2	0.2
266	8/13/2019 11:26:11	0.2	0.2	0.2
267	8/13/2019 11:27:11	0.2	0.2	0.2
268	8/13/2019 11:28:11	0.2	0.2	0.2
269	8/13/2019 11:29:11	0.2	0.2	0.2
270	8/13/2019 11:30:11	0.2	0.2	0.2
271	8/13/2019 11:31:11	0.2	0.2	0.2
272	8/13/2019 11:32:11	0.2	0.2	0.2
273	8/13/2019 11:33:11	0.2	0.2	0.2
274	8/13/2019 11:34:11	0.2	0.2	0.2
275	8/13/2019 11:35:11	0.2	0.2	0.2
276	8/13/2019 11:36:11	0.2	0.2	0.2
277	8/13/2019 11:37:11	0.2	0.2	0.2
278	8/13/2019 11:38:11	0.2	0.2	0.2
279	8/13/2019 11:39:11	0.2	0.2	0.2
280	8/13/2019 11:40:11	0.2	0.2	0.2
281	8/13/2019 11:41:11	0.2	0.2	0.2
282	8/13/2019 11:42:11	0.2	0.2	0.2
283	8/13/2019 11:43:11	0.2	0.2	0.2
284	8/13/2019 11:44:11	0.2	0.2	0.2
285	8/13/2019 11:45:11	0.2	0.2	0.2
286	8/13/2019 11:46:11	0.2	0.2	0.2
287	8/13/2019 11:47:11	0.2	0.2	0.2
288	8/13/2019 11:48:11	0.2	0.2	0.2
289	8/13/2019 11:49:11	0.2	0.2	0.2
290	8/13/2019 11:50:11	0.2	0.2	0.2
291	8/13/2019 11:51:11	0.2	0.2	0.2
292	8/13/2019 11:52:11	0.2	0.2	0.2
293	8/13/2019 11:53:11	0.2	0.2	0.2
294	8/13/2019 11:54:11	0.2	0.2	0.2
295	8/13/2019 11:55:11	0.2	0.2	0.2
296	8/13/2019 11:56:11	0.2	0.2	0.2
297	8/13/2019 11:57:11	0.2	0.2	0.2
298	8/13/2019 11:58:11	0.2	0.2	0.2

299	8/13/2019 11:59:11	0.2	0.2	0.2
300	8/13/2019 12:00:11	0.2	0.2	0.2
301	8/13/2019 12:01:11	0.2	0.2	0.2
302	8/13/2019 12:02:11	0.2	0.2	0.2
303	8/13/2019 12:03:11	0.2	0.2	0.2
304	8/13/2019 12:04:11	0.2	0.2	0.2
305	8/13/2019 12:05:11	0.2	0.2	0.2
306	8/13/2019 12:06:11	0.2	0.2	0.2
307	8/13/2019 12:07:11	0.2	0.2	0.2
308	8/13/2019 12:08:11	0.2	0.2	0.2
309	8/13/2019 12:09:11	0.2	0.2	0.2
310	8/13/2019 12:10:11	0.2	0.2	0.2
311	8/13/2019 12:11:11	0.2	0.2	0.2
312	8/13/2019 12:12:11	0.2	0.2	0.2
313	8/13/2019 12:13:11	0.2	0.2	0.2
314	8/13/2019 12:14:11	0.2	0.2	0.2
315	8/13/2019 12:15:11	0.2	0.2	0.2
316	8/13/2019 12:16:11	0.2	0.2	0.2
317	8/13/2019 12:17:11	0.2	0.2	0.2
318	8/13/2019 12:18:11	0.2	0.2	0.2
319	8/13/2019 12:19:11	0.2	0.2	0.2
320	8/13/2019 12:20:11	0.2	0.2	0.2
321	8/13/2019 12:21:11	0.2	0.2	0.2
322	8/13/2019 12:22:11	0.2	0.2	0.2
323	8/13/2019 12:23:11	0.2	0.2	0.2
324	8/13/2019 12:24:11	0.2	0.2	0.2
325	8/13/2019 12:25:11	0.2	0.2	0.2
326	8/13/2019 12:26:11	0.2	0.2	0.2
327	8/13/2019 12:27:11	0.2	0.2	0.2
328	8/13/2019 12:28:11	0.2	0.2	0.2
329	8/13/2019 12:29:11	0.2	0.2	0.2
330	8/13/2019 12:30:11	0.2	0.2	0.2
331	8/13/2019 12:31:11	0.2	0.2	0.2
332	8/13/2019 12:32:11	0.2	0.2	0.2
333	8/13/2019 12:33:11	0.2	0.2	0.2
334	8/13/2019 12:34:11	0.2	0.2	0.2
335	8/13/2019 12:35:11	0.2	0.2	0.2
336	8/13/2019 12:36:11	0.2	0.2	0.2
337	8/13/2019 12:37:11	0.2	0.2	0.2
338	8/13/2019 12:38:11	0.2	0.2	0.2
339	8/13/2019 12:39:11	0.2	0.2	0.2
340	8/13/2019 12:40:11	0.2	0.2	0.2
341	8/13/2019 12:41:11	0.2	0.2	0.2
342	8/13/2019 12:42:11	0.2	0.2	0.2
343	8/13/2019 12:43:11	0.2	0.2	0.2
344	8/13/2019 12:44:11	0.2	0.2	0.2
345	8/13/2019 12:45:11	0.2	0.2	0.2
346	8/13/2019 12:46:11	0.2	0.2	0.2

347	8/13/2019 12:47:11	0.2	0.2	0.2
348	8/13/2019 12:48:11	0.2	0.2	0.2
349	8/13/2019 12:49:11	0.2	0.2	0.2
350	8/13/2019 12:50:11	0.2	0.2	0.2
351	8/13/2019 12:51:11	0.2	0.2	0.2
352	8/13/2019 12:52:11	0.2	0.2	0.2
353	8/13/2019 12:53:11	0.2	0.2	0.2
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356	8/13/2019 12:56:11	0.2	0.2	0.2
357	8/13/2019 12:57:11	0.2	0.2	0.2
358	8/13/2019 12:58:11	0.2	0.2	0.2
359	8/13/2019 12:59:11	0.2	0.2	0.2
360	8/13/2019 13:00:11	0.2	0.2	0.2
361	8/13/2019 13:01:11	0.2	0.2	0.2
362	8/13/2019 13:02:11	0.2	0.2	0.2
363	8/13/2019 13:03:11	0.2	0.2	0.2
364	8/13/2019 13:04:11	0.2	0.2	0.2
365	8/13/2019 13:05:11	0.2	0.2	0.2
366	8/13/2019 13:06:11	0.2	0.2	0.2
367	8/13/2019 13:07:11	0.2	0.2	0.2
368	8/13/2019 13:08:11	0.2	0.2	0.2
369	8/13/2019 13:09:11	0.2	0.2	0.2
370	8/13/2019 13:10:11	0.2	0.2	0.2
371	8/13/2019 13:11:11	0.2	0.2	0.2
372	8/13/2019 13:12:11	0.2	0.2	0.2
373	8/13/2019 13:13:11	0.2	0.2	0.2
374	8/13/2019 13:14:11	0.2	0.2	0.2
375	8/13/2019 13:15:11	0.2	0.2	0.2
376	8/13/2019 13:16:11	0.2	0.2	0.2
377	8/13/2019 13:17:11	0.2	0.2	0.2
378	8/13/2019 13:18:11	0.2	0.2	0.2
379	8/13/2019 13:19:11	0.2	0.2	0.2
380	8/13/2019 13:20:11	0.2	0.2	0.2
381	8/13/2019 13:21:11	0.2	0.2	0.2
382	8/13/2019 13:22:11	0.2	0.2	0.2
383	8/13/2019 13:23:11	0.2	0.2	0.2
384	8/13/2019 13:24:11	0.2	0.2	0.2
385	8/13/2019 13:25:11	0.2	0.3	0.2
386	8/13/2019 13:26:11	0.2	0.2	0.2
387	8/13/2019 13:27:11	0.2	0.2	0.2
388	8/13/2019 13:28:11	0.2	0.2	0.2
389	8/13/2019 13:29:11	0.2	0.2	0.2
390	8/13/2019 13:30:11	0.2	0.2	0.2
391	8/13/2019 13:31:11	0.2	0.2	0.2
392	8/13/2019 13:32:11	0.2	0.2	0.2
393	8/13/2019 13:33:11	0.2	0.3	0.2
394	8/13/2019 13:34:11	0.2	0.2	0.2

395	8/13/2019 13:35:11	0.2	0.2	0.2
396	8/13/2019 13:36:11	0.2	0.3	0.3
397	8/13/2019 13:37:11	0.3	0.3	0.2
398	8/13/2019 13:38:11	0.2	0.3	0.2
399	8/13/2019 13:39:11	0.2	0.3	0.2
400	8/13/2019 13:40:11	0.2	0.3	0.3
401	8/13/2019 13:41:11	0.3	0.3	0.3
402	8/13/2019 13:42:11	0.3	0.3	0.3
403	8/13/2019 13:43:11	0.2	0.3	0.2
404	8/13/2019 13:44:11	0.2	0.3	0.2
405	8/13/2019 13:45:11	0.2	0.3	0.2
406	8/13/2019 13:46:11	0.2	0.2	0.2
407	8/13/2019 13:47:11	0.2	0.2	0.2
408	8/13/2019 13:48:11	0.2	0.2	0.2
409	8/13/2019 13:49:11	0.2	0.2	0.2
410	8/13/2019 13:50:11	0.2	0.2	0.2
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413	8/13/2019 13:53:11	0.2	0.2	0.2
414	8/13/2019 13:54:11	0.2	0.2	0.2
415	8/13/2019 13:55:11	0.2	0.2	0.2
416	8/13/2019 13:56:11	0.2	0.2	0.2
417	8/13/2019 13:57:11	0.2	0.2	0.2
418	8/13/2019 13:58:11	0.2	0.2	0.2
419	8/13/2019 13:59:11	0.2	0.2	0.2
420	8/13/2019 14:00:11	0.2	0.2	0.2
421	8/13/2019 14:01:11	0.2	0.2	0.2
422	8/13/2019 14:02:11	0.2	0.2	0.2
423	8/13/2019 14:03:11	0.2	0.2	0.2
424	8/13/2019 14:04:11	0.2	0.2	0.2
425	8/13/2019 14:05:11	0.2	0.2	0.2
426	8/13/2019 14:06:11	0.2	0.2	0.2
427	8/13/2019 14:07:11	0.2	0.2	0.2
428	8/13/2019 14:08:11	0.2	0.2	0.2
429	8/13/2019 14:09:11	0.2	0.2	0.2
430	8/13/2019 14:10:11	0.2	0.2	0.2
431	8/13/2019 14:11:11	0.2	0.2	0.2
432	8/13/2019 14:12:11	0.2	0.2	0.2
433	8/13/2019 14:13:11	0.2	0.2	0.2
434	8/13/2019 14:14:11	0.2	0.2	0.2
435	8/13/2019 14:15:11	0.2	0.2	0.2
436	8/13/2019 14:16:11	0.2	0.2	0.2
437	8/13/2019 14:17:11	0.2	0.2	0.2
438	8/13/2019 14:18:11	0.2	0.2	0.2
439	8/13/2019 14:19:11	0.2	0.2	0.2
440	8/13/2019 14:20:11	0.2	0.2	0.2
441	8/13/2019 14:21:11	0.2	0.2	0.2
442	8/13/2019 14:22:11	0.2	0.2	0.2

443	8/13/2019 14:23:11	0.2	0.2	0.2
444	8/13/2019 14:24:11	0.2	0.2	0.2
445	8/13/2019 14:25:11	0.2	0.2	0.2
446	8/13/2019 14:26:11	0.2	0.2	0.2
447	8/13/2019 14:27:11	0.2	0.2	0.2
448	8/13/2019 14:28:11	0.2	0.2	0.2
449	8/13/2019 14:29:11	0.2	0.2	0.2
450	8/13/2019 14:30:11	0.2	0.2	0.2
451	8/13/2019 14:31:11	0.2	0.2	0.2
452	8/13/2019 14:32:11	0.2	0.2	0.2
453	8/13/2019 14:33:11	0.2	0.2	0.2
454	8/13/2019 14:34:11	0.2	0.2	0.2
455	8/13/2019 14:35:11	0.2	0.2	0.2
456	8/13/2019 14:36:11	0.2	0.2	0.2
457	8/13/2019 14:37:11	0.2	0.2	0.2
458	8/13/2019 14:38:11	0.2	0.2	0.2
459	8/13/2019 14:39:11	0.2	0.2	0.2
460	8/13/2019 14:40:11	0.2	0.2	0.2
461	8/13/2019 14:41:11	0.2	0.2	0.2
462	8/13/2019 14:42:11	0.2	0.3	0.2
463	8/13/2019 14:43:11	0.2	0.3	0.2
464	8/13/2019 14:44:11	0.3	0.3	0.3
465	8/13/2019 14:45:11	0.3	0.3	0.3
466	8/13/2019 14:46:11	0.3	0.3	0.3
467	8/13/2019 14:47:11	0.3	0.3	0.3
468	8/13/2019 14:48:11	0.3	0.3	0.3
469	8/13/2019 14:49:11	0.3	0.3	0.3
470	8/13/2019 14:50:11	0.3	0.3	0.3
471	8/13/2019 14:51:11	0.3	0.3	0.3
472	8/13/2019 14:52:11	0.3	0.3	0.3
473	8/13/2019 14:53:11	0.3	0.3	0.3
474	8/13/2019 14:54:11	0.3	0.3	0.3
475	8/13/2019 14:55:11	0.3	0.3	0.3
476	8/13/2019 14:56:11	0.3	0.3	0.3
477	8/13/2019 14:57:11	0.3	0.3	0.3
478	8/13/2019 14:58:11	0.3	0.3	0.3
479	8/13/2019 14:59:11	0.3	0.3	0.3
Peak		0.3	0.3	0.3
Min		0.0	0.0	0.0
Average		0.2	0.2	0.2

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/13/2019 07:01:11	0.0	---
002	8/13/2019 07:02:11	0.0	---
003	8/13/2019 07:03:11	0.0	---

004	8/13/2019 07:04:11	0.0	---
005	8/13/2019 07:05:11	0.0	---
006	8/13/2019 07:06:11	0.0	---
007	8/13/2019 07:07:11	0.0	---
008	8/13/2019 07:08:11	0.0	---
009	8/13/2019 07:09:11	0.0	---
010	8/13/2019 07:10:11	0.0	---
011	8/13/2019 07:11:11	0.0	---
012	8/13/2019 07:12:11	0.0	---
013	8/13/2019 07:13:11	0.0	---
014	8/13/2019 07:14:11	0.0	---
015	8/13/2019 07:15:11	0.0	0.0
016	8/13/2019 07:16:11	0.0	0.0
017	8/13/2019 07:17:11	0.0	0.0
018	8/13/2019 07:18:11	0.0	0.0
019	8/13/2019 07:19:11	0.0	0.0
020	8/13/2019 07:20:11	0.0	0.0
021	8/13/2019 07:21:11	0.0	0.0
022	8/13/2019 07:22:11	0.0	0.0
023	8/13/2019 07:23:11	0.0	0.0
024	8/13/2019 07:24:11	0.0	0.0
025	8/13/2019 07:25:11	0.0	0.0
026	8/13/2019 07:26:11	0.0	0.0
027	8/13/2019 07:27:11	0.0	0.0
028	8/13/2019 07:28:11	0.0	0.0
029	8/13/2019 07:29:11	0.0	0.0
030	8/13/2019 07:30:11	0.0	0.0
031	8/13/2019 07:31:11	0.0	0.0
032	8/13/2019 07:32:11	0.0	0.0
033	8/13/2019 07:33:11	0.0	0.1
034	8/13/2019 07:34:11	0.0	0.1
035	8/13/2019 07:35:11	0.0	0.1
036	8/13/2019 07:36:11	0.0	0.1
037	8/13/2019 07:37:11	0.0	0.1
038	8/13/2019 07:38:11	0.0	0.1
039	8/13/2019 07:39:11	0.0	0.1
040	8/13/2019 07:40:11	0.0	0.1
041	8/13/2019 07:41:11	0.0	0.1
042	8/13/2019 07:42:11	0.0	0.1
043	8/13/2019 07:43:11	0.0	0.1
044	8/13/2019 07:44:11	0.0	0.1
045	8/13/2019 07:45:11	0.0	0.1
046	8/13/2019 07:46:11	0.0	0.1
047	8/13/2019 07:47:11	0.0	0.1
048	8/13/2019 07:48:11	0.0	0.1
049	8/13/2019 07:49:11	0.0	0.1
050	8/13/2019 07:50:11	0.0	0.1
051	8/13/2019 07:51:11	0.0	0.1

052	8/13/2019 07:52:11	0.0	0.1
053	8/13/2019 07:53:11	0.0	0.1
054	8/13/2019 07:54:11	0.0	0.1
055	8/13/2019 07:55:11	0.0	0.1
056	8/13/2019 07:56:11	0.0	0.1
057	8/13/2019 07:57:11	0.0	0.1
058	8/13/2019 07:58:11	0.0	0.1
059	8/13/2019 07:59:11	0.0	0.1
060	8/13/2019 08:00:11	0.0	0.1
061	8/13/2019 08:01:11	0.0	0.1
062	8/13/2019 08:02:11	0.0	0.1
063	8/13/2019 08:03:11	0.0	0.1
064	8/13/2019 08:04:11	0.0	0.1
065	8/13/2019 08:05:11	0.0	0.1
066	8/13/2019 08:06:11	0.0	0.1
067	8/13/2019 08:07:11	0.0	0.1
068	8/13/2019 08:08:11	0.0	0.1
069	8/13/2019 08:09:11	0.0	0.1
070	8/13/2019 08:10:11	0.0	0.1
071	8/13/2019 08:11:11	0.0	0.1
072	8/13/2019 08:12:11	0.0	0.1
073	8/13/2019 08:13:11	0.0	0.1
074	8/13/2019 08:14:11	0.0	0.1
075	8/13/2019 08:15:11	0.0	0.1
076	8/13/2019 08:16:11	0.0	0.1
077	8/13/2019 08:17:11	0.0	0.1
078	8/13/2019 08:18:11	0.0	0.1
079	8/13/2019 08:19:11	0.0	0.1
080	8/13/2019 08:20:11	0.0	0.1
081	8/13/2019 08:21:11	0.0	0.1
082	8/13/2019 08:22:11	0.0	0.1
083	8/13/2019 08:23:11	0.0	0.1
084	8/13/2019 08:24:11	0.0	0.1
085	8/13/2019 08:25:11	0.0	0.1
086	8/13/2019 08:26:11	0.0	0.1
087	8/13/2019 08:27:11	0.0	0.1
088	8/13/2019 08:28:11	0.0	0.1
089	8/13/2019 08:29:11	0.0	0.1
090	8/13/2019 08:30:11	0.0	0.1
091	8/13/2019 08:31:11	0.0	0.1
092	8/13/2019 08:32:11	0.0	0.1
093	8/13/2019 08:33:11	0.0	0.1
094	8/13/2019 08:34:11	0.0	0.1
095	8/13/2019 08:35:11	0.0	0.1
096	8/13/2019 08:36:11	0.0	0.1
097	8/13/2019 08:37:11	0.0	0.1
098	8/13/2019 08:38:11	0.0	0.1
099	8/13/2019 08:39:11	0.0	0.1

100	8/13/2019 08:40:11	0.0	0.1
101	8/13/2019 08:41:11	0.0	0.1
102	8/13/2019 08:42:11	0.0	0.1
103	8/13/2019 08:43:11	0.0	0.1
104	8/13/2019 08:44:11	0.0	0.1
105	8/13/2019 08:45:11	0.0	0.1
106	8/13/2019 08:46:11	0.0	0.1
107	8/13/2019 08:47:11	0.0	0.1
108	8/13/2019 08:48:11	0.0	0.1
109	8/13/2019 08:49:11	0.0	0.1
110	8/13/2019 08:50:11	0.0	0.1
111	8/13/2019 08:51:11	0.0	0.1
112	8/13/2019 08:52:11	0.0	0.1
113	8/13/2019 08:53:11	0.0	0.1
114	8/13/2019 08:54:11	0.0	0.1
115	8/13/2019 08:55:11	0.0	0.1
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117	8/13/2019 08:57:11	0.0	0.1
118	8/13/2019 08:58:11	0.0	0.1
119	8/13/2019 08:59:11	0.0	0.1
120	8/13/2019 09:00:11	0.0	0.1
121	8/13/2019 09:01:11	0.0	0.1
122	8/13/2019 09:02:11	0.0	0.1
123	8/13/2019 09:03:11	0.0	0.1
124	8/13/2019 09:04:11	0.0	0.1
125	8/13/2019 09:05:11	0.0	0.1
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127	8/13/2019 09:07:11	0.0	0.1
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131	8/13/2019 09:11:11	0.0	0.1
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133	8/13/2019 09:13:11	0.0	0.1
134	8/13/2019 09:14:11	0.0	0.1
135	8/13/2019 09:15:11	0.0	0.1
136	8/13/2019 09:16:11	0.0	0.1
137	8/13/2019 09:17:11	0.0	0.1
138	8/13/2019 09:18:11	0.0	0.1
139	8/13/2019 09:19:11	0.0	0.1
140	8/13/2019 09:20:11	0.0	0.1
141	8/13/2019 09:21:11	0.0	0.1
142	8/13/2019 09:22:11	0.0	0.1
143	8/13/2019 09:23:11	0.0	0.1
144	8/13/2019 09:24:11	0.0	0.1
145	8/13/2019 09:25:11	0.0	0.1
146	8/13/2019 09:26:11	0.0	0.1
147	8/13/2019 09:27:11	0.0	0.1

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149	8/13/2019 09:29:11	0.0	0.1
150	8/13/2019 09:30:11	0.0	0.1
151	8/13/2019 09:31:11	0.0	0.1
152	8/13/2019 09:32:11	0.0	0.1
153	8/13/2019 09:33:11	0.0	0.1
154	8/13/2019 09:34:11	0.0	0.1
155	8/13/2019 09:35:11	0.0	0.1
156	8/13/2019 09:36:11	0.0	0.1
157	8/13/2019 09:37:11	0.0	0.1
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159	8/13/2019 09:39:11	0.0	0.1
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161	8/13/2019 09:41:11	0.0	0.1
162	8/13/2019 09:42:11	0.0	0.1
163	8/13/2019 09:43:11	0.0	0.1
164	8/13/2019 09:44:11	0.0	0.1
165	8/13/2019 09:45:11	0.0	0.1
166	8/13/2019 09:46:11	0.0	0.1
167	8/13/2019 09:47:11	0.0	0.1
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171	8/13/2019 09:51:11	0.0	0.2
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175	8/13/2019 09:55:11	0.0	0.2
176	8/13/2019 09:56:11	0.0	0.2
177	8/13/2019 09:57:11	0.0	0.2
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179	8/13/2019 09:59:11	0.0	0.2
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181	8/13/2019 10:01:11	0.0	0.2
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183	8/13/2019 10:03:11	0.0	0.2
184	8/13/2019 10:04:11	0.0	0.2
185	8/13/2019 10:05:11	0.0	0.2
186	8/13/2019 10:06:11	0.0	0.2
187	8/13/2019 10:07:11	0.0	0.2
188	8/13/2019 10:08:11	0.0	0.2
189	8/13/2019 10:09:11	0.0	0.2
190	8/13/2019 10:10:11	0.0	0.2
191	8/13/2019 10:11:11	0.0	0.2
192	8/13/2019 10:12:11	0.0	0.2
193	8/13/2019 10:13:11	0.0	0.2
194	8/13/2019 10:14:11	0.0	0.2
195	8/13/2019 10:15:11	0.0	0.2

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197	8/13/2019 10:17:11	0.0	0.2
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199	8/13/2019 10:19:11	0.0	0.2
200	8/13/2019 10:20:11	0.0	0.2
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205	8/13/2019 10:25:11	0.0	0.2
206	8/13/2019 10:26:11	0.0	0.2
207	8/13/2019 10:27:11	0.0	0.2
208	8/13/2019 10:28:11	0.0	0.2
209	8/13/2019 10:29:11	0.0	0.2
210	8/13/2019 10:30:11	0.0	0.2
211	8/13/2019 10:31:11	0.0	0.2
212	8/13/2019 10:32:11	0.1	0.2
213	8/13/2019 10:33:11	0.1	0.2
214	8/13/2019 10:34:11	0.1	0.2
215	8/13/2019 10:35:11	0.1	0.2
216	8/13/2019 10:36:11	0.1	0.2
217	8/13/2019 10:37:11	0.1	0.2
218	8/13/2019 10:38:11	0.1	0.2
219	8/13/2019 10:39:11	0.1	0.2
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221	8/13/2019 10:41:11	0.1	0.2
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223	8/13/2019 10:43:11	0.1	0.2
224	8/13/2019 10:44:11	0.1	0.2
225	8/13/2019 10:45:11	0.1	0.2
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230	8/13/2019 10:50:11	0.1	0.2
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235	8/13/2019 10:55:11	0.1	0.2
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237	8/13/2019 10:57:11	0.1	0.2
238	8/13/2019 10:58:11	0.1	0.2
239	8/13/2019 10:59:11	0.1	0.2
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256	8/13/2019 11:16:11	0.1	0.2
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258	8/13/2019 11:18:11	0.1	0.2
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260	8/13/2019 11:20:11	0.1	0.2
261	8/13/2019 11:21:11	0.1	0.2
262	8/13/2019 11:22:11	0.1	0.2
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264	8/13/2019 11:24:11	0.1	0.2
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267	8/13/2019 11:27:11	0.1	0.2
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282	8/13/2019 11:42:11	0.1	0.2
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288	8/13/2019 11:48:11	0.1	0.2
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290	8/13/2019 11:50:11	0.1	0.2
291	8/13/2019 11:51:11	0.1	0.2

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308	8/13/2019 12:08:11	0.1	0.2
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310	8/13/2019 12:10:11	0.1	0.2
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312	8/13/2019 12:12:11	0.1	0.2
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314	8/13/2019 12:14:11	0.1	0.2
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316	8/13/2019 12:16:11	0.1	0.2
317	8/13/2019 12:17:11	0.1	0.2
318	8/13/2019 12:18:11	0.1	0.2
319	8/13/2019 12:19:11	0.1	0.2
320	8/13/2019 12:20:11	0.1	0.2
321	8/13/2019 12:21:11	0.1	0.2
322	8/13/2019 12:22:11	0.1	0.2
323	8/13/2019 12:23:11	0.1	0.2
324	8/13/2019 12:24:11	0.1	0.2
325	8/13/2019 12:25:11	0.1	0.2
326	8/13/2019 12:26:11	0.1	0.2
327	8/13/2019 12:27:11	0.1	0.2
328	8/13/2019 12:28:11	0.1	0.2
329	8/13/2019 12:29:11	0.1	0.2
330	8/13/2019 12:30:11	0.1	0.2
331	8/13/2019 12:31:11	0.1	0.2
332	8/13/2019 12:32:11	0.1	0.2
333	8/13/2019 12:33:11	0.1	0.2
334	8/13/2019 12:34:11	0.1	0.2
335	8/13/2019 12:35:11	0.1	0.2
336	8/13/2019 12:36:11	0.1	0.2
337	8/13/2019 12:37:11	0.1	0.2
338	8/13/2019 12:38:11	0.1	0.2
339	8/13/2019 12:39:11	0.1	0.2

340	8/13/2019 12:40:11	0.1	0.2
341	8/13/2019 12:41:11	0.1	0.2
342	8/13/2019 12:42:11	0.1	0.2
343	8/13/2019 12:43:11	0.1	0.2
344	8/13/2019 12:44:11	0.1	0.2
345	8/13/2019 12:45:11	0.1	0.2
346	8/13/2019 12:46:11	0.1	0.2
347	8/13/2019 12:47:11	0.1	0.2
348	8/13/2019 12:48:11	0.1	0.2
349	8/13/2019 12:49:11	0.1	0.2
350	8/13/2019 12:50:11	0.1	0.2
351	8/13/2019 12:51:11	0.1	0.2
352	8/13/2019 12:52:11	0.1	0.2
353	8/13/2019 12:53:11	0.1	0.2
354	8/13/2019 12:54:11	0.1	0.2
355	8/13/2019 12:55:11	0.1	0.2
356	8/13/2019 12:56:11	0.1	0.2
357	8/13/2019 12:57:11	0.1	0.2
358	8/13/2019 12:58:11	0.1	0.2
359	8/13/2019 12:59:11	0.1	0.2
360	8/13/2019 13:00:11	0.1	0.2
361	8/13/2019 13:01:11	0.1	0.2
362	8/13/2019 13:02:11	0.1	0.2
363	8/13/2019 13:03:11	0.1	0.2
364	8/13/2019 13:04:11	0.1	0.2
365	8/13/2019 13:05:11	0.1	0.2
366	8/13/2019 13:06:11	0.1	0.2
367	8/13/2019 13:07:11	0.1	0.2
368	8/13/2019 13:08:11	0.1	0.2
369	8/13/2019 13:09:11	0.1	0.2
370	8/13/2019 13:10:11	0.1	0.2
371	8/13/2019 13:11:11	0.1	0.2
372	8/13/2019 13:12:11	0.1	0.2
373	8/13/2019 13:13:11	0.1	0.2
374	8/13/2019 13:14:11	0.1	0.2
375	8/13/2019 13:15:11	0.1	0.2
376	8/13/2019 13:16:11	0.1	0.2
377	8/13/2019 13:17:11	0.1	0.2
378	8/13/2019 13:18:11	0.1	0.2
379	8/13/2019 13:19:11	0.1	0.2
380	8/13/2019 13:20:11	0.1	0.2
381	8/13/2019 13:21:11	0.1	0.2
382	8/13/2019 13:22:11	0.1	0.2
383	8/13/2019 13:23:11	0.1	0.2
384	8/13/2019 13:24:11	0.1	0.2
385	8/13/2019 13:25:11	0.1	0.2
386	8/13/2019 13:26:11	0.1	0.2
387	8/13/2019 13:27:11	0.1	0.2

388	8/13/2019 13:28:11	0.1	0.2
389	8/13/2019 13:29:11	0.1	0.2
390	8/13/2019 13:30:11	0.1	0.2
391	8/13/2019 13:31:11	0.1	0.2
392	8/13/2019 13:32:11	0.1	0.2
393	8/13/2019 13:33:11	0.1	0.2
394	8/13/2019 13:34:11	0.1	0.2
395	8/13/2019 13:35:11	0.1	0.2
396	8/13/2019 13:36:11	0.1	0.2
397	8/13/2019 13:37:11	0.1	0.2
398	8/13/2019 13:38:11	0.1	0.2
399	8/13/2019 13:39:11	0.1	0.2
400	8/13/2019 13:40:11	0.1	0.2
401	8/13/2019 13:41:11	0.1	0.2
402	8/13/2019 13:42:11	0.1	0.2
403	8/13/2019 13:43:11	0.1	0.2
404	8/13/2019 13:44:11	0.1	0.2
405	8/13/2019 13:45:11	0.1	0.2
406	8/13/2019 13:46:11	0.1	0.2
407	8/13/2019 13:47:11	0.1	0.2
408	8/13/2019 13:48:11	0.1	0.2
409	8/13/2019 13:49:11	0.1	0.2
410	8/13/2019 13:50:11	0.1	0.2
411	8/13/2019 13:51:11	0.1	0.2
412	8/13/2019 13:52:11	0.1	0.2
413	8/13/2019 13:53:11	0.1	0.2
414	8/13/2019 13:54:11	0.1	0.2
415	8/13/2019 13:55:11	0.1	0.2
416	8/13/2019 13:56:11	0.1	0.2
417	8/13/2019 13:57:11	0.1	0.2
418	8/13/2019 13:58:11	0.1	0.2
419	8/13/2019 13:59:11	0.1	0.2
420	8/13/2019 14:00:11	0.1	0.2
421	8/13/2019 14:01:11	0.1	0.2
422	8/13/2019 14:02:11	0.1	0.2
423	8/13/2019 14:03:11	0.1	0.2
424	8/13/2019 14:04:11	0.1	0.2
425	8/13/2019 14:05:11	0.1	0.2
426	8/13/2019 14:06:11	0.1	0.2
427	8/13/2019 14:07:11	0.1	0.2
428	8/13/2019 14:08:11	0.1	0.2
429	8/13/2019 14:09:11	0.1	0.2
430	8/13/2019 14:10:11	0.1	0.2
431	8/13/2019 14:11:11	0.1	0.2
432	8/13/2019 14:12:11	0.1	0.2
433	8/13/2019 14:13:11	0.1	0.2
434	8/13/2019 14:14:11	0.1	0.2
435	8/13/2019 14:15:11	0.1	0.2

436	8/13/2019 14:16:11	0.1	0.2
437	8/13/2019 14:17:11	0.1	0.2
438	8/13/2019 14:18:11	0.1	0.2
439	8/13/2019 14:19:11	0.1	0.2
440	8/13/2019 14:20:11	0.1	0.2
441	8/13/2019 14:21:11	0.1	0.2
442	8/13/2019 14:22:11	0.1	0.2
443	8/13/2019 14:23:11	0.1	0.2
444	8/13/2019 14:24:11	0.1	0.2
445	8/13/2019 14:25:11	0.1	0.2
446	8/13/2019 14:26:11	0.1	0.2
447	8/13/2019 14:27:11	0.1	0.2
448	8/13/2019 14:28:11	0.1	0.2
449	8/13/2019 14:29:11	0.1	0.2
450	8/13/2019 14:30:11	0.2	0.2
451	8/13/2019 14:31:11	0.2	0.2
452	8/13/2019 14:32:11	0.2	0.2
453	8/13/2019 14:33:11	0.2	0.2
454	8/13/2019 14:34:11	0.2	0.2
455	8/13/2019 14:35:11	0.2	0.2
456	8/13/2019 14:36:11	0.2	0.2
457	8/13/2019 14:37:11	0.2	0.2
458	8/13/2019 14:38:11	0.2	0.2
459	8/13/2019 14:39:11	0.2	0.2
460	8/13/2019 14:40:11	0.2	0.2
461	8/13/2019 14:41:11	0.2	0.2
462	8/13/2019 14:42:11	0.2	0.2
463	8/13/2019 14:43:11	0.2	0.2
464	8/13/2019 14:44:11	0.2	0.2
465	8/13/2019 14:45:11	0.2	0.2
466	8/13/2019 14:46:11	0.2	0.2
467	8/13/2019 14:47:11	0.2	0.2
468	8/13/2019 14:48:11	0.2	0.2
469	8/13/2019 14:49:11	0.2	0.3
470	8/13/2019 14:50:11	0.2	0.3
471	8/13/2019 14:51:11	0.2	0.3
472	8/13/2019 14:52:11	0.2	0.3
473	8/13/2019 14:53:11	0.2	0.3
474	8/13/2019 14:54:11	0.2	0.3
475	8/13/2019 14:55:11	0.2	0.3
476	8/13/2019 14:56:11	0.2	0.3
477	8/13/2019 14:57:11	0.2	0.3
478	8/13/2019 14:58:11	0.2	0.3
479	8/13/2019 14:59:11	0.2	0.3

==========
19/08/14 07:20
****
Summary

```
------------------------------------------------------------
Unit Name       MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Pause in Menu Mode
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/14/2019 07:20:54
End     8/14/2019 07:21:00
Sample Period(s)        60
Number of Records       0
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030282W4
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      100.0
TWA Alarm       50.0
Measurement Gas Isobutylene
Calibration Time        8/13/2019 07:00

************************************************************
Datalog

0 record.

============================================================
19/08/14 07:27
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
```

```
Stop Reason     Power Down
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/14/2019 07:27:20
End     8/14/2019 07:27:41
Sample Period(s)        60
Number of Records       0
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030282W4
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      100.0
TWA Alarm       50.0
Measurement Gas Isobutylene
Calibration Time        8/14/2019 07:24

************************************************************
Datalog

0 record.

============================================================
19/08/14 07:33
************************************************************
Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Power Down
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/14/2019 07:33:12
End     8/14/2019 09:53:56
Sample Period(s)        60
```

Number of Records 140

Sensor PID(ppm)
Sensor SN S023030282W4
Measure Type Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 15000.0
STEL Alarm 100.0
TWA Alarm 50.0
Measurement Gas Isobutylene
Calibration Time 8/14/2019 07:24
Peak 0.1
Min 0.0
Average 0.1

****

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	8/14/2019 07:34:12	0.0	0.0	0.0
002	8/14/2019 07:35:12	0.0	0.0	0.0
003	8/14/2019 07:36:12	0.0	0.0	0.0
004	8/14/2019 07:37:12	0.0	0.0	0.0
005	8/14/2019 07:38:12	0.0	0.0	0.0
006	8/14/2019 07:39:12	0.0	0.0	0.0
007	8/14/2019 07:40:12	0.0	0.0	0.0
008	8/14/2019 07:41:12	0.0	0.0	0.0
009	8/14/2019 07:42:12	0.0	0.0	0.0
010	8/14/2019 07:43:12	0.0	0.0	0.0
011	8/14/2019 07:44:12	0.0	0.0	0.0
012	8/14/2019 07:45:12	0.0	0.0	0.0
013	8/14/2019 07:46:12	0.0	0.0	0.0
014	8/14/2019 07:47:12	0.0	0.0	0.0
015	8/14/2019 07:48:12	0.0	0.0	0.0
016	8/14/2019 07:49:12	0.0	0.0	0.0
017	8/14/2019 07:50:12	0.0	0.0	0.0
018	8/14/2019 07:51:12	0.0	0.0	0.0
019	8/14/2019 07:52:12	0.0	0.0	0.0
020	8/14/2019 07:53:12	0.0	0.0	0.0
021	8/14/2019 07:54:12	0.0	0.0	0.0
022	8/14/2019 07:55:12	0.0	0.0	0.0
023	8/14/2019 07:56:12	0.0	0.0	0.0
024	8/14/2019 07:57:12	0.0	0.0	0.0
025	8/14/2019 07:58:12	0.0	0.0	0.0
026	8/14/2019 07:59:12	0.0	0.0	0.0

027	8/14/2019 08:00:12	0.0	0.1	0.0
028	8/14/2019 08:01:12	0.1	0.1	0.1
029	8/14/2019 08:02:12	0.1	0.1	0.1
030	8/14/2019 08:03:12	0.1	0.1	0.1
031	8/14/2019 08:04:12	0.1	0.1	0.1
032	8/14/2019 08:05:12	0.1	0.1	0.1
033	8/14/2019 08:06:12	0.1	0.1	0.1
034	8/14/2019 08:07:12	0.1	0.1	0.1
035	8/14/2019 08:08:12	0.1	0.1	0.1
036	8/14/2019 08:09:12	0.1	0.1	0.1
037	8/14/2019 08:10:12	0.1	0.1	0.1
038	8/14/2019 08:11:12	0.1	0.1	0.1
039	8/14/2019 08:12:12	0.1	0.1	0.1
040	8/14/2019 08:13:12	0.1	0.1	0.1
041	8/14/2019 08:14:12	0.1	0.1	0.1
042	8/14/2019 08:15:12	0.1	0.1	0.1
043	8/14/2019 08:16:12	0.1	0.1	0.1
044	8/14/2019 08:17:12	0.1	0.1	0.1
045	8/14/2019 08:18:12	0.1	0.1	0.1
046	8/14/2019 08:19:12	0.1	0.1	0.1
047	8/14/2019 08:20:12	0.1	0.1	0.1
048	8/14/2019 08:21:12	0.1	0.1	0.1
049	8/14/2019 08:22:12	0.1	0.1	0.1
050	8/14/2019 08:23:12	0.1	0.1	0.1
051	8/14/2019 08:24:12	0.1	0.1	0.1
052	8/14/2019 08:25:12	0.1	0.1	0.1
053	8/14/2019 08:26:12	0.1	0.1	0.1
054	8/14/2019 08:27:12	0.1	0.1	0.1
055	8/14/2019 08:28:12	0.1	0.1	0.1
056	8/14/2019 08:29:12	0.1	0.1	0.1
057	8/14/2019 08:30:12	0.1	0.1	0.1
058	8/14/2019 08:31:12	0.1	0.1	0.1
059	8/14/2019 08:32:12	0.1	0.1	0.1
060	8/14/2019 08:33:12	0.1	0.1	0.1
061	8/14/2019 08:34:12	0.1	0.1	0.1
062	8/14/2019 08:35:12	0.1	0.1	0.1
063	8/14/2019 08:36:12	0.1	0.1	0.1
064	8/14/2019 08:37:12	0.1	0.1	0.1
065	8/14/2019 08:38:12	0.1	0.1	0.1
066	8/14/2019 08:39:12	0.1	0.1	0.1
067	8/14/2019 08:40:12	0.1	0.1	0.1
068	8/14/2019 08:41:12	0.1	0.1	0.1
069	8/14/2019 08:42:12	0.1	0.1	0.1
070	8/14/2019 08:43:12	0.1	0.1	0.1
071	8/14/2019 08:44:12	0.1	0.1	0.1
072	8/14/2019 08:45:12	0.1	0.1	0.1
073	8/14/2019 08:46:12	0.1	0.1	0.1
074	8/14/2019 08:47:12	0.1	0.1	0.1

075	8/14/2019 08:48:12	0.1	0.1	0.1
076	8/14/2019 08:49:12	0.1	0.1	0.1
077	8/14/2019 08:50:12	0.1	0.1	0.1
078	8/14/2019 08:51:12	0.1	0.1	0.1
079	8/14/2019 08:52:12	0.1	0.1	0.1
080	8/14/2019 08:53:12	0.1	0.1	0.1
081	8/14/2019 08:54:12	0.1	0.1	0.1
082	8/14/2019 08:55:12	0.1	0.1	0.1
083	8/14/2019 08:56:12	0.1	0.1	0.1
084	8/14/2019 08:57:12	0.1	0.1	0.1
085	8/14/2019 08:58:12	0.1	0.1	0.1
086	8/14/2019 08:59:12	0.1	0.1	0.1
087	8/14/2019 09:00:12	0.1	0.1	0.1
088	8/14/2019 09:01:12	0.1	0.1	0.1
089	8/14/2019 09:02:12	0.1	0.1	0.1
090	8/14/2019 09:03:12	0.1	0.1	0.1
091	8/14/2019 09:04:12	0.1	0.1	0.1
092	8/14/2019 09:05:12	0.1	0.1	0.1
093	8/14/2019 09:06:12	0.1	0.1	0.1
094	8/14/2019 09:07:12	0.1	0.1	0.1
095	8/14/2019 09:08:12	0.1	0.1	0.1
096	8/14/2019 09:09:12	0.1	0.1	0.1
097	8/14/2019 09:10:12	0.1	0.1	0.1
098	8/14/2019 09:11:12	0.1	0.1	0.1
099	8/14/2019 09:12:12	0.1	0.1	0.1
100	8/14/2019 09:13:12	0.1	0.1	0.1
101	8/14/2019 09:14:12	0.1	0.1	0.1
102	8/14/2019 09:15:12	0.1	0.1	0.1
103	8/14/2019 09:16:12	0.1	0.1	0.1
104	8/14/2019 09:17:12	0.1	0.1	0.1
105	8/14/2019 09:18:12	0.1	0.1	0.1
106	8/14/2019 09:19:12	0.1	0.1	0.1
107	8/14/2019 09:20:12	0.1	0.1	0.1
108	8/14/2019 09:21:12	0.1	0.1	0.1
109	8/14/2019 09:22:12	0.1	0.1	0.1
110	8/14/2019 09:23:12	0.1	0.1	0.1
111	8/14/2019 09:24:12	0.1	0.1	0.1
112	8/14/2019 09:25:12	0.1	0.1	0.1
113	8/14/2019 09:26:12	0.1	0.1	0.1
114	8/14/2019 09:27:12	0.1	0.1	0.1
115	8/14/2019 09:28:12	0.1	0.1	0.1
116	8/14/2019 09:29:12	0.1	0.1	0.1
117	8/14/2019 09:30:12	0.1	0.1	0.1
118	8/14/2019 09:31:12	0.1	0.1	0.1
119	8/14/2019 09:32:12	0.1	0.1	0.1
120	8/14/2019 09:33:12	0.1	0.1	0.1
121	8/14/2019 09:34:12	0.1	0.1	0.1
122	8/14/2019 09:35:12	0.1	0.1	0.1

123	8/14/2019 09:36:12	0.1	0.1	0.1
124	8/14/2019 09:37:12	0.1	0.1	0.1
125	8/14/2019 09:38:12	0.1	0.1	0.1
126	8/14/2019 09:39:12	0.1	0.1	0.1
127	8/14/2019 09:40:12	0.1	0.1	0.1
128	8/14/2019 09:41:12	0.1	0.1	0.1
129	8/14/2019 09:42:12	0.1	0.1	0.1
130	8/14/2019 09:43:12	0.1	0.1	0.1
131	8/14/2019 09:44:12	0.1	0.1	0.1
132	8/14/2019 09:45:12	0.1	0.1	0.1
133	8/14/2019 09:46:12	0.1	0.1	0.1
134	8/14/2019 09:47:12	0.1	0.1	0.1
135	8/14/2019 09:48:12	0.1	0.1	0.1
136	8/14/2019 09:49:12	0.1	0.1	0.1
137	8/14/2019 09:50:12	0.1	0.1	0.1
138	8/14/2019 09:51:12	0.1	0.1	0.1
139	8/14/2019 09:52:12	0.1	0.1	0.1
140	8/14/2019 09:53:12	0.1	0.1	0.1
Peak		0.1	0.1	0.1
Min		0.0	0.0	0.0
Average		0.1	0.1	0.1

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/14/2019 07:34:12	0.0	---
002	8/14/2019 07:35:12	0.0	---
003	8/14/2019 07:36:12	0.0	---
004	8/14/2019 07:37:12	0.0	---
005	8/14/2019 07:38:12	0.0	---
006	8/14/2019 07:39:12	0.0	---
007	8/14/2019 07:40:12	0.0	---
008	8/14/2019 07:41:12	0.0	---
009	8/14/2019 07:42:12	0.0	---
010	8/14/2019 07:43:12	0.0	---
011	8/14/2019 07:44:12	0.0	---
012	8/14/2019 07:45:12	0.0	---
013	8/14/2019 07:46:12	0.0	---
014	8/14/2019 07:47:12	0.0	---
015	8/14/2019 07:48:12	0.0	0.0
016	8/14/2019 07:49:12	0.0	0.0
017	8/14/2019 07:50:12	0.0	0.0
018	8/14/2019 07:51:12	0.0	0.0
019	8/14/2019 07:52:12	0.0	0.0
020	8/14/2019 07:53:12	0.0	0.0
021	8/14/2019 07:54:12	0.0	0.0
022	8/14/2019 07:55:12	0.0	0.0

023	8/14/2019 07:56:12	0.0	0.0
024	8/14/2019 07:57:12	0.0	0.0
025	8/14/2019 07:58:12	0.0	0.0
026	8/14/2019 07:59:12	0.0	0.0
027	8/14/2019 08:00:12	0.0	0.0
028	8/14/2019 08:01:12	0.0	0.0
029	8/14/2019 08:02:12	0.0	0.0
030	8/14/2019 08:03:12	0.0	0.0
031	8/14/2019 08:04:12	0.0	0.0
032	8/14/2019 08:05:12	0.0	0.0
033	8/14/2019 08:06:12	0.0	0.0
034	8/14/2019 08:07:12	0.0	0.0
035	8/14/2019 08:08:12	0.0	0.1
036	8/14/2019 08:09:12	0.0	0.1
037	8/14/2019 08:10:12	0.0	0.1
038	8/14/2019 08:11:12	0.0	0.1
039	8/14/2019 08:12:12	0.0	0.1
040	8/14/2019 08:13:12	0.0	0.1
041	8/14/2019 08:14:12	0.0	0.1
042	8/14/2019 08:15:12	0.0	0.1
043	8/14/2019 08:16:12	0.0	0.1
044	8/14/2019 08:17:12	0.0	0.1
045	8/14/2019 08:18:12	0.0	0.1
046	8/14/2019 08:19:12	0.0	0.1
047	8/14/2019 08:20:12	0.0	0.1
048	8/14/2019 08:21:12	0.0	0.1
049	8/14/2019 08:22:12	0.0	0.1
050	8/14/2019 08:23:12	0.0	0.1
051	8/14/2019 08:24:12	0.0	0.1
052	8/14/2019 08:25:12	0.0	0.1
053	8/14/2019 08:26:12	0.0	0.1
054	8/14/2019 08:27:12	0.0	0.1
055	8/14/2019 08:28:12	0.0	0.1
056	8/14/2019 08:29:12	0.0	0.1
057	8/14/2019 08:30:12	0.0	0.1
058	8/14/2019 08:31:12	0.0	0.1
059	8/14/2019 08:32:12	0.0	0.1
060	8/14/2019 08:33:12	0.0	0.1
061	8/14/2019 08:34:12	0.0	0.1
062	8/14/2019 08:35:12	0.0	0.1
063	8/14/2019 08:36:12	0.0	0.1
064	8/14/2019 08:37:12	0.0	0.1
065	8/14/2019 08:38:12	0.0	0.1
066	8/14/2019 08:39:12	0.0	0.1
067	8/14/2019 08:40:12	0.0	0.1
068	8/14/2019 08:41:12	0.0	0.1
069	8/14/2019 08:42:12	0.0	0.1
070	8/14/2019 08:43:12	0.0	0.1

071	8/14/2019 08:44:12	0.0	0.1
072	8/14/2019 08:45:12	0.0	0.1
073	8/14/2019 08:46:12	0.0	0.1
074	8/14/2019 08:47:12	0.0	0.1
075	8/14/2019 08:48:12	0.0	0.1
076	8/14/2019 08:49:12	0.0	0.1
077	8/14/2019 08:50:12	0.0	0.1
078	8/14/2019 08:51:12	0.0	0.1
079	8/14/2019 08:52:12	0.0	0.1
080	8/14/2019 08:53:12	0.0	0.1
081	8/14/2019 08:54:12	0.0	0.1
082	8/14/2019 08:55:12	0.0	0.1
083	8/14/2019 08:56:12	0.0	0.1
084	8/14/2019 08:57:12	0.0	0.1
085	8/14/2019 08:58:12	0.0	0.1
086	8/14/2019 08:59:12	0.0	0.1
087	8/14/2019 09:00:12	0.0	0.1
088	8/14/2019 09:01:12	0.0	0.1
089	8/14/2019 09:02:12	0.0	0.1
090	8/14/2019 09:03:12	0.0	0.1
091	8/14/2019 09:04:12	0.0	0.1
092	8/14/2019 09:05:12	0.0	0.1
093	8/14/2019 09:06:12	0.0	0.1
094	8/14/2019 09:07:12	0.0	0.1
095	8/14/2019 09:08:12	0.0	0.1
096	8/14/2019 09:09:12	0.0	0.1
097	8/14/2019 09:10:12	0.0	0.1
098	8/14/2019 09:11:12	0.0	0.1
099	8/14/2019 09:12:12	0.0	0.1
100	8/14/2019 09:13:12	0.0	0.1
101	8/14/2019 09:14:12	0.0	0.1
102	8/14/2019 09:15:12	0.0	0.1
103	8/14/2019 09:16:12	0.0	0.1
104	8/14/2019 09:17:12	0.0	0.1
105	8/14/2019 09:18:12	0.0	0.1
106	8/14/2019 09:19:12	0.0	0.1
107	8/14/2019 09:20:12	0.0	0.1
108	8/14/2019 09:21:12	0.0	0.1
109	8/14/2019 09:22:12	0.0	0.1
110	8/14/2019 09:23:12	0.0	0.1
111	8/14/2019 09:24:12	0.0	0.1
112	8/14/2019 09:25:12	0.0	0.1
113	8/14/2019 09:26:12	0.0	0.1
114	8/14/2019 09:27:12	0.0	0.1
115	8/14/2019 09:28:12	0.0	0.1
116	8/14/2019 09:29:12	0.0	0.1
117	8/14/2019 09:30:12	0.0	0.1
118	8/14/2019 09:31:12	0.0	0.1

119	8/14/2019 09:32:12	0.0	0.1
120	8/14/2019 09:33:12	0.0	0.1
121	8/14/2019 09:34:12	0.0	0.1
122	8/14/2019 09:35:12	0.0	0.1
123	8/14/2019 09:36:12	0.0	0.1
124	8/14/2019 09:37:12	0.0	0.1
125	8/14/2019 09:38:12	0.0	0.1
126	8/14/2019 09:39:12	0.0	0.1
127	8/14/2019 09:40:12	0.0	0.1
128	8/14/2019 09:41:12	0.0	0.1
129	8/14/2019 09:42:12	0.0	0.1
130	8/14/2019 09:43:12	0.0	0.1
131	8/14/2019 09:44:12	0.0	0.1
132	8/14/2019 09:45:12	0.0	0.1
133	8/14/2019 09:46:12	0.0	0.1
134	8/14/2019 09:47:12	0.0	0.1
135	8/14/2019 09:48:12	0.0	0.1
136	8/14/2019 09:49:12	0.0	0.1
137	8/14/2019 09:50:12	0.0	0.1
138	8/14/2019 09:51:12	0.0	0.1
139	8/14/2019 09:52:12	0.0	0.1
140	8/14/2019 09:53:12	0.0	0.1

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19/08/16 11:12

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Summary

Unit Name MiniRAE 3000 +(PGM-7320)

Unit SN 592-927993

Unit Firmware Ver V2.20A

Running Mode Hygiene Mode

Datalog Mode Auto

Diagnostic Mode No

Stop Reason Power Down

Site ID 12345678

User ID 12345678

Begin 8/16/2019 11:12:13

End 8/16/2019 11:12:28

Sample Period(s) 60

Number of Records 0

Sensor PID(ppm)

Sensor SN S023030282W4

Measure Type Avg; Max; Real

Span 100.0

Span 2 1000.0
Low Alarm   50.0
High Alarm   100.0
Over Alarm   15000.0
STEL Alarm   100.0
TWA Alarm   50.0
Measurement Gas Isobutylene
Calibration Time   8/14/2019 07:24

****
Datalog

0 record.

==========
19/08/19 10:46
****
Summary

Unit Name   MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver   V2.20A

Running Mode   Hygiene Mode
Datalog Mode   Auto
Diagnostic Mode No
Stop Reason   Pause in Menu Mode

Site ID 12345678
User ID 12345678

Begin   8/19/2019 10:46:50
End   8/19/2019 10:47:03
Sample Period(s)   60
Number of Records   0

Sensor PID(ppm)
Sensor SN   S023030282W4
Measure Type   Avg; Max; Real
Span   100.0
Span 2 1000.0
Low Alarm   50.0
High Alarm   100.0
Over Alarm   15000.0
STEL Alarm   100.0
TWA Alarm   50.0
Measurement Gas Isobutylene
Calibration Time   8/14/2019 07:24

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************************************************************
Datalog

0 record.

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19/08/19 10:49
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Summary
------------------------------------------------------------
Unit Name       MiniRAE 3000 +(PGM-7320)
Unit SN 592-927993
Unit Firmware Ver       V2.20A
------------------------------------------------------------
Running Mode    Hygiene Mode
Datalog Mode    Auto
Diagnostic Mode No
Stop Reason     Pause in Communication Mode
------------------------------------------------------------
Site ID 12345678
User ID 12345678
------------------------------------------------------------
Begin   8/19/2019 10:49:19
End     8/19/2019 10:49:25
Sample Period(s)        60
Number of Records       0
------------------------------------------------------------
Sensor  PID(ppm)
Sensor SN       S023030282W4
Measure Type    Avg; Max; Real
Span    100.0
Span 2  1000.0
Low Alarm       50.0
High Alarm      100.0
Over Alarm      15000.0
STEL Alarm      100.0
TWA Alarm       50.0
Measurement Gas Isobutylene
Calibration Time        8/19/2019 10:49

************************************************************
Datalog

0 record.
```

Submittal 04 – Waste Characterization

J L Steel
Waste Characterization
Liquid Waste

NYSDEC-J&L Steel Site Liquid Waste Characterization SDG: SC51727		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	JL-A1 JL-A1 SC51727-01 PHOENIX SC51727 WATER 11/5/2018 13:00	Trip Blank Trip Blank SC51727-08 SPECTRUM SC51727 WATER 11/5/2018 0:00
CAS NO.	COMPOUND	UNITS:		
	VOLATILES			
630-20-6	1,1,1,2-Tetrachloroethane	ug/l	1 U	1 U
71-55-6	1,1,1-Trichloroethane	ug/l	1 U	1 U
79-34-5	1,1,2,2-Tetrachloroethane	ug/l	0.5 U	0.5 U
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1 U	1 U
79-00-5	1,1,2-Trichloroethane	ug/l	1 U	1 U
75-34-3	1,1-Dichloroethane	ug/l	1 U	1 U
75-35-4	1,1-Dichloroethene	ug/l	1 U	1 U
563-58-6	1,1-Dichloropropene	ug/l	1 U	1 U
87-61-6	1,2,3-Trichlorobenzene	ug/l	1 U	1 U
96-18-4	1,2,3-Trichloropropane	ug/l	1 U	1 U
120-82-1	1,2,4-Trichlorobenzene	ug/l	1 U	1 U
95-63-6	1,2,4-Trimethylbenzene	ug/l	1 U	1 U
96-12-8	1,2-Dibromo-3-Chloropropane	ug/l	2 U	2 U
106-93-4	1,2-Dibromoethane (Ethylene Dibromide)	ug/l	0.5 U	0.5 U
95-50-1	1,2-Dichlorobenzene	ug/l	4.9 U	1 U
107-06-2	1,2-Dichloroethane	ug/l	1 U	1 U
78-87-5	1,2-Dichloropropane	ug/l	1 U	1 U
108-67-8	1,3,5-Trimethylbenzene (Mesitylene)	ug/l	1 U	1 U
108-70-3	1,3,5-Trichlorobenzene	ug/l	1 U	1 U
541-73-1	1,3-Dichlorobenzene	ug/l	1 U	1 U
142-28-9	1,3-Dichloropropane	ug/l	1 U	1 U
106-46-7	1,4-Dichlorobenzene	ug/l	1 U	1 U
123-91-1	1,4-Dioxane (P-Dioxane)	ug/l	20 U	20 U
594-20-7	2,2-Dichloropropane	ug/l	1 U	1 U
95-49-8	2-Chlorotoluene	ug/l	1 U	1 U
591-78-6	2-Hexanone	ug/l	2 U	2 U
106-43-4	4-Chlorotoluene	ug/l	1 U	1 U
67-64-1	Acetone	ug/l	10 U	10 U
107-13-1	Acrylonitrile	ug/l	0.5 U	0.5 U
71-43-2	Benzene	ug/l	1 U	1 U
108-86-1	Bromobenzene	ug/l	1 U	1 U
74-97-5	Bromochloromethane	ug/l	1 U	1 U
75-27-4	Bromodichloromethane	ug/l	0.5 U	0.5 U
75-25-2	Bromoform	ug/l	1 U	1 U
74-83-9	Bromomethane	ug/l	2 U	2 U
75-15-0	Carbon Disulfide	ug/l	2 U	2 U
56-23-5	Carbon Tetrachloride	ug/l	1 U	1 U
108-90-7	Chlorobenzene	ug/l	1 U	1 U
75-00-3	Chloroethane	ug/l	2 U	2 U
67-66-3	Chloroform	ug/l	1 U	1 U
74-87-3	Chloromethane	ug/l	2 U	2 U
156-59-2	Cis-1,2-Dichloroethylene	ug/l	1 U	1 U
10061-01-5	Cis-1,3-Dichloropropene	ug/l	0.5 U	0.5 U
99-87-6	Cymene	ug/l	1 U	1 U
124-48-1	Dibromochloromethane	ug/l	0.5 U	0.5 U
74-95-3	Dibromomethane	ug/l	1 U	1 U
75-71-8	Dichlorodifluoromethane	ug/l	2 U	2 U
60-29-7	Diethyl Ether (Ethyl Ether)	ug/l	1 U	1 U
64-17-5	Ethanol	ug/l	200 U	200 U
637-92-3	Ethyl Tert-Butyl Ether	ug/l	1 U	1 U
100-41-4	Ethylbenzene	ug/l	1 U	1 U
87-68-3	Hexachlorobutadiene	ug/l	4.9 U	0.5 U
108-20-3	Isopropyl Ether	ug/l	1 U	1 U
98-82-8	Isopropylbenzene (Cumene)	ug/l	1 U	1 U
XYLMP	M,P-Xylene (Sum Of Isomers)	ug/l	2 U	2 U
78-93-3	Methyl Ethyl Ketone (2-Butanone)	ug/l	2 U	2 U
108-10-1	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ug/l	2 U	2 U
75-09-2	Methylene Chloride	ug/l	2 U	2 U
104-51-8	N-Butylbenzene	ug/l	1 U	1 U
103-65-1	N-Propylbenzene	ug/l	1 U	1 U
91-20-3	Naphthalene	ug/l	4.9 U	2 U
95-47-6	O-Xylene (1,2-Dimethylbenzene)	ug/l	1 U	1 U
135-98-8	Sec-Butylbenzene	ug/l	1 U	1 U
100-42-5	Styrene	ug/l	1 U	1 U
98-06-6	T-Butylbenzene	ug/l	1 U	1 U
75-65-0	Tert-Butyl Alcohol	ug/l	10 U	10 U
994-05-8	Tert-Amyl Methyl Ether	ug/l	1 U	1 U
1634-04-4	Tert-Butyl Methyl Ether	ug/l	1 U	1 U
127-18-4	Tetrachloroethylene (PCE)	ug/l	0.75 J	1 U
108-88-3	Toluene	ug/l	1 U	1 U
109-99-9	Tetrahydrofuran	ug/l	2 U	2 U
156-60-5	Trans-1,2-Dichloroethene	ug/l	1 U	1 U
10061-02-6	Trans-1,3-Dichloropropene	ug/l	0.5 U	0.5 U
110-57-6	Trans-1,4-Dichloro-2-Butene	ug/l	5 U	5 U
79-01-6	Trichloroethylene (TCE)	ug/l	1 U	1 U
75-69-4	Trichlorofluoromethane	ug/l	1 U	1 U
75-01-4	Vinyl Chloride	ug/l	1 U	1 U

J L Steel
Waste Characterization
Liquid Waste

NYSDEC-J&L Steel Site Liquid Waste Characterization SDG: SC51727		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	JL-A1 JL-A1 SC51727-01 PHOENIX SC51727 WATER 11/5/2018 13:00	Trip Blank Trip Blank SC51727-08 SPECTRUM SC51727 WATER 11/5/2018 0:00
CAS NO.	COMPOUND	UNITS:		
	SEMIVOLATILES			
DBABA	Dibenz(A,H)anthracene	ug/l	4.9 U	
95-94-3	1,2,4,5-Tetrachlorobenzene	ug/l	4.9 U	
90-12-0	1-Methylnaphthalene	ug/l	4.9 U	
95-95-4	2,4,5-Trichlorophenol	ug/l	4.9 U	
88-06-2	2,4,6-Trichlorophenol	ug/l	4.9 U	
120-83-2	2,4-Dichlorophenol	ug/l	4.9 U	
105-67-9	2,4-Dimethylphenol	ug/l	4.9 U	
51-28-5	2,4-Dinitrophenol	ug/l	4.9 U	
121-14-2	2,4-Dinitrotoluene	ug/l	4.9 U	
606-20-2	2,6-Dinitrotoluene	ug/l	4.9 U	
91-58-7	2-Chloronaphthalene	ug/l	4.9 U	
95-57-8	2-Chlorophenol	ug/l	4.9 U	
91-57-6	2-Methylnaphthalene	ug/l	4.9 U	
95-48-7	2-Methylphenol (O-Cresol)	ug/l	4.9 U	
88-74-4	2-Nitroaniline	ug/l	4.9 U	
88-75-5	2-Nitrophenol	ug/l	4.9 U	
MEPH3MEPH	3- And 4- Methylphenol (Total)	ug/l	9.8 U	
91-94-1	3,3'-Dichlorobenzidine	ug/l	4.9 U	
99-09-2	3-Nitroaniline	ug/l	4.9 U	
534-52-1	4,6-Dinitro-2-Methylphenol	ug/l	4.9 U	
101-55-3	4-Bromophenyl Phenyl Ether	ug/l	4.9 U	
59-50-7	4-Chloro-3-Methylphenol	ug/l	4.9 U	
106-47-8	4-Chloroaniline	ug/l	4.9 U	
7005-72-3	4-Chlorophenyl Phenyl Ether	ug/l	4.9 U	
100-01-6	4-Nitroaniline	ug/l	4.9 U	
100-02-7	4-Nitrophenol	ug/l	19.6 U	
83-32-9	Acenaphthene	ug/l	4.9 U	
208-96-8	Acenaphthylene	ug/l	4.9 U	
62-53-3	Aniline	ug/l	4.9 U	
120-12-7	Anthracene	ug/l	4.9 U	
103-33-3	Azobenzene	ug/l	4.9 U	
56-55-3	Benzo(A)Anthracene	ug/l	4.9 U	
50-32-8	Benzo(A)Pyrene	ug/l	4.9 U	
205-99-2	Benzo(B)Fluoranthene	ug/l	4.9 U	
191-24-2	Benzo(G,H,I)Perylene	ug/l	4.9 U	
207-08-9	Benzo(K)Fluoranthene	ug/l	4.9 U	
65-85-0	Benzoic Acid	ug/l	4.9 U	
100-51-6	Benzyl Alcohol	ug/l	4.9 U	
85-68-7	Benzyl Butyl Phthalate	ug/l	4.9 U	
111-91-1	Bis(2-Chloroethoxy) Methane	ug/l	4.9 U	
111-44-4	Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	ug/l	4.9 U	
108-60-1	Bis(2-Chloroisopropyl) Ether	ug/l	4.9 U	
117-81-7	Bis(2-Ethylhexyl) Phthalate	ug/l	4.9 U	
86-74-8	Carbazole	ug/l	4.9 U	
218-01-9	Chrysene	ug/l	4.9 U	
132-64-9	Dibenzofuran	ug/l	4.9 U	
84-66-2	Diethyl Phthalate	ug/l	4.9 U	
131-11-3	Dimethyl Phthalate	ug/l	4.9 U	
84-74-2	Di-N-Butyl Phthalate	ug/l	4.9 U	
117-84-0	Di-N-Octylphthalate	ug/l	4.9 U	
206-44-0	Fluoranthene	ug/l	4.9 U	
86-73-7	Fluorene	ug/l	4.9 U	
118-74-1	Hexachlorobenzene	ug/l	4.9 U	
77-47-4	Hexachlorocyclopentadiene	ug/l	4.9 U	
67-72-1	Hexachloroethane	ug/l	4.9 U	
193-39-5	Indeno(1,2,3-C,D)Pyrene	ug/l	4.9 U	
78-59-1	Isophorone	ug/l	4.9 U	
98-95-3	Nitrobenzene	ug/l	4.9 U	
62-75-9	N-Nitrosodimethylamine	ug/l	4.9 U	
621-64-7	N-Nitrosodi-N-Propylamine	ug/l	4.9 U	
86-30-6	N-Nitrosodiphenylamine	ug/l	2.1 J	
82-68-8	Pentachloronitrobenzene	ug/l	4.9 U	
87-86-5	Pentachlorophenol	ug/l	19.6 U	
85-01-8	Phenanthrene	ug/l	4.9 U	
108-95-2	Phenol	ug/l	4.9 U	
129-00-0	Pyrene	ug/l	4.9 U	
110-86-1	Pyridine	ug/l	4.9 U	

J L Steel
Waste Characterization
Liquid Waste

NYSDEC-J&L Steel Site Liquid Waste Characterization SDG: SC51727		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	JL-A1 JL-A1 SC51727-01 PHOENIX SC51727 WATER 11/5/2018 13:00	Trip Blank Trip Blank SC51727-08 SPECTRUM SC51727 WATER 11/5/2018 0:00
CAS NO.	COMPOUND	UNITS:		
	PESTICIDES			
15972-60-8	Alachlor	ug/l	0.074 U	
309-00-2	Aldrin	ug/l	0.002 U	
319-84-6	Alpha Bhc (Alpha Hexachlorocyclohexane)	ug/l	0.005 U	
959-98-8	Alpha Endosulfan	ug/l	0.01 U	
5103-71-9	cis-Chlordane	ug/l	0.01 U	
319-85-7	Beta Bhc (Beta Hexachlorocyclohexane)	ug/l	0.005 U	
33213-65-9	Beta Endosulfan	ug/l	0.01 U	
57-74-9	Chlordane	ug/l	0.05 U	
319-86-8	Delta BHC (Delta Hexachlorocyclohexane)	ug/l	0.005 U	
60-57-1	Dieldrin	ug/l	0.002 U	
1031-07-8	Endosulfan Sulfate	ug/l	0.01 U	
72-20-8	Endrin	ug/l	0.01 U	
7421-93-4	Endrin Aldehyde	ug/l	0.01 U	
53494-70-5	Endrin Ketone	ug/l	0.01 U	
58-89-9	Gamma Bhc (Lindane)	ug/l	0.005 U	
12789-03-6	Chlordane (Technical)	ug/l	0.01 U	
76-44-8	Heptachlor	ug/l	0.01 U	
1024-57-3	Heptachlor Epoxide	ug/l	0.01 U	
72-43-5	Methoxychlor	ug/l	0.099 U	
72-54-8	P,P'-DDD	ug/l	0.005 U	
72-55-9	P,P'-DDE	ug/l	0.01 U	
50-29-3	P,P'-DDT	ug/l	0.005 U	
8001-35-2	Toxaphene	ug/l	0.2 U	
	PCBs			
12674-11-2	PCB-1016 (Aroclor 1016)	ug/l	0.202 U	
11104-28-2	PCB-1221 (Aroclor 1221)	ug/l	0.202 U	
11141-16-5	PCB-1232 (Aroclor 1232)	ug/l	0.202 U	
53469-21-9	PCB-1242 (Aroclor 1242)	ug/l	1.02 U	
12672-29-6	PCB-1248 (Aroclor 1248)	ug/l	0.202 U	
11097-69-1	PCB-1254 (Aroclor 1254)	ug/l	0.202 U	
11096-82-5	PCB-1260 (Aroclor 1260)	ug/l	0.202 U	
37324-23-5	PCB-1262 (Aroclor 1262)	ug/l	0.202 U	
11100-14-4	PCB-1268 (Aroclor 1268)	ug/l	0.202 U	
	METALS			
7429-90-5	Aluminum	mg/l	0.321	
7440-36-0	Antimony	mg/l	0.006 U	
7440-38-2	Arsenic	mg/l	0.004 U	
7440-39-3	Barium	mg/l	0.04	
7440-41-7	Beryllium	mg/l	0.002 U	
7440-43-9	Cadmium	mg/l	0.0025 U	
7440-70-2	Calcium	mg/l	15.4	
7440-47-3	Chromium, Total	mg/l	0.0012 J	
7440-48-4	Cobalt	mg/l	0.0008 J	
7440-50-8	Copper	mg/l	0.0087	
7439-89-6	Iron	mg/l	1.33	
7439-92-1	Lead	mg/l	0.0075 U	
7439-95-4	Magnesium	mg/l	2.51	
7439-96-5	Manganese	mg/l	0.0186	
7439-97-6	Mercury	mg/l	0.0002 U	
7440-02-0	Nickel	mg/l	0.0014 J	
9/7/7440	Potassium	mg/l	1.08	
7782-49-2	Selenium	mg/l	0.015 U	
7440-22-4	Silver	mg/l	0.005 U	
7440-23-5	Sodium	mg/l	1.34	
7440-28-0	Thallium	mg/l	0.005 U	
7440-62-2	Vanadium	mg/l	0.0014 J	
7440-66-6	Zinc	mg/l	0.0148 J	
57-12-5	Cyanide	mg/l	0.005 U	
	OTHER			
92-87-5	Benzidine	ug/l	9.8 U	
PH	pH	ph units	6.87	
	WASTE CHARACTERISTICS			
CREAC	Reactive Cyanide	mg/l	25 U	
SREAC	Sulfide Reactive	mg/l	50 U	

NOTES:
U - Compound not detected. Detection limit posted.
J - Estimated concentration.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

TestAmerica Job ID: 160-31368-1
Client Project/Site: NYSDEC Former J&L Steel

For:
Parsons Corporation
301 Plainfield Road
Suite 350
Syracuse, New York 13212

Attn: Ms. Michelle Gugliuzza

Authorized for release by:
10/22/2018 3:31:48 PM

Jayna Awalt, Project Manager II
(314)298-8566
jayna.awalt@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 160-31368-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

Client: Parsons Corporation

Project: NYSDEC Former J&L Steel

Report Number: 160-31368-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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

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

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Manual Integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure. Detailed information can be found in the raw data section of the level IV report.

The following clean-up methods for Organic analyses may have been used on the samples in this data set. Specific methods employed are documented on the batch extraction logs:

Method 3600C: Cleanup
Method 3620C: Florisil Cleanup
Method 3630C: Silica Gel Cleanup
Method 3640A: Gel-Permeation Cleanup
Method 3650B: Acid-Base Partition Cleanup
Method 3660B: Sulfur Cleanup

Job ID: 160-31368-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

Method 3665A: Sulfuric Acid/Permanganate Cleanup

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 10/17/2018; the samples arrived in good condition, properly preserved. The temperature of the coolers at receipt was 18.0 C.

RADIUM-226 & OTHER GAMMA EMITTERS

Sample RAD A-1 (160-31368-1) was analyzed for Radium-226 & Other Gamma Emitters in accordance with EPA Method 901.1. The samples were dried on 10/18/2018, and prepared and analyzed on 10/22/2018.

Ra-226 by gamma spectroscopy is typically determined by inference from daughters (e.g. Bi-214) after sealing the sample in an appropriate counting geometry/container and waiting 21 days to allow the Ra-226 decay chain through Rn-222 to reach secular equilibrium. Such an approach is considered to be the most reliable and representative means for establishing the true Ra-226 concentration in the sample. The method requested by the client to report Ra-226, using its own 186 keV gamma-ray emission, is subject to interference and potential bias due to the 185.7 keV U-235 gamma ray. Experience also indicates gamma spectroscopy software does not consistently assign accurate peak areas to Ra-226 (186 keV), with the problem compounded by slight drift of the instrumentation. The laboratory considers Ra-226 reported based upon the 186 keV gamma-ray emission to be best used by the client in a qualitative fashion. The following samples were affected: RAD A-1 (160-31368-1), (LCS 160-396369/2-A), (MB 160-396369/1-A) and (160-31368-A-1-C DU).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TestAmerica St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

Client Contact	Project Manager: Matt Vetter	Site Contact: Jeremy Neumann	Date: October 15, 2018	COC No:
Parsons	Tel/Fax: 315-552-9742	Lab Contact: Mike Franks	Carrier:	____ of ____ COCs
301 Plainfield Road, Ste 350	**Analysis Turnaround Time**			Sampler:
Syracuse, NY 13212	☑ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only:**
(315) 552-9560 Phone	TAT if different from Below ____			Walk-in Client:
(315-552-9675) FAX	☐ 2 weeks			Lab Sampling:
Project Name: J&L Steel Site	☑ 1 week			
Site: J&L Steel Site	☐ 2 days			Job / SDG No.:
P O # 447415	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec	Sample Specific Notes:
Rad A-1	10/15/2018	1:30 pm	C	S	1	N		x	

160-31368 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

	Company:	Date/Time:			
Relinquished by:			Received by:	Company: TUSTL	Date/Time: 10-17-18/1500
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

10/22/2018

Login Sample Receipt Checklist

Client: Parsons Corporation

Job Number: 160-31368-1

Login Number: 31368
List Number: 1
Creator: Press, Nicholas B

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Parsons Corporation
Project/Site: NYSDEC Former J&L Steel

TestAmerica Job ID: 160-31368-1

Method	Method Description	Protocol	Laboratory
901.1	Radium-226 & Other Gamma Emitters (GS)	EPA	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Fill_Geo-0	Fill Geometry, No In-Growth	None	TAL SL

Protocol References:

EPA = US Environmental Protection Agency
None = None

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Parsons Corporation
Project/Site: NYSDEC Former J&L Steel

TestAmerica Job ID: 160-31368-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-31368-1	RAD A-1	Solid	10/15/18 13:30	10/17/18 15:00

Client Sample ID: RAD A-1
Date Collected: 10/15/18 13:30
Date Received: 10/17/18 15:00

Lab Sample ID: 160-31368-1
Matrix: Solid

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**1.13**		0.251	0.276	1.00	0.178	pCi/g	10/22/18 10:15	10/22/18 10:41	1
Bismuth-212	0.0128	U	1.12	1.12	3.00	1.96	pCi/g	10/22/18 10:15	10/22/18 10:41	1
Bismuth-214	**1.49**		0.226	0.274	1.00	0.146	pCi/g	10/22/18 10:15	10/22/18 10:41	1
Lead-210	1.07	U	1.98	1.98	5.00	3.29	pCi/g	10/22/18 10:15	10/22/18 10:41	1
Lead-212	**1.07**		0.141	0.198	0.300	0.142	pCi/g	10/22/18 10:15	10/22/18 10:41	1
Lead-214	**1.39**		0.233	0.274	1.00	0.194	pCi/g	10/22/18 10:15	10/22/18 10:41	1
Protactinium-234	0.0169	U	0.413	0.413		0.694	pCi/g	10/22/18 10:15	10/22/18 10:41	1
Radium-224	**1.07**		0.141	0.198		0.142	pCi/g	10/22/18 10:15	10/22/18 10:41	1
Radium-226	**5.48**		1.87	2.10	5.00	1.88	pCi/g	10/22/18 10:15	10/22/18 10:41	1
Radium-228	**1.13**		0.251	0.276	1.00	0.178	pCi/g	10/22/18 10:15	10/22/18 10:41	1
Thallium-208	**0.411**		0.0884	0.0982	0.200	0.0632	pCi/g	10/22/18 10:15	10/22/18 10:41	1
Thorium-228	**1.07**		0.141	0.198		0.142	pCi/g	10/22/18 10:15	10/22/18 10:41	1
Thorium-232	**1.13**		0.251	0.276		0.178	pCi/g	10/22/18 10:15	10/22/18 10:41	1
Thorium-234	1.18	U	0.745	0.757	4.00	1.25	pCi/g	10/22/18 10:15	10/22/18 10:41	1
Uranium-238	1.18	U	0.745	0.757		1.25	pCi/g	10/22/18 10:15	10/22/18 10:41	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
K-40	*29.7*		*2.60*	*4.00*		*0.637*	*pCi/g*	*10/22/18 10:15*	*10/22/18 10:41*	*1*

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-396369/1-A
Matrix: Solid
Analysis Batch: 396346

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 396369

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	-0.006134	U	0.0126	0.0126	1.00	0.248	pCi/g	10/22/18 10:15	10/22/18 10:35	1
Bismuth-212	0.2256	U	0.407	0.408	3.00	0.702	pCi/g	10/22/18 10:15	10/22/18 10:35	1
Bismuth-214	-0.04025	U	0.0964	0.0965	1.00	0.353	pCi/g	10/22/18 10:15	10/22/18 10:35	1
Lead-210	-0.6178	U	0.130	0.149	5.00	2.23	pCi/g	10/22/18 10:15	10/22/18 10:35	1
Lead-212	-0.005938	U	0.0659	0.0659	0.300	0.150	pCi/g	10/22/18 10:15	10/22/18 10:35	1
Lead-214	0.004660	U	0.0685	0.0685	1.00	0.123	pCi/g	10/22/18 10:15	10/22/18 10:35	1
Protactinium-234	0.03784	U	0.105	0.105		0.181	pCi/g	10/22/18 10:15	10/22/18 10:35	1
Radium-224	-0.005938	U	0.0659	0.0659		0.150	pCi/g	10/22/18 10:15	10/22/18 10:35	1
Radium-226	-0.05957	U	0.643	0.643	5.00	1.15	pCi/g	10/22/18 10:15	10/22/18 10:35	1
Radium-228	-0.006134	U	0.0126	0.0126	1.00	0.248	pCi/g	10/22/18 10:15	10/22/18 10:35	1
Thallium-208	0.02552	U	0.0540	0.0541	0.200	0.0610	pCi/g	10/22/18 10:15	10/22/18 10:35	1
Thorium-228	-0.005938	U	0.0659	0.0659		0.150	pCi/g	10/22/18 10:15	10/22/18 10:35	1
Thorium-232	-0.006134	U	0.0126	0.0126		0.248	pCi/g	10/22/18 10:15	10/22/18 10:35	1
Thorium-234	-0.009658	U	0.0680	0.0681	4.00	1.37	pCi/g	10/22/18 10:15	10/22/18 10:35	1
Uranium-238	-0.009658	U	0.0680	0.0681		1.37	pCi/g	10/22/18 10:15	10/22/18 10:35	1

Other Detected Radionuclides	*MB Result*	*MB Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*10/22/18 10:15*	*10/22/18 10:35*	*1*

Lab Sample ID: LCS 160-396369/2-A
Matrix: Solid
Analysis Batch: 396349

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 396369

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.8	98.92		11.6		1.19	pCi/g	102	87 - 116		
Cesium-137			28.1	31.41		3.31		0.277	pCi/g	112	87 - 120		
Cobalt-60			12.6	13.67		1.44		0.211	pCi/g	109	87 - 115		

Lab Sample ID: 160-31368-1 DU
Matrix: Solid
Analysis Batch: 396346

Client Sample ID: RAD A-1
Prep Type: Total/NA
Prep Batch: 396369

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Actinium-228	1.13			0.8824		0.222	1.00	0.196	pCi/g			0.51	1
Bismuth-212	0.0128	U		0.0000	U	0.581	3.00	1.45	pCi/g			0.01	1
Bismuth-214	1.49			1.510		0.247	1.00	0.122	pCi/g			0.05	1
Lead-210	1.07	U		1.404	U	1.10	5.00	1.73	pCi/g			0.11	1
Lead-212	1.07			0.9258		0.164	0.300	0.111	pCi/g			0.41	1
Lead-214	1.39			1.580		0.221	1.00	0.114	pCi/g			0.38	1
Protactinium-234	0.0169	U		0.04031	U	0.0701		0.593	pCi/g			0.05	1
Radium-224	1.07			0.9258		0.164		0.111	pCi/g			0.41	1
Radium-226	5.48			5.995		1.62	5.00	1.18	pCi/g			0.14	1
Radium-228	1.13			0.8824		0.222	1.00	0.196	pCi/g			0.51	1
Thallium-208	0.411			0.3073		0.0734	0.200	0.0543	pCi/g			0.61	1

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 160-31368-1 DU
Matrix: Solid
Analysis Batch: 396346

Client Sample ID: RAD A-1
Prep Type: Total/NA
Prep Batch: 396369

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Thorium-228	1.07			0.9258		0.164		0.111	pCi/g			0.41	1
Thorium-232	1.13			0.8824		0.222		0.196	pCi/g			0.51	1
Thorium-234	1.18	U		1.133		0.575	4.00	0.910	pCi/g			0.04	1
Uranium-238	1.18	U		1.133		0.575		0.910	pCi/g			0.04	1
Other Detected Radionuclides	***Sample Result***	***Sample Qual***		***DU Result***	***DU Qual***	***Total Uncert. (2σ+/-)***	***RL***	***MDC***	***Unit***			***RER***	***RER Limit***
K-40	*29.7*			*25.02*		*3.23*		*0.738*	*pCi/g*			*0.65*	*1*

QC Association Summary

Client: Parsons Corporation
Project/Site: NYSDEC Former J&L Steel

TestAmerica Job ID: 160-31368-1

Rad

Leach Batch: 395883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-31368-1	RAD A-1	Total/NA	Solid	Dry and Grind	
160-31368-1 DU	RAD A-1	Total/NA	Solid	Dry and Grind	

Prep Batch: 396369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-31368-1	RAD A-1	Total/NA	Solid	Fill_Geo-0	395883
MB 160-396369/1-A	Method Blank	Total/NA	Solid	Fill_Geo-0	
LCS 160-396369/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-0	
160-31368-1 DU	RAD A-1	Total/NA	Solid	Fill_Geo-0	395883

J L Steel
Waste Characterization
Solid Waste - PCBs

NYSDEC-J&L Steel Site Solid Waste Characterization SDG: SC51687		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	JL-AX JL-AX SC51687-01 SPECTRUM SC51687 SOIL 11/1/2018 8:30	JL-BX JL-BX SC51687-02 SPECTRUM SC51687 SOIL 11/1/2018 8:30	JL-CX JL-CX SC51687-03 SPECTRUM SC51687 SOIL 11/1/2018 8:30	JL-DX JL-DX SC51687-04 SPECTRUM SC51687 SOIL 11/1/2018 8:30	Duplicate of JL-DX JL-D-X2 JL-D-X2 SC51687-07 SPECTRUM SC51687 SOIL 11/1/2018 8:30	JL-EX JL-EX SC51687-05 SPECTRUM SC51687 SOIL 11/1/2018 8:30	JL-FX JL-FX SC51687-06 SPECTRUM SC51687 SOIL 11/1/2018 8:30
CAS NO.	COMPOUND	UNITS:							
	PCBs								
12674-11-2	PCB-1016 (Aroclor 1016)	ug/kg	22 U	21.4 U	21.9 U	21.8 U	22.4 U	21.8 U	22.6 U
11104-28-2	PCB-1221 (Aroclor 1221)	ug/kg	22 U	21.4 U	21.9 U	21.8 U	22.4 U	21.8 U	22.6 U
11141-16-5	PCB-1232 (Aroclor 1232)	ug/kg	22 U	21.4 U	21.9 U	21.8 U	22.4 U	21.8 U	22.6 U
53469-21-9	PCB-1242 (Aroclor 1242)	ug/kg	22 U	21.4 U	21.9 U	21.8 U	22.4 U	21.8 U	22.6 U
12672-29-6	PCB-1248 (Aroclor 1248)	ug/kg	1390	21.4 U	21.9 U	21.8 U	53	39.3	24800 D
11097-69-1	PCB-1254 (Aroclor 1254)	ug/kg	22 U	327	37.7	170	71.1	33.6	22.6 U
11096-82-5	PCB-1260 (Aroclor 1260)	ug/kg	22 U	21.4 U	21.9 U	21.8 U	22.4 U	21.8 U	22.6 U
37324-23-5	PCB-1262 (Aroclor 1262)	ug/kg	22 U	21.4 U	21.9 U	21.8 U	22.4 U	21.8 U	166
11100-14-4	PCB-1268 (Aroclor 1268)	ug/kg	22 U	21.4 U	21.9 U	21.8 U	22.4 U	21.8 U	22.6 U
	Total PCBs	ug/kg	1390	327	37.7	170	124.1	72.9	24966 D
	OTHER								
PH	pH	ph units	5.45	12	8.92	8.4	7.04	7.93	5.08
SOLID	Solids, Percent	%	89.2	90.5	90	90.4	86.1	88.2	86.5
	WASTE CHARACTERISTICS								
FLIQUIDS	Free Liquids	none							
IGNITB	Ignitability	none	IgHT	IgHT	IgHT	IgHT	IgHT	IgHT	IgHT
CREAC	Reactive Cyanide	mg/kg	24.5 U	23.1 U	24.7 U	24.4 U	23.8 U	24.5 U	24.5 U
SREAC	Sulfide Reactive	mg/kg	49 U	46.3 U	49.4 U	48.7 U	47.6 U	49 U	49 U

NOTES:
U - Compound not detected. Detection limit posted
J - Estimated concentration.
D - Sample diluted.

J L Steel
Waste Characterization
Solid Waste

NYSDEC-J&L Steel Site Solid Waste Characterization SDG: SC51195			Location ID: Sample ID: Lab Sample Id Source: SDG: Matrix: Sampled: Validated:	JL-BC JL-BC SC51195-01 PHOENIX SC51195 SOIL 10/15/2018	JL-D JL-D SC51195-02 PHOENIX SC51195 SOIL 10/15/2018	JL-E JL-E SC51195-03 PHOENIX SC51195 SOIL 10/15/2018	JL-F JL-F SC51195-04 PHOENIX SC51195 SOIL 10/15/2018
CAS NO.	COMPOUND	TCLP Criteria	UNITS:				
	TCLP VOLATILES						
75-35-4	1,1-Dichloroethene	0.7	mg/l	0.005 U	0.005 U	0.005 U	0.005 U
107-06-2	1,2-Dichloroethane	0.5	mg/l	0.005 U	0.005 U	0.005 U	0.005 U
71-43-2	Benzene	0.5	mg/l	0.005 U	0.005 U	0.005 U	0.005 U
56-23-5	Carbon Tetrachloride	0.5	mg/l	0.005 U	0.005 U	0.005 U	0.005 U
108-90-7	Chlorobenzene	100	mg/l	0.005 U	0.005 U	0.005 U	0.005 U
67-66-3	Chloroform	6	mg/l	0.005 U	0.005 U	0.005 U	0.005 U
78-93-3	Methyl Ethyl Ketone (2-Butanone)	200	mg/l	0.01 U	0.01 U	0.01 U	0.01 U
127-18-4	Tetrachloroethylene (PCE)	0.7	mg/l	0.005 U	0.005 U	0.005 U	0.005 U
79-01-6	Trichloroethylene (TCE)	0.5	mg/l	0.005 U	0.005 U	0.005 U	0.005 U
75-01-4	Vinyl Chloride	0.2	mg/l	0.005 U	0.005 U	0.005 U	0.005 U
	TCLP SEMIVOLATILES						
106-46-7	1,4-Dichlorobenzene	7.5	mg/l	0.00495 U	0.00521 U	0.00476 U	0.00481 U
121-14-2	2,4-Dinitrotoluene	0.13	mg/l	0.00495 U	0.00521 U	0.00476 U	0.00481 U
95-48-7	2-Methylphenol (O-Cresol)	200	mg/l	0.00495 U	0.00521 U	0.00476 U	0.00481 U
MEPH3MEPH	3- And 4- Methylphenol (Total)	200	mg/l	0.0099 U	0.0104 U	0.00952 U	0.00962 U
118-74-1	Hexachlorobenzene	0.13	mg/l	0.00495 U	0.00521 U	0.00476 U	0.00481 U
67-72-1	Hexachloroethane	0.5	mg/l	0.00495 U	0.00521 U	0.00476 U	0.00481 U
87-68-3	Hexachlorobutadiene	3	mg/l	0.00495 U	0.00521 U	0.00476 U	0.00481 U
98-95-3	Nitrobenzene	2	mg/l	0.00495 U	0.00521 U	0.00476 U	0.00481 U
87-86-5	Pentachlorophenol	100	mg/l	0.0198 U	0.0208 U	0.019 U	0.0192 U
110-86-1	Pyridine	5	mg/l	0.00495 U	0.00521 U	0.00476 U	0.00481 U
95-95-4	2,4,5-Trichlorophenol	400	mg/l	0.00495 U	0.00521 U	0.00476 U	0.00481 U
88-06-2	2,4,6-Trichlorophenol	2	mg/l	0.00495 U	0.00521 U	0.00476 U	0.00481 U
	TCLP PESTICIDES						
15972-60-8	Alachlor		mg/l	0.0005 U	0.0005 U	0.0005 U	0.0005 U
309-00-2	Aldrin		mg/l	0.0005 U	0.0005 U	0.0005 U	0.0005 U
319-84-6	Alpha Bhc (Alpha Hexachlorocyclohexane)		mg/l	0.0005 U	0.0005 U	0.0005 U	0.0005 U
959-98-8	Alpha Endosulfan		mg/l	0.0005 U	0.0005 U	0.0005 U	0.0005 U
319-85-7	Beta Bhc (Beta Hexachlorocyclohexane)		mg/l	0.0005 U	0.0005 U	0.0005 U	0.0005 U
33213-65-9	Beta Endosulfan		mg/l	0.001 U	0.001 U	0.001 U	0.001 U
57-74-9	Chlordane	0.03	mg/l	0.005 U	0.005 U	0.005 U	0.005 U
319-86-8	Delta BHC (Delta Hexachlorocyclohexane)		mg/l	0.0005 U	0.0005 U	0.0005 U	0.0005 U
60-57-1	Dieldrin		mg/l	0.001 U	0.001 U	0.001 U	0.001 U
1031-07-8	Endosulfan Sulfate		mg/l	0.001 U	0.001 U	0.001 U	0.001 U
72-20-8	Endrin	0.02	mg/l	0.001 U	0.001 U	0.001 U	0.001 U
7421-93-4	Endrin Aldehyde		mg/l	0.001 U	0.001 U	0.001 U	0.001 U
58-89-9	Gamma Bhc (Lindane)	0.4	mg/l	0.0005 U	0.0005 U	0.0005 U	0.0005 U
76-44-8	Heptachlor	0.008	mg/l	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1024-57-3	Heptachlor Epoxide	0.008	mg/l	0.0005 U	0.0005 U	0.0005 U	0.0005 U
72-43-5	Methoxychlor	10	mg/l	0.0005 U	0.0005 U	0.0005 U	0.0005 U
72-54-8	P,P'-DDD		mg/l	0.001 U	0.001 U	0.001 U	0.001 U
72-55-9	P,P'-DDE		mg/l	0.001 U	0.001 U	0.001 U	0.001 U
50-29-3	P,P'-DDT		mg/l	0.001 U	0.001 U	0.001 U	0.001 U
8001-35-2	Toxaphene	0.5	mg/l	0.02 U	0.02 U	0.02 U	0.02 U
	TCLP HERBICIDES						
93-72-1	Silvex (2,4,5-TP)	1	mg/l	0.0083 U	0.0083 U	0.0083 U	0.0083 U
94-75-7	2,4-D (Dichlorophenoxyacetic Acid)	10	mg/l	0.017 U	0.017 U	0.017 U	0.017 U
	TCLP METALS						
7440-38-2	Arsenic	5	mg/l	0.008 U	0.003 J	0.008 U	0.0029 J
7440-39-3	Barium	100	mg/l	1.17	0.289	1.7	1.25
7440-43-9	Cadmium	1	mg/l	0.0008 J	0.005 U	0.005 U	0.0004 J
7440-47-3	Chromium, Total	5	mg/l	0.002 J	0.01 U	0.01 U	0.0015 J
7439-92-1	Lead	5	mg/l	0.0073 J	0.015 U	0.015 U	0.015 U
7439-97-6	Mercury	0.2	mg/l	0.0002 U	0.0002 U	0.0002 U	0.0002 U
7782-49-2	Selenium	1	mg/l	0.0107 J	0.0124 J	0.0096 J	0.0133 J
7440-22-4	Silver	5	mg/l	0.008 J	0.0054 J	0.0041 J	0.0023 J

NOTES:
U - Compound not detected. Detection limit posted.
J - Estimated concentration.

Submittal 05 – Pre-Excavation Information

Ticket: 10178-547-141-00 Type: Regular Previous Ticket:

State: NY County: ST LAWRENCE Place: CLIFTON /T
Addr: From: 4669 To: Name: NY RT 3
Cross: From: To: Name:
Offset:

Locate: ENTIRE PROPERTY
NearSt: BENSON MINE-NEWTON FALLS RD
Means of Excavation: EXCAVATOR Blasting: N
Site marked with white: N
Boring/Directional Drilling: N
Within 25ft of Edge of Road: U

Work Type: EXCAVATION
Duration: 2 WEEKS
Depth of excavation: 15 FEET
Site dimensions: Length 300 FEET Width 300 FEET
Start Date and Time: 10/22/2018 07:00
Must Start By: 11/05/2018

Contact Name: JIM AGAR
Company: TREC ENVIRONMENTAL
Addr1: 1018 WASHINGTON ST Addr2:
City: SPENCERPORT State: NY Zip: 14559
Phone: 585-594-5545 Fax:
Email: JAGAR@TRECENV.COM
Field Contact: JIM AGAR
Cell Phone: 585-507-5645
Working for: PARSONS

Comments: Former J&L Foundry. Crew will be onsite approximately 1pm on 10/22.
: site contact steve warner 585 698 6108
: Lookup Type: ADDRESS

Members:
NATIONAL GRID / CENTRAL / ELECTRIC 800-262-8600
TOWN OF CLIFTON 315-848-2782

Service Area Code	Service Area Name	Contact	Day Phone	Emergency Phone	Alt Phone	Utility Type	Response
NAT GRID / CENTRAL / ELECTRIC	NATIONAL GRID / CENTRAL / ELECTRIC	USIC VOICE CALLS		(800) 262 - 8600		ELECTRIC	10 CLEAR, NO FACILITIES WITHIN 15 FT OF THE EXCAVATOR DEFINED WORK AREA
TWN CLIFTON	TOWN OF CLIFTON	KELLY SMITH	(315) 848 - 2782			HIGHWAY, CULVERTS, SEWER, WATER	10 CLEAR, NO FACILITIES WITHIN 15 FT OF THE EXCAVATOR DEFINED WORK AREA

TREC Environmental Inc.

Technician: Jim Agar

Date: 10-24-18 & 10/25/19

Site Address: Former J & L Steel, Clifton, NY

Contact Person: Jeremy Neumann

Scope of Work: Scan area for underground utilities and clear future excavation areas of utilities.

Type of Service:

☐Fault Detection ☒Utility Location/GPR

☐Infrastructure Assessment ☐Utility Mapping

Type of Equipment Used:

☒Mala Easy Locator HDR ☒SPX RD 7000

Marking Used:

☒Paint ☐Flags ☐Chalk ☐Updated Existing Maps ☒Other

Instructions from Onsite Contact: Locate underground utilities in upcoming areas of excavation.

Notes: Area A consisted of rough terrain and some standing water. Only two passes were made in this area, however, with this limited scanning no utilities were seen.

Area B showed concrete in a large portion of the area at a depth of 2.5-3'. A large portion of the area was covered in demolition debris. No utilities were seen.

Area C was covered with demolition debris and a black foundry sand. No utilities were observed.

Area D was shown to have a utility running in a northeasterly direction at a depth of 2-2.5'.

Area E was inaccessible to scan due to rough terrain and tree stumps/roots.

Area F was scanned and no utilities were seen.

Information Relayed on site:

☒Verbal ☐GPR Photos ☐Digital Photos ☐Hand drawn Map

Reporting Options:

☒Letter Report

☐Comprehensive Report

TREC will guarantee the accuracy of utility markings only when subsurface utility location methods are used which meet the ASCE's *Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data CI/ASCE 38-02,* Quality Level A. This process exposes subsurface utility systems to confirm location, size and identity.

Submittal 06 – Confirmatory Samples

J & L Steel
Confirmatory Samples

10/26/2018 & 10/29/18		11/26/2018		12/6/2018	
Sample ID	ug/kg	Sample ID	ug/kg	Sample ID	ug/kg
JLA1-A	2194.5	JL-A1-A2	32600 D	JL-A1-A3	23.4
JLA1-B	73500 D	JL-A1-B2	27300 D	JL-A1-B3	22.5 U
JLA1-C	477810 D	JL-A1-C2	40300 D	JL-A1-C3	34
JLA1-D	33259 D	JL-A1-D2	56500 D	JL-A1-D3	329
JLA1-E	23400 U	JL-A1-E2	76400 D	JL-A1-E3	243
JLA1-F	1010000 D	JL-A1-F2	36900 D	JL-A1-F3	148
JLA1-G	5130 U	JL-A1-G2	7160 D	JL-A1-G3	490
JLA1-H	195987 D	JL-A1-H2	441	JL-A1-H3	548
		JL-A1-X2	971		
		JL-A1-X3	320		

NOTES:

Data presented are total PCBs.

U - Compound not detected. Detection limit posted.

D - Sample diluted.

Submittal 07 – Wipe Samples

J L Steel Historical
Wipes

			Part 375 Unrestricted SCOs	sys_sample_code sys_loc_code sample_date lab_sdg matrix_code	BLDG20-1_101408 BLDG20-1 10/14/2008 MG1844 Wipe	BLDG20-2_101408 BLDG20-2 10/14/2008 MG1844 Wipe	BLDG20-3_101408 BLDG20-3 10/14/2008 MG1844 Wipe	BLDG-32B_100708 BLDG 32B 10/7/2008 MG-1773 Wipe	BLDG-32C_100708 BLDG 32C 10/7/2008 MG-1773 Wipe
method	cas_rn	chemical_name		units					
SW7471	7439-97-6	MERCURY	0.18	mg/wipe	1.12	1.47	0.008		
SW8015	TPH	TOTAL PETROLEUM HYDROCARBONS	NS	mg/kg				5800	380
SW8260	630-20-6	1,1,1,2-TETRACHLOROETHANE	NS	ug/kg				6.3 U	14 U
SW8260	71-55-6	1,1,1-TRICHLOROETHANE	680	ug/kg				6.3 U	6.3 U
SW8260	79-34-5	1,1,2,2-TETRACHLOROETHANE	NS	ug/kg				6.3 U	6.3 U
SW8260	79-00-5	1,1,2-TRICHLOROETHANE	NS	ug/kg				6.3 U	14 U
SW8260	75-34-3	1,1-DICHLOROETHANE	270	ug/kg				6.3 U	14 U
SW8260	75-35-4	1,1-DICHLOROETHENE	330	ug/kg				6.3 U	14 U
SW8260	563-58-6	1,1-DICHLOROPROPENE	NS	ug/kg				6.3 U	14 U
SW8260	87-61-6	1,2,3-TRICHLOROBENZENE	NS	ug/kg				6.3 U	14 U
SW8260	96-18-4	1,2,3-TRICHLOROPROPANE	NS	ug/kg				6.3 U	14 U
SW8260	120-82-1	1,2,4-TRICHLOROBENZENE	NS	ug/kg				6.3 U	14 U
SW8260	95-63-6	1,2,4-TRIMETHYLBENZENE	3600	ug/kg				4.3 J	14 U
SW8260	96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	NS	ug/kg				6.3 U	14 U
SW8260	106-93-4	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	NS	ug/kg				6.3 U	14 U
SW8260	95-50-1	1,2-DICHLOROBENZENE	1100	ug/kg				6.3 U	14 U
SW8260	107-06-2	1,2-DICHLOROETHANE	20	ug/kg				6.3 U	14 U
SW8260	78-87-5	1,2-DICHLOROPROPANE	NS	ug/kg				6.3 U	14 U
SW8260	108-67-8	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	8400	ug/kg				5.2 J	14 U
SW8260	541-73-1	1,3-DICHLOROBENZENE	2400	ug/kg				6.3 U	14 U
SW8260	142-28-9	1,3-DICHLOROPROPANE	NS	ug/kg				6.3 U	14 U
SW8260	106-46-7	1,4-DICHLOROBENZENE	1800	ug/kg				6.3 U	14 U
SW8260	594-20-7	2,2-DICHLOROPROPANE	NS	ug/kg				6.3 U	14 U
SW8260	95-49-8	2-CHLOROTOLUENE	NS	ug/kg				6.3 U	14 U
SW8260	591-78-6	2-HEXANONE	NS	ug/kg				6.3 U	14 U
SW8260	106-43-4	4-CHLOROTOLUENE	NS	ug/kg				6.3 U	14 U
SW8260	67-64-1	ACETONE	50	ug/kg				160 J	420 J
SW8260	71-43-2	BENZENE	60	ug/kg				6.3 U	14 U
SW8260	108-86-1	BROMOBENZENE	NS	ug/kg				6.3 U	14 U
SW8260	74-97-5	BROMOCHLOROMETHANE	NS	ug/kg				6.3 U	14 U
SW8260	75-27-4	BROMODICHLOROMETHANE	NS	ug/kg				6.3 U	14 U
SW8260	75-25-2	BROMOFORM	NS	ug/kg				6.3 U	14 U
SW8260	74-83-9	BROMOMETHANE	NS	ug/kg				6.3 U	14 U
SW8260	75-15-0	CARBON DISULFIDE	NS	ug/kg				2 J	14 U
SW8260	56-23-5	CARBON TETRACHLORIDE	760	ug/kg				6.3 U	14 U
SW8260	108-90-7	CHLOROBENZENE	1100	ug/kg				6.3 U	14 U
SW8260	75-00-3	CHLOROETHANE	NS	ug/kg				6.3 U	14 U
SW8260	67-66-3	CHLOROFORM	370	ug/kg				6.3 U	14 U
SW8260	74-87-3	CHLOROMETHANE	NS	ug/kg				6.3 U	14 U
SW8260	156-59-2	CIS-1,2-DICHLOROETHYLENE	250	ug/kg				6.3 U	14 U
SW8260	10061-01-5	CIS-1,3-DICHLOROPROPENE	NS	ug/kg				6.3 U	14 U
SW8260	99-87-6	CYMENE	NS	ug/kg				7.7	14 U
SW8260	124-48-1	DIBROMOCHLOROMETHANE	NS	ug/kg				6.3 U	14 U
SW8260	74-95-3	DIBROMOMETHANE	NS	ug/kg				6.3 U	14 U
SW8260	75-71-8	DICHLORODIFLUOROMETHANE	NS	ug/kg				6.3 U	14 U
SW8260	1330-20-7	DIMETHYL BENZENE	260	ug/kg				1.8 J	3.9 J
SW8260	100-41-4	ETHYLBENZENE	1000	ug/kg				6.3 U	14 U
SW8260	87-68-3	HEXACHLOROBUTADIENE	NS	ug/kg				6.3 U	14 U
SW8260	74-88-4	IODOMETHANE (METHYL IODIDE)	NS	ug/kg				6.3 U	14 U
SW8260	98-82-8	ISOPROPYLBENZENE (CUMENE)	NS	ug/kg				6.3 U	14 U
SW8260	78-93-3	METHYL ETHYL KETONE (2-BUTANONE)	120	ug/kg				37 J	110 J
SW8260	108-10-1	METHYL ISOBUTYL KETONE	NS	ug/kg				6.3 U	14 U
SW8260	75-09-2	METHYLENE CHLORIDE	50	ug/kg				6.3 U	14 U
SW8260	91-20-3	NAPHTHALENE	12000	ug/kg				6.3 U	14 U

			Part 375 Unrestricted SCOs	sys_sample_code sys_loc_code sample_date lab_sdg matrix_code	BLDG20-1_101408 BLDG20-1 10/14/2008 MG1844 Wipe	BLDG20-2_101408 BLDG20-2 10/14/2008 MG1844 Wipe	BLDG20-3_101408 BLDG20-3 10/14/2008 MG1844 Wipe	BLDG-32B_100708 BLDG 32B 10/7/2008 MG-1773 Wipe	BLDG-32C_100708 BLDG 32C 10/7/2008 MG-1773 Wipe
method	cas_rn	chemical_name		units					
SW8260	104-51-8	N-BUTYLBENZENE	12000	ug/kg				18	14 U
SW8260	103-65-1	N-PROPYLBENZENE	3900	ug/kg				6.3 U	14 U
SW8260	95-47-6	O-XYLENE (1,2-DIMETHYLBENZENE)	260	ug/kg				6.3 U	14 U
SW8260	135-98-8	SEC-BUTYLBENZENE	11000	ug/kg				5.1 J	14 U
SW8260	100-42-5	STYRENE	NS	ug/kg				6.3 U	14 U
SW8260	98-06-6	T-BUTYLBENZENE	5900	ug/kg				6.3 U	14 U
SW8260	1634-04-4	TERT-BUTYL METHYL ETHER	930	ug/kg				6.3 U	14 U
SW8260	127-18-4	TETRACHLOROETHYLENE(PCE)	1300	ug/kg				6.3 U	14 U
SW8260	108-88-3	TOLUENE	700	ug/kg				1.3 J	14 U
SW8260	156-60-5	TRANS-1,2-DICHLOROETHENE	190	ug/kg				6.3 U	14 U
SW8260	10061-02-6	TRANS-1,3-DICHLOROPROPENE	NS	ug/kg				6.3 U	14 U
SW8260	79-01-6	TRICHLOROETHYLENE (TCE)	470	ug/kg				6.3 U	14 U
SW8260	75-69-4	TRICHLOROFLUOROMETHANE	NS	ug/kg				6.3 U	14 U
SW8260	108-05-4	VINYL ACETATE	NS	ug/kg				6.3 U	14 U
SW8260	75-01-4	VINYL CHLORIDE	20	ug/kg				6.3 U	14 U
SW8260	XYLENES	XYLENES, TOTAL	260	ug/kg				1.8 J	3.9 J

J L Steel Historical
Wipes

			Part 375 Unrestricted SCOs	sys_sample_code sys_loc_code sample_date lab_sdg matrix_code	BLDG-32D_100708 BLDG 32D 10/7/2008 MG-1773 Wipe	BLDG-32F_100708 BLDG 32F 10/7/2008 MG-1773 Wipe	BLDG-32G_100708 BLDG 32G 10/7/2008 MG-1773 Wipe	DUP-1_100708 BLDG 32G 10/7/2008 MG-1773 Wipe
method	cas_rn	chemical_name		units				
SW7471	7439-97-6	MERCURY	0.18	mg/wipe				
SW8015	TPH	TOTAL PETROLEUM HYDROCARBONS	NS	mg/kg	23000	9600	26000	22000
SW8260	630-20-6	1,1,1,2-TETRACHLOROETHANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	71-55-6	1,1,1-TRICHLOROETHANE	680	ug/kg	150 J	650 U	320 U	360 U
SW8260	79-34-5	1,1,2,2-TETRACHLOROETHANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	79-00-5	1,1,2-TRICHLOROETHANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	75-34-3	1,1-DICHLOROETHANE	270	ug/kg	630 U	650 U	320 U	360 U
SW8260	75-35-4	1,1-DICHLOROETHENE	330	ug/kg	630 U	650 U	320 U	360 U
SW8260	563-58-6	1,1-DICHLOROPROPENE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	87-61-6	1,2,3-TRICHLOROBENZENE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	96-18-4	1,2,3-TRICHLOROPROPANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	120-82-1	1,2,4-TRICHLOROBENZENE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	95-63-6	1,2,4-TRIMETHYLBENZENE	3600	ug/kg	12000	14000	2900	4500
SW8260	96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	106-93-4	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	95-50-1	1,2-DICHLOROBENZENE	1100	ug/kg	630 U	650 U	320 U	360 U
SW8260	107-06-2	1,2-DICHLOROETHANE	20	ug/kg	630 U	650 U	320 U	360 U
SW8260	78-87-5	1,2-DICHLOROPROPANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	108-67-8	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	8400	ug/kg	4800	4700	640	1100
SW8260	541-73-1	1,3-DICHLOROBENZENE	2400	ug/kg	630 U	650 U	320 U	360 U
SW8260	142-28-9	1,3-DICHLOROPROPANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	106-46-7	1,4-DICHLOROBENZENE	1800	ug/kg	630 U	650 U	320 U	360 U
SW8260	594-20-7	2,2-DICHLOROPROPANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	95-49-8	2-CHLOROTOLUENE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	591-78-6	2-HEXANONE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	106-43-4	4-CHLOROTOLUENE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	67-64-1	ACETONE	50	ug/kg	630 UJ	650 UJ	320 UJ	360 UJ
SW8260	71-43-2	BENZENE	60	ug/kg	630 U	650 U	320 U	360 U
SW8260	108-86-1	BROMOBENZENE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	74-97-5	BROMOCHLOROMETHANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	75-27-4	BROMODICHLOROMETHANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	75-25-2	BROMOFORM	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	74-83-9	BROMOMETHANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	75-15-0	CARBON DISULFIDE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	56-23-5	CARBON TETRACHLORIDE	760	ug/kg	630 U	650 U	320 U	360 U
SW8260	108-90-7	CHLOROBENZENE	1100	ug/kg	630 U	650 U	320 U	360 U
SW8260	75-00-3	CHLOROETHANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	67-66-3	CHLOROFORM	370	ug/kg	630 U	650 U	320 U	360 U
SW8260	74-87-3	CHLOROMETHANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	156-59-2	CIS-1,2-DICHLOROETHYLENE	250	ug/kg	630 U	650 U	320 U	360 U
SW8260	10061-01-5	CIS-1,3-DICHLOROPROPENE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	99-87-6	CYMENE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	124-48-1	DIBROMOCHLOROMETHANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	74-95-3	DIBROMOMETHANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	75-71-8	DICHLORODIFLUOROMETHANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	1330-20-7	DIMETHYL BENZENE	260	ug/kg	740	2300	200 J	210 J
SW8260	100-41-4	ETHYLBENZENE	1000	ug/kg	760	1200	240 J	320 J
SW8260	87-68-3	HEXACHLOROBUTADIENE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	74-88-4	IODOMETHANE (METHYL IODIDE)	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	98-82-8	ISOPROPYLBENZENE (CUMENE)	NS	ug/kg	2500	1100	390	520
SW8260	78-93-3	METHYL ETHYL KETONE (2-BUTANONE)	120	ug/kg	630 UJ	650 UJ	320 UJ	360 UJ
SW8260	108-10-1	METHYL ISOBUTYL KETONE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	75-09-2	METHYLENE CHLORIDE	50	ug/kg	630 U	650 U	320 U	360 U
SW8260	91-20-3	NAPHTHALENE	12000	ug/kg	21000	20000	2000	2100

J L Steel Historical
Wipes

			Part 375 Unrestricted SCOs	sys_sample_code sys_loc_code sample_date lab_sdg matrix_code	BLDG-32D_100708 BLDG 32D 10/7/2008 MG-1773 Wipe	BLDG-32F_100708 BLDG 32F 10/7/2008 MG-1773 Wipe	BLDG-32G_100708 BLDG 32G 10/7/2008 MG-1773 Wipe	DUP-1_100708 BLDG 32G 10/7/2008 MG-1773 Wipe
method	cas_rn	chemical_name		units				
SW8260	104-51-8	N-BUTYLBENZENE	12000	ug/kg	8300	4400	520	690
SW8260	103-65-1	N-PROPYLBENZENE	3900	ug/kg	4100	2000	550	810
SW8260	95-47-6	O-XYLENE (1,2-DIMETHYLBENZENE)	260	ug/kg	170 J	970	320 U	360 U
SW8260	135-98-8	SEC-BUTYLBENZENE	11000	ug/kg	4500	1500	500	700
SW8260	100-42-5	STYRENE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	98-06-6	T-BUTYLBENZENE	5900	ug/kg	630 U	650 U	320 U	360 U
SW8260	1634-04-4	TERT-BUTYL METHYL ETHER	930	ug/kg	630 U	650 U	320 U	360 U
SW8260	127-18-4	TETRACHLOROETHYLENE(PCE)	1300	ug/kg	630 U	650 U	320 U	360 U
SW8260	108-88-3	TOLUENE	700	ug/kg	630 U	650 U	320 U	360 U
SW8260	156-60-5	TRANS-1,2-DICHLOROETHENE	190	ug/kg	630 U	650 U	320 U	360 U
SW8260	10061-02-6	TRANS-1,3-DICHLOROPROPENE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	79-01-6	TRICHLOROETHYLENE (TCE)	470	ug/kg	630 U	650 U	320 U	360 U
SW8260	75-69-4	TRICHLOROFLUOROMETHANE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	108-05-4	VINYL ACETATE	NS	ug/kg	630 U	650 U	320 U	360 U
SW8260	75-01-4	VINYL CHLORIDE	20	ug/kg	630 U	650 U	320 U	360 U
SW8260	XYLENES	XYLENES, TOTAL	260	ug/kg	910	3300	200 J	210 J

Submittal 08 – Tabulated Waste Summaries

Non-Hazardous Waste Tabulated

Date	Transmittal Number	Landfill	Hauler	Net Ton
11/14/2018	420870	Rodman Landfill	Riccelli	39.04
11/14/2018	420871	Rodman Landfill	Riccelli	30.14
11/14/2018	420876	Rodman Landfill	Riccelli	41.01
11/14/2018	420885	Rodman Landfill	Riccelli	40.42
11/14/2018	420888	Rodman Landfill	Riccelli	38.4
11/14/2018	420922	Rodman Landfill	Riccelli	35.57
11/14/2018	420923	Rodman Landfill	Riccelli	31.64
11/14/2018	420928	Rodman Landfill	Riccelli	25.84
11/15/2018	420936	Rodman Landfill	Riccelli	38.35
11/15/2018	420950	Rodman Landfill	Riccelli	44.41
11/15/2018	420951	Rodman Landfill	Riccelli	36.95
11/15/2018	420956	Rodman Landfill	Riccelli	36.99
11/15/2018	420963	Rodman Landfill	Riccelli	39.41
11/15/2018	420964	Rodman Landfill	Riccelli	37.89
11/15/2018	420968	Rodman Landfill	Riccelli	34.46
11/15/2018	420994	Rodman Landfill	Riccelli	34.71
11/15/2018	421000	Rodman Landfill	Riccelli	44.81
11/15/2018	421009	Rodman Landfill	Riccelli	38.71
11/15/2018	421013	Rodman Landfill	Riccelli	34.52
11/15/2018	421016	Rodman Landfill	Riccelli	34.79
11/15/2018	421021	Rodman Landfill	Riccelli	36.67
11/15/2018	421026	Rodman Landfill	Riccelli	34.88
11/19/2018	421134	Rodman Landfill	Riccelli	26.08
11/19/2018	421140	Rodman Landfill	Riccelli	34.15
11/19/2018	421144	Rodman Landfill	Riccelli	25.9
11/19/2018	421147	Rodman Landfill	Riccelli	30.81
11/20/2018	421260	Rodman Landfill	Riccelli	28.52
11/20/2018	421265	Rodman Landfill	Riccelli	26.69
11/20/2018	421310	Rodman Landfill	Riccelli	26.79
11/20/2018	421318	Rodman Landfill	Riccelli	24.31
11/28/2018	421642	Rodman Landfill	Riccelli	26.37
11/28/2018	421644	Rodman Landfill	Riccelli	27.73
12/14/2018	422592	Rodman Landfill	Riccelli	34.77
8/13/2019	434638	Rodman Landfill	Riccelli	36.68
8/13/2019	434648	Rodman Landfill	Riccelli	36.2
8/13/2019	434680	Rodman Landfill	Riccelli	34.89
			Total:	**1229.5**

Hazardous Waste Tabulated Load Summary

Date	Landfill	Hauler	Manifest #	Scaled Tons
12/3/2018	Wayne Disposal	Page Etc. Inc.	12728689	19958
12/3/2018	Wayne Disposal	Page Etc. Inc.	12728690	19958
12/3/2018	Wayne Disposal	Page Etc. Inc.	12728691	19958
12/3/2018	Wayne Disposal	Page Etc. Inc.	12728692	19958
12/3/2018	Wayne Disposal	Page Etc. Inc.	12728693	19958
12/4/2018	Wayne Disposal	US Bulk Transport Inc.	12728694	20450
12/4/2018	Wayne Disposal	US Bulk Transport Inc.	12728695	20000
			Total:	**140240**

Tabulated Contaminated Water

Date	Designated Facility	Carrier	Shipper #	Truck Number	Quantity (Gallons)
11/29/2018	Indutrial Oil Tank Services	Sun Environemntal Corp.	10-496	307/203	5500
11/30/2018	Indutrial Oil Tank Services	Sun Environemntal Corp.	10-497	307/203	5500
12/5/2018	Indutrial Oil Tank Services	Sun Environemntal Corp.		307/203	5500
12/5/2018	Indutrial Oil Tank Services	Page E.T.C.	JLS181205	4891	5000
12/5/2018	Indutrial Oil Tank Services	Page E.T.C.	JLS181205	4891	5000
12/6/2018	Indutrial Oil Tank Services	Page E.T.C.	JLS181205	4891	5000
12/7/2018	Indutrial Oil Tank Services	Page E.T.C.	JLS181205	4891	5000
12/11/2018	Indutrial Oil Tank Services	Page E.T.C.	JLS181211		5000
12/11/2018	Indutrial Oil Tank Services	Environmental Prod & Svcs of Vermont			4500
12/14/2018	Indutrial Oil Tank Services	Environmental Prod & Svcs of Vermont			1356
				Total:	**47356**

Submittal 09 – Waste Manifests

012728691FLE

8/18/60

B 7083

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NYR 000 197 608	1	[redacted]	012728691 FLE

GENERATOR

5. Generator's Name and Mailing Address
~~ATTN: MARK GALLO, MS 205 RAB~~ ~~USEPA REGION II~~ J&L Steel NYSDEC
~~2890 WOODBRIDGE AVENUE~~ 48 Court street
~~EDISON, NJ 08837~~ Canton, NY 13617
Generator's Phone: ~~(732) 906-6874~~

Generator's Site Address (if different than mailing address)
J&L Steel/NYSDEC
4869 STATE HIGHWAY 3
~~(INTERSECTION RT3 & RT 60)~~
~~CLIFTON, NY 13690~~ STAR LAKE, NY 13690

6. Transporter 1 Company Name
~~US Bulk Transport, Inc~~ PAGE ETC - INC.
U.S. EPA ID Number
~~NYD 987 347 645~~ NYD986969547

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
WAYNE DISPOSAL, INC. SITE #2 LANDFIL
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number
MID 048 090 633

9a HM	9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN3432, Polychlorinated biphenyls, solid, 9, PGII, ERG #171	01	DT	Est 19958	K	B007 PCB1 NORM
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
01 X180025WDI / PCB Soil / ERG #171

Storage start date 12-3-18 TAL 6138

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: JEREMY NEUMANN
Signature:
Month 12 Day 3 Year 18

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Ronald Hearshaw
Signature:
Month 12 Day 3 Year 18
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK to correct section 5 per Keith Hambley@TREC-INC 2/4/19
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Chris Grissom
Signature:
Month Day Year

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

012728689FLE

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NYR 000 197 608
2. Page 1 of: 1
3. Emergency Response Phone: (877) 437-0007 ~~CHEMTREC~~
4. Manifest Tracking Number: 012728689 FLE

5. Generator's Name and Mailing Address: ~~USEPA REGION II~~ J+L Steel NYSDEC
~~ATTN MARK GALLO MS 205 RAB~~
~~2890 WOODBRIDGE AVENUE~~ 48 court street
~~EDISON, NJ 08837~~ Canton, NY 13617
Generator's Phone: ~~(732) 906-6871~~

Generator's Site Address (if different than mailing address): ~~4669 STATE HIGHWAY 3~~ J+L Steel NYSDEC
~~(INTERSECTION RT3 & RT 60)~~ 4669 State Hwy 3
~~CLIFTON, NY 13690~~ STAR LAKE, NY 13690

6. Transporter 1 Company Name: ~~ETC~~
~~US Bulk Transport Inc~~

U.S. EPA ID Number: ~~NYD986904947~~

7. Transporter 2 Company Name:

U.S. EPA ID Number:

8. Designated Facility Name and Site Address: WAYNE DISPOSAL INC SITE #2 LANDFIL
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

U.S. EPA ID Number: MID 048 090 633

9a HM	9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10 Containers No.	10 Containers Type	11 Total Quantity	12. Unit Wt./Vol.	13 Waste Codes
X	1. RQ, UN3432, Polychlorinated biphenyls, solid, 9, PGII, ERG #171	1	DT	20000 ~~#~~ 19000	LB	8001 PCB1 NORM
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
01 K180025WDI / PCB Soil / ERG #171
~~SD~~ 12-3-18

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: JEREMY NEUMANN
Signature:
Month 12 Day 3 Year 18

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Brian Lapbury
Signature:
Month 12 Day 3 Year 18

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

OK to correct section 5 per Keith Hambley @ TREC Inv. - TC 2/4/19
Manifest Reference Number:

18b Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a

Printed/Typed Name: Chris Grisson
Signature:
Month 12 Day 4 Year 18

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

012728693FLE

Please print or type.

Form Approved OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NYR 000 197 608
2. Page 1 of: 1
3. Emergency Response Phone: (877) 437-0007 ~~GUARDIAN ENV SVCS~~
4. Manifest Tracking Number: 012728693 FLE

5. Generator's Name and Mailing Address: ~~ATTN MARK GALLO MS 206 RAB~~ ~~USEPA REGION II~~ ~~2890 WOODBRIDGE AVENUE~~ ~~EDISON, NJ 08837~~ J&L Steel NYSDEC 48 Court Street Canton, NY 13617
Generator's Phone: (732) 906-6871

Generator's Site Address (if different than mailing address): ~~4669 STATE HIGHWAY 3~~ ~~(INTERSECTION RT3 & RT 60)~~ ~~CLIFTON, NY 13690~~ J&L Steel NYSDEC 4669 State Hwy 3 Star Lake, NY 13690

6. Transporter 1 Company Name: ~~US Bulk Transport, Inc~~ PAGE ETC (NC.
U.S. EPA ID Number: NYD ~~986969947~~ ~~PAD 987 347 515~~

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: WAYNE DISPOSAL, INC SITE #2 LANDFII
49350 N I-94 SERVICE DRIVE
BELLEVILLE MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 048 090 633

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN3432, Polychlorinated biphenyls, solid, 9, PGII, ERG #171	01	DT	19958	K	B007 PCB1 NORN
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
01. K180C25WDI / PCB Soil / ERG #171

Storage Start Date 12-3-18

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: JEREMY NEUMANN
Signature: [signature]
Month 12 Day 3 Year 18

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: [illegible]
Signature: [signature]
Month 12 Day 3 Year 18

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK to correct section 5 per Keith Hambley@TREC inv. TC 2/4/19
Gross weight 23,555 K G Tare 10,440 K G Net 13,115 K G 1,665 12/7/18
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible]
Signature: [signature]
Month 12 Day 7 Year 18

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

012728694FLE

1109 79300

Please print or type.

Form Approved OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NYR 000 197 608	1	(877) 437-0007	012728694 FLE

5. Generator's Name and Mailing Address: ~~USEPA REGION II~~ J&L Steel NYSDEC
~~ATTN: MARK GALLO, MS 205 RAB~~
~~2890 WOODBRIDGE AVENUE~~ 48 Court Street
~~EDISON, NJ 08837~~ Canton, NY 13617
Generator's Phone: ~~(732) 906-6874~~

Generator's Site Address (if different than mailing address): J&L Steel NYSDEC
4669 STATE HIGHWAY 3
~~(INTERSECTION RT3 & RT 60)~~
~~CLIFTON, NY 13690~~ STAR LAKE, NY 13690

6. Transporter 1 Company Name: US Bulk Transport, Inc — U.S. EPA ID Number: PAD 987 347 515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: WAYNE DISPOSAL, INC. SITE #2 LANDFIL
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 048 090 633

9a HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN3432, Polychlorinated biphenyls, solid, 9, PGII, ERG #171	01	DT	20450	K	B007	PCB1	NOPN
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
G1. K180025WDI / PCB Soil / ERG #171
SSD 12/4/18

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: JEREMY NEUMANN — Signature: Jeremy S. Neuman — Month 12 Day 4 Year 18

INTL

16. International Shipments ☐ Import to U.S ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: EVERETT MOSHER JR — Signature: [signature] — Month 12 Day 4 Year 18

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy: OK to correct section 5 per Keith Hambley @ TREC INV - to 2/4/19

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
ok to add SSD per Keith Hambley @ TREC INV 12.5.18
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1	2	3	4
H132			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible] — Signature: [signature] — Month 12 Day 5 Year 18

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete

DESIGNATED FACILITY TO GENERATOR

012728695FLE

157

83040

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NYR 000 197 608

2. Page 1 of 1

3. Emergency Response Phone: (877) 437-0007 ~~GUARDIAN ENV SVCS~~

4. Manifest Tracking Number: 012728695 FLE

5. Generator's Name and Mailing Address: ~~USEPA REGION II~~ J&L STEEL NYSDEC
~~ATTN: MARK GALLO MS 205 RAB~~
~~2890 WOODBRIDGE AVENUE~~ 48 Court Street
~~EDISON, NJ 08837~~ Canton, NY 13617
Generator's Phone: ~~(732) 906-6871~~

Generator's Site Address (if different than mailing address): J&L Steel NYSDEC
4669 STATE HIGHWAY 3
~~(INTERSECTION RT3 & RT 60)~~
~~CLIFTON NY 13690~~ Star Lake, NY 13690

6. Transporter 1 Company Name: US Bulk Transport, Inc — U.S. EPA ID Number: PAD 987 347 815

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: WAYNE DISPOSAL INC. SITE #2 LANDFILL
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489 — U.S. EPA ID Number: MID 048 090 633

9a HM	9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group (if any))	10 Containers No.	10 Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN3432, Polychlorinated biphenyls, solid, 9, PGII, ERG #171	01	DT	20,000	K	2007 PCB [illegible]
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
01 K18002SWD01 / PCB Soil / ERG #171

DATE 12/4/18 TRAILER 157A

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's Offeror's Printed/Typed Name: JEREMY NEUMANN — Signature: [signature] — Month 12 Day 4 Year 18

INTL

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.
Transporter signature (for exports only):

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jay L. Fauzey — Signature: [signature] — Month 12 Day 4 Year 18

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

OK to correct section 5 per Keith Hambley @ TREC ENV. - TC 2/4/19

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Chris Grissom — Signature: [signature] — Month 12 Day 5 Year 18

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

012728690FLE

4720

Form Approved. OMB No. 2050-0039

Please print or type.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NYR 000 197 608
2. Page 1 of: 1
3. Emergency Response Phone: (877) 437-0007 GUARDIAN ENV SVCS
4. Manifest Tracking Number: 012728690 FLE

GENERATOR

5. Generator's Name and Mailing Address: ~~USEPA REGION 2~~ J&L Steel NYSDEC ~~SITE NO 645024~~
ATTN MARK GALLO MS 205 RAB
~~2890 WOODBRIDGE AVENUE~~ 48 Court street
~~EDISON, NJ 08837~~ Canton, NY 13617
Generator's Phone: ~~(732) 906-6871~~

Generator's Site Address (if different than mailing address): ~~4669 STATE HIGHWAY 3 (INTERSECTION RT3 & RT 60) CLIFTON, NY 13690~~ J&L Steel NYSDEC 4669 State Hwy 3 Star Lake, NY 13690

6. Transporter 1 Company Name: ~~US BULK Transport Inc~~ PAGE ETC
U.S. EPA ID Number: ~~NJD986659547~~ ~~PAD 987 347 515~~

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: WAYNE DISPOSAL, INC SITE #2 LANDFII
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5469
U.S. EPA ID Number: MID 048 090 633

9a HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN3432, Polychlorinated biphenyls, solid, 9, PGII ERG #171	1	DT	19958	K	B007 PCB1 NONE
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
01 K180025WDI / PCB Soil / ERG #171
12/3/18

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: JEREMY NEUMANN
Signature:
Month 12 Day 3 Year 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Carmel Olcmer
Signature:
Month 12 Day 3 Year 18
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK to correct section 5 per Keith Hambley@tricon. -TC 2/4/19
Manifest Reference Number:
U.S. EPA ID Number:

18b. Alternate Facility (or Generator)
Facility's Phone:
Month Day Year
18c. Signature of Alternate Facility (or Generator)

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Keith Crean
Signature:
Month 12 Day 4 Year 18

DESIGNATED FACILITY TO EPA's e-MANIFEST

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

012728692FLE

Form Approved. OMB No. 2050-0039

Please print or type.

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number NYR 000 197 608	2. Page 1 of 1	3. Emergency Response Phone (877) 437-0007	4. Manifest Tracking Number 012728692 FLE

GENERATOR

5. Generator's Name and Mailing Address
~~USEPA REGION 2~~ J&L Steel NYSDEC
~~ATTN: MARK GALLO MS 205 RAB~~
~~2890 WOODBRIDGE AVENUE~~ 48 Court street
~~EDISON, NJ 08837~~ Canton, NY 13617
Generator's Phone: ~~(732) 906-6871~~

Generator's Site Address (if different than mailing address): J&L Steel NYSDEC
~~4669 STATE HIGHWAY 3~~
~~(INTERSECTION RT3 & RT 60)~~
~~CLIFTON, NY 13690~~ STAR LAKE, NY 13690
U.S. EPA ID Number: NYD 986969947 ~~NJD 987 347 515~~

6. Transporter 1 Company Name: ~~US Bulk Transport, Inc~~ RAGE ETC INC
U.S. EPA ID Number:

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: WAYNE DISPOSAL, INC. SITE #2 LANDFIL
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 048 090 633

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN3432, Polychlorinated biphenyls, solid, 9, PGII, ERG #171	01	DT	19958	K	B007	PCB1	NORA
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
01. K180025WD1 / PCB Soil / ERG #171 AD
TPK 1672 TLP 8162
STORAGE START DATE 12-3-18

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true

Generator's/Offeror's Printed/Typed Name: JEREMY NEUMANN
Signature:
Month 12 Day 3 Year 18

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

TRANSPORTER

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Deloshe Jr
Signature:
Month 12 Day 07 Year 18

Transporter 2 Printed/Typed Name
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
ok to correct section 5 per Keith Hambley @ TREC - TC 2/4/19
Manifest Reference Number: U.S. EPA ID Number

18b. Alternate Facility (or Generator)
Facility's Phone: Month Day Year

18c. Signature of Alternate Facility (or Generator)

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY TO GENERAT

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

090846

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	13 Aug	10:30	
TRUCK # 355	TRAILER # 405		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	Tree Environment

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1 L	Contaminated Soil	WEIGHT IN
		WEIGHT OUT
		BILLED WEIGHT

SHIPPER SIGNATURE _____ PRINT NAME Mgr on clock as agent for NW Dirt State.

DRIVER SIGNATURE _____ PRINT NAME _____

SPECIAL INSTRUCTIONS:
SW 15-49 Rt 3 Star Lake Person Mine Rd
DESTINATION:
Rodman Landfill Release No

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____ (NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

090845

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	13 Aug 19		
TRUCK # 355	TRAILER # 405		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	Tree Equipment Stanley NY

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1 ½	contained Soil	WEIGHT IN
		WEIGHT OUT
		BILLED WEIGHT

SHIPPER SIGNATURE W B C PRINT NAME Megan Clark as agent for New York State Department of Environmental Conservation

DRIVER SIGNATURE [signature] PRINT NAME [illegible]

SPECIAL INSTRUCTIONS: SW 18-49

RT 3 Stanley NY

DESTINATION: Ontario Landfill

FOR APPROVAL: [signature]

CONSIGNEE PRINT NAME [illegible]

CONSIGNEE SIGN HERE (NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

090842

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	8-13-19	08:30	
TRUCK # 342	TRAILER # 410		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	Trec environment (315) 406-1447

NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1 T / L	contaminated soil	WEIGHT IN	
		WEIGHT OUT	
		BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME Megan Clark as agent for NYS DEC Department of Environmental Conservation

DRIVER SIGNATURE _____ PRINT NAME Josh Winter

SPECIAL INSTRUCTIONS:
SW 18-44

DESTINATION:
Rodman

FOR APPROVAL: _____
CONSIGNEE PRINT NAME _____
CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION
FIRM _____ DATE _____
BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094923

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	12-14-18	11:30	
TRUCK # 354	TRAILER # 427		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TREC ENV. 1018 WASHINGTON ST. SPENCERPORT, NY 14559

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1 I/L	CONTAMINATED SOIL	WEIGHT IN
		WEIGHT OUT
		BILLED WEIGHT

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME _____

SPECIAL INSTRUCTIONS:
4669 St. Hwy 3, STARLAKE, NY

DESTINATION:
RODMAN LANDFILL

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094953

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217			
TRUCK # 352	TRAILER # 407		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
	WEIGHT IN	
	WEIGHT OUT	
	BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME _____

SPECIAL INSTRUCTIONS:

DESTINATION:

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

5647
094817

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11-28-18		
TRUCK # 357	TRAILER # 428 (Clifton-Fine mk.)		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	Trec Env 1018 Washington St Spencerport NY 14559

NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1 T 1 L	contaminated soil	WEIGHT IN	
		WEIGHT OUT	
		BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME Steve DO

DRIVER SIGNATURE _____ PRINT NAME Josh Winter

SPECIAL INSTRUCTIONS:

DESTINATION:
Rolman Landfill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094842

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	2006 18		
TRUCK # 352	TRAILER # 407		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
	WEIGHT IN	
	WEIGHT OUT	
	BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME _____

SPECIAL INSTRUCTIONS:

DESTINATION:

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217			
TRUCK #	TRAILER #		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
	WEIGHT IN	
	WEIGHT OUT	
	BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME _____

SPECIAL INSTRUCTIONS:

DESTINATION:

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

NON-HAZARDOUS SOLID WASTE MANIFE

TRANSPORTER	DATE	TIME IN /
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11-20-18	
TRUCK # 357	TRAILER # 428 (Star Lake NY)	

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	Trec Env 1018 Washington St. Spencer Port NY 14559

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1 T/L	contaminated soil	WEIGHT IN
		WEIGHT OUT
		BILLED WEIGHT

SHIPPER SIGNATURE Shane Favo PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME Josh Winter

SPECIAL INSTRUCTIONS:

DESTINATION: Rodman Landfill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

5647

094819

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11-2-18		
TRUCK # 357	TRAILER # 428 (Star Lake NY)		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	Trec Env 1018 Washington St. Spencerport NY 14559

NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
T 1 L	contaminated Soil	WEIGHT IN	
		WEIGHT OUT	
		BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME Steve Favo

DRIVER SIGNATURE _____ PRINT NAME Josh Winter

SPECIAL INSTRUCTIONS:

DESTINATION: Rodman landfill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

5645

094860

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN	/ OUT
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	19 NOV 18		
TRUCK # 325	TRAILER # 405		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TREC. ENV. 1017 WASHINGTON ST. SPENCERPORT NY 14559

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1 LD	CONTAMINATED SOIL	**WEIGHT IN**
		WEIGHT OUT
		BILLED WEIGHT

SHIPPER SIGNATURE Shane Pavo PRINT NAME Shane

DRIVER SIGNATURE [signature] PRINT NAME Dave Palmero

SPECIAL INSTRUCTIONS:

DESTINATION:
RODMAN LANDFILL

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094840

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	19NOV15		
TRUCK # 352	TRAILER # 407		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	Tree env 1015 Wash-Ave Ext Spare-Feet NY 14559

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
	contaminated Soil **WEIGHT IN**	
	WEIGHT OUT	
	BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME _____

SPECIAL INSTRUCTIONS: PT3

DESTINATION: Rolling Hills

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

5647

094816

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11-19-18		
TRUCK # 357	TRAILER # 428		

(Clifton NY)

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TREC ENV 1018 washington st. Spencerport NY. 14559

NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1 T 1 L	contaminated soil	WEIGHT IN	
		WEIGHT OUT	
		BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME Josh Winter

SPECIAL INSTRUCTIONS:

DESTINATION:
Rodman landf.11

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

083824

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11/19/15		
TRUCK # 353	TRAILER # 425		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	Tech Environmental 1618 Washington St Spencerport, NY

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
	Contaminated Soil **WEIGHT IN**	
	WEIGHT OUT	
	BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME _____

SPECIAL INSTRUCTIONS: 4669 State Rt 5, Clifton, N.Y.

DESTINATION: Redman Landfill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____ (NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

084021

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11/15/18		
TRUCK # 344	TRAILER # T408		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	Tree. EVN 1018 Washington St. Spencerport N.Y. 14559

NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1	Contaminated soil	WEIGHT IN	
		WEIGHT OUT	
		BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME Shane FAVO

DRIVER SIGNATURE _____ PRINT NAME Daniel Robbins

SPECIAL INSTRUCTIONS:

DESTINATION: Rodman land fill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094924

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11-15-18		
TRUCK # 354	TRAILER # 171		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TREC Environmental 1018 Washington St Spencerport N.Y.

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1	Contaminated Soil	**WEIGHT IN**
		WEIGHT OUT
		BILLED WEIGHT

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE Leo PRINT NAME Leo

SPECIAL INSTRUCTIONS: 1169 State Rt 3 Clinton N.Y.

DESTINATION: Rodman landfill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094995

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11/15/16		
TRUCK # 353	TRAILER # 425		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TREC Environmental 1016 Washington Spencerport NY

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
	Contaminated Soil — **WEIGHT IN**	
	WEIGHT OUT	
	BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME _____

SPECIAL INSTRUCTIONS: 4669 State Rt 3 Clifton NY

DESTINATION: Rodman Landfill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094825
5645

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	15 NOV 17		
TRUCK # 355	TRAILER # 405		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TREC ENV. 1013 WASHINGTON ST. SPENCERPORT, NY 14559

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1 LD	CONTAMINATED SOIL	**WEIGHT IN**
		WEIGHT OUT
		BILLED WEIGHT

SHIPPER SIGNATURE _____ PRINT NAME Steve Fino

DRIVER SIGNATURE Lamotte PRINT NAME Dave Lamotte

SPECIAL INSTRUCTIONS:

DESTINATION: RODMAN LANDFILL

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

☐ AM ☐ PM

BY _____ TIME _____

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094952

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217			
TRUCK # 352	TRAILER # 467		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
	WEIGHT IN	
	WEIGHT OUT	
	BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME _____

SPECIAL INSTRUCTIONS:

DESTINATION:

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

5647

094815

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11-15-18		
TRUCK # 357	TRAILER # 428 (Clifton Mt.)		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	Trec Env 1018 washington St Spencerport NY. 14559

NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1 T 1 L	contaminated soil	WEIGHT IN	
		WEIGHT OUT	
		BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME Trec Env

DRIVER SIGNATURE _____ PRINT NAME Josh Winter

SPECIAL INSTRUCTIONS:

DESTINATION:
Rodman Landfill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

5639.

083541

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11-15-18.	9:10.	
TRUCK # 347.	TRAILER # 421.		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TREC ENV 4669 RT 3. Ft. Ctoll. NY

NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1. TL.	Contaminated SOIL	**WEIGHT IN**	
		WEIGHT OUT	
		BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME Steve Fino

DRIVER SIGNATURE _____ PRINT NAME Jim Hiel

SPECIAL INSTRUCTIONS:

DESTINATION: Rodman Landfill.

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

5645

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094824

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	15 NOV 19		
TRUCK # 355	TRAILER # 405		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TREC ENV. 101 WASHINGTON ST. SPENCERPORT NY 14559

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1 LD	CONTAMINATED SOIL	**WEIGHT IN**
		WEIGHT OUT
		BILLED WEIGHT

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME _____

SPECIAL INSTRUCTIONS:

DESTINATION:
ROOMEY LANDFILL

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

5647

094814

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11-15-18		
TRUCK # 357	TRAILER # 428		

(Clifton Mt.)

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TREC ENV 1018 washington st spencerport NY 14559

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1 T / L	contaminated soil	WEIGHT IN
		WEIGHT OUT
		BILLED WEIGHT

SHIPPER SIGNATURE Steve (Rec) PRINT NAME Steve (Rec)

DRIVER SIGNATURE [signature] PRINT NAME Josh Winter

SPECIAL INSTRUCTIONS:

DESTINATION:
Rodman Landfill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094951

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217			
TRUCK # 352	TRAILER # 407		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
	WEIGHT IN	
	WEIGHT OUT	
	BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME _____

SPECIAL INSTRUCTIONS:

DESTINATION:

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094992

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11/15/18		
TRUCK # 459	TRAILER # 425		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	T/Rec Environmental 618 Washington St Spencerport NY 14559

NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
	Contaminated Soil	**WEIGHT IN**	
		WEIGHT OUT	
		BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME Matt

SPECIAL INSTRUCTIONS:
459 State Rt 3
Clifton N.Y.

DESTINATION:
Rodman Landfill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

1

5636

084245

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11/15/18		
TRUCK # 344	TRAILER # T408		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	Trec Env. 1018 Washington St. Spencerport N.Y. 14559

NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1	Contaminated Soil	WEIGHT IN	
		WEIGHT OUT	
		BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME Shawn Cino

DRIVER SIGNATURE _____ PRINT NAME David Robbins

SPECIAL INSTRUCTIONS:

DESTINATION: Parkman land fill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094925

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11-15-18		
TRUCK # 354	TRAILER # 107		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TREC Environmental 1019 Washington St Syracuse, NY

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1	Contaminated Soil	WEIGHT IN
		WEIGHT OUT
		BILLED WEIGHT

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE Leo PRINT NAME Leo

SPECIAL INSTRUCTIONS:
4669 State Rt 3
Clinton NY

DESTINATION:
Redman Landfill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

5649.

083538

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11-14-18	1:25	1:42
TRUCK # 347	TRAILER # 371.		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	Tec Env 4669 Rt 3 Clifton NM

NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1 TN	Contaminated Soil	WEIGHT IN	
		WEIGHT OUT	
		BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME _____

SPECIAL INSTRUCTIONS:

DESTINATION: Rodman Landfill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

5645
094822

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	14 NOV 13		
TRUCK # 355	TRAILER # 405		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TREC ENV. 1018 WASHINGTON ST. SPENCERPORT, NY 14559

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1 LD	CONTAMINATED SOIL	WEIGHT IN
		WEIGHT OUT
		BILLED WEIGHT

SHIPPER SIGNATURE _____ PRINT NAME Steve Cato

DRIVER SIGNATURE _____ PRINT NAME Dave Parrotta

SPECIAL INSTRUCTIONS:

DESTINATION:
ROOSA LANDFILL

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

5647

094821

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11-14-18		
TRUCK # 359	TRAILER # 428 (Clifton NY)		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	Trec Env 1018 Washington St Spencerport N.Y. 14559

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1 T L	contaminted soil	WEIGHT IN
		WEIGHT OUT
		BILLED WEIGHT

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME Josh Winter

SPECIAL INSTRUCTIONS:

DESTINATION: Rodman Landfill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

5647

094820

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11-14-18		
TRUCK # 357	TRAILER # 428 (Clifton rt)		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	Trec Env 1018 Washington St Spencerport N.Y. 14559

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
T L	contaminated soil	**WEIGHT IN**
		WEIGHT OUT
		BILLED WEIGHT

SHIPPER SIGNATURE _____ PRINT NAME _____

DRIVER SIGNATURE _____ PRINT NAME Josh Winter

SPECIAL INSTRUCTIONS:

DESTINATION:
Rodman Landfill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094950

12:28 pm

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11-14-18	12:15	12:45
TRUCK # 352	TRAILER # 407		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
	WEIGHT IN	
	WEIGHT OUT	
	BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME Steve Warner

DRIVER SIGNATURE _____ PRINT NAME _____

SPECIAL INSTRUCTIONS:

DESTINATION: Rodman LF

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

083539

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11-14-18	8:45	
TRUCK # 347.	TRAILER # 421.		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TecEnv 4669 Rt 3 Clifton, NY

NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1	TL Contaminated Soil	WEIGHT IN	
		WEIGHT OUT	
		BILLED WEIGHT	

SHIPPER SIGNATURE _____ PRINT NAME Steve Wavra

DRIVER SIGNATURE _____ PRINT NAME Tim Hiel

SPECIAL INSTRUCTIONS:

DESTINATION: DANC Landfill Rodman, NY

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094823

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	14 NOV 19		
TRUCK # 335	TRAILER # 405		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TRC ENV. 1018 Washington St Spencerport, NY 14559

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1 LD	CONTAMINATED SOIL	**WEIGHT IN**
		WEIGHT OUT
		BILLED WEIGHT

SHIPPER SIGNATURE D Wm. PRINT NAME Steve Warner

DRIVER SIGNATURE Scott PRINT NAME Dave Pawlicki

SPECIAL INSTRUCTIONS:

DESTINATION: ROMAN LANDFILL

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094994

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11/14/18		
TRUCK # 352	TRAILER # 407		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TRIC INV. 1018 ~~Spencerport~~ Washington St Spencerport, NY 14559

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
	CONTAMINATED SOIL **WEIGHT IN**	
	WEIGHT OUT	
	BILLED WEIGHT	

SHIPPER SIGNATURE B Wagner PRINT NAME STEVE WAGNER

DRIVER SIGNATURE Ron Bartell PRINT NAME Ronald Bartell

SPECIAL INSTRUCTIONS:

DESTINATION:

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

RICCELLI ENTERPRISES INC

Syracuse
P.O. Box 6418
Syracuse, NY 13217
(315) 433-5115

Rochester
6800 W. Henrietta Road
Rush, NY 14543
(585) 344-8410

Geneva
1210 Gifford Road
Phelps, NY 14532
(315) 548-4049

094993

NON-HAZARDOUS SOLID WASTE MANIFEST

TRANSPORTER	DATE	TIME IN / OUT	
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217	11/14/13		
TRUCK # 353	TRAILER # 1 36		

CONSIGNEE	SHIPPER
RICCELLI ENTERPRISES INC. P.O. BOX 6418 SYRACUSE, NY 13217 PHONE # (315) 433-5115	TREC Environmental 10 Washington St. Spencerport, NY 14559

NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
	Contaminated Soil **WEIGHT IN**	
	WEIGHT OUT	
	BILLED WEIGHT	

SHIPPER SIGNATURE Dave PRINT NAME Dave Weaver

DRIVER SIGNATURE Matt PRINT NAME Matt

SPECIAL INSTRUCTIONS:
4669 Rt 3
Clifton N.Y.

DESTINATION:
Rodman Landfill

FOR APPROVAL: _____

CONSIGNEE PRINT NAME _____

CONSIGNEE SIGN HERE _____
(NO INITIALS)

RECEIVED ABOVE MATERIAL IN GOOD CONDITION

FIRM _____ DATE _____

BY _____ TIME _____ ☐ AM ☐ PM

Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and metal non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.

White Copy - *Riccelli* Yellow Copy - *Driver* Pink Copy - *Land Fill* Gold Copy - *Shipper*

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/14/18 TICKET #: 420870
TIME IN: 10:06 AM TIME OUT:10:23 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5642 License#:98774MG
Container#: License#:

	LBS	Tons
GROSS:	118660	59.33
TARE:	40580	20.29
NET:	**78080**	**39.04**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 702.72
: 0.00
TOTAL FEE: 702.72

Driver ID: Bartlett, Frankie

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/14/18 TICKET #: 420871
TIME IN: 10:10 AM TIME OUT:10:27 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5647 License#:48393MH
Container#: License#:

	LBS	Tons
GROSS:	103680	51.84
TARE:	43400	21.70
NET:	**60280**	**30.14**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 542.52
: 0.00
TOTAL FEE: 542.52

Driver ID: Winter, Joshua

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/14/18 TICKET #: 420876
TIME IN: 10:22 AM TIME OUT:10:42 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5645 License#:48391MH
Container#: License#:

	LBS	Tons
GROSS:	121980	60.99
TARE:	39960	19.98
NET:	**82020**	**41.01**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 738.18
: 0.00
TOTAL FEE: 738.18

Driver ID: Parameter, Dave

NOTE:DAVE PARMETER

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/14/18 TICKET #: 420885
TIME IN: 10:59 AM TIME OUT:11:25 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5639 License#:19967MD
Container#: License#:

	LBS	Tons
GROSS:	123340	61.67
TARE:	42500	21.25
NET:	**80840**	**40.42**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 727.56
: 0.00
TOTAL FEE: 727.56

Driver ID: Hier, Tim

NOTE:TIM HIER

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/14/18 TICKET #: 420888
TIME IN: 11:22 AM TIME OUT:11:55 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5643 License#:48400MH
Container#: License#:

	LBS	Tons
GROSS:	120400	60.20
TARE:	43600	21.80
NET:	**76800**	**38.40**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 691.20
: 0.00
TOTAL FEE: 691.20

Driver ID: Tornatore, Matt

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/14/18 TICKET #: 420922
TIME IN: 02:02 PM TIME OUT:02:31 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5647 License#:48393MH
Container#: License#:

	LBS	Tons
GROSS:	114260	57.13
TARE:	43120	21.56
NET:	**71140**	**35.57**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 640.26
: 0.00
TOTAL FEE: 640.26

Driver ID: Winter, Joshua

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/14/18 TICKET #: 420923
TIME IN: 02:11 PM TIME OUT:02:35 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5642 License#:98774MG
Container#: License#:

	LBS	Tons
GROSS:	103600	51.80
TARE:	40320	20.16
NET:	**63280**	**31.64**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 569.52
: 0.00
TOTAL FEE: 569.52

Driver ID: Bartlett, Frankie

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/14/18 TICKET #: 420928
TIME IN: 02:18 PM TIME OUT:02:46 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5645 License#:48391MH
Container#: License#:

	LBS	Tons
GROSS:	91340	45.67
TARE:	39660	19.83
NET:	**51680**	**25.84**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 465.12
: 0.00
TOTAL FEE: 465.12

Driver ID: Parameter, Dave

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/15/18 TICKET #: 420936
TIME IN: 07:16 AM TIME OUT:07:38 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5639 License#:19967MD
Container#: License#:

	LBS	Tons
GROSS:	119520	59.76
TARE:	42820	21.41
NET:	**76700**	**38.35**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 690.30
: 0.00
TOTAL FEE: 690.30

Driver ID: Hier, Tim

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/15/18 TICKET #: 420950
TIME IN: 08:52 AM TIME OUT:09:07 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5644 License#:48401MH
Container#: License#:

	LBS	Tons
GROSS:	132160	66.08
TARE:	43340	21.67
NET:	**88820**	**44.41**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 799.38
: 0.00
TOTAL FEE: 799.38

Driver ID: Jayson, Leo

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/15/18 TICKET #: 420951
TIME IN: 09:02 AM TIME OUT:09:25 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5643 License#:48400MH
Container#: License#:

	LBS	Tons
GROSS:	117460	58.73
TARE:	43560	21.78
NET:	**73900**	**36.95**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 665.10
: 0.00
TOTAL FEE: 665.10

Driver ID: Tornatore, Matt

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/15/18 TICKET #: 420956
TIME IN: 09:29 AM TIME OUT:09:45 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5642 License#:98774MG
Container#: License#:

	LBS	Tons
GROSS:	114480	57.24
TARE:	40500	20.25
NET:	**73980**	**36.99**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 665.82
: 0.00
TOTAL FEE: 665.82

Driver ID: Bartlett, Frankie

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/15/18 TICKET #: 420963
TIME IN: 09:44 AM TIME OUT:10:05 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5647 License#:48393MH
Container#: License#:

	LBS	Tons
GROSS:	122280	61.14
TARE:	43460	21.73
NET:	**78820**	**39.41**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 709.38
: 0.00
TOTAL FEE: 709.38

Driver ID: Winter, Joshua

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/15/18 TICKET #: 420964
TIME IN: 09:48 AM TIME OUT:10:09 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5645 License#:48391MH
Container#: License#:

	LBS	Tons
GROSS:	115660	57.83
TARE:	39880	19.94
NET:	**75780**	**37.89**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 682.02
: 0.00
TOTAL FEE: 682.02

Driver ID: Parameter, Dave

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/15/18 TICKET #: 420968
TIME IN: 09:54 AM TIME OUT:10:17 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5636 License#:19964MD
Container#: License#:

	LBS	Tons
GROSS:	107860	53.93
TARE:	38940	19.47
NET:	**68920**	**34.46**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 620.28
: 0.00
TOTAL FEE: 620.28

Driver ID: Driver

NOTE:DAVID ROBBINS

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/15/18 TICKET #: 420994
TIME IN: 11:44 AM TIME OUT:12:12 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5639 License#:19967MD
Container#: License#:

	LBS	Tons
GROSS:	111840	55.92
TARE:	42420	21.21
NET:	**69420**	**34.71**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 624.78
: 0.00
TOTAL FEE: 624.78

Driver ID: Hier, Tim

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/15/18 TICKET #: 421000
TIME IN: 12:43 PM TIME OUT:01:00 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5644 License#:48401MH
Container#: License#:

	LBS	Tons
GROSS:	132760	66.38
TARE:	43140	21.57
NET:	**89620**	**44.81**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 806.58
: 0.00
TOTAL FEE: 806.58

Driver ID: Jayson, Leo

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/15/18 TICKET #: 421009
TIME IN: 12:58 PM TIME OUT:01:24 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5643 License#:48400MH
Container#: License#:

	LBS	Tons
GROSS:	120760	60.38
TARE:	43340	21.67
NET:	**77420**	**38.71**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 696.78
: 0.00
TOTAL FEE: 696.78

Driver ID: Tornatore, Matt

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/15/18 TICKET #: 421013
TIME IN: 01:17 PM TIME OUT:01:35 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5642 License#:98774MG
Container#: License#:

	LBS	Tons
GROSS:	109260	54.63
TARE:	40220	20.11
NET:	**69040**	**34.52**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 621.36
: 0.00
TOTAL FEE: 621.36

Driver ID: Bartlett, Frankie

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/15/18 TICKET #: 421016
TIME IN: 01:28 PM TIME OUT:01:46 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5647 License#:48393MH
Container#: License#:

	LBS	Tons
GROSS:	112680	56.34
TARE:	43100	21.55
NET:	**69580**	**34.79**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 626.22
: 0.00
TOTAL FEE: 626.22

Driver ID: Winter, Joshua

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/15/18 TICKET #: 421021
TIME IN: 01:41 PM TIME OUT:02:06 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5645 License#:48391MH
Container#: License#:

	LBS	Tons
GROSS:	112900	56.45
TARE:	39560	19.78
NET:	**73340**	**36.67**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 660.06
: 0.00
TOTAL FEE: 660.06

Driver ID: Parameter, Dave

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/15/18 TICKET #: 421026
TIME IN: 01:59 PM TIME OUT:02:18 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5636 License#:19964MD
Container#: License#:

	LBS	Tons
GROSS:	108740	54.37
TARE:	38980	19.49
NET:	**69760**	**34.88**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 627.84
: 0.00
TOTAL FEE: 627.84

Driver ID: Driver

NOTE:DAVID ROBBINS

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/19/18 TICKET #: 421134
TIME IN: 09:06 AM TIME OUT:09:22 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5642 License#:98774MG
Container#: License#:

	LBS	Tons
GROSS:	92840	46.42
TARE:	40680	20.34
NET:	**52160**	**26.08**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 469.44
: 0.00
TOTAL FEE: 469.44

Driver ID: Bartlett, Frankie

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/19/18 TICKET #: 421140
TIME IN: 09:24 AM TIME OUT:09:45 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5643 License#:48400MH
Container#: License#:

	LBS	Tons
GROSS:	112160	56.08
TARE:	43860	21.93
NET:	**68300**	**34.15**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 614.70
: 0.00
TOTAL FEE: 614.70

Driver ID: Tornatore, Matt

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/19/18 TICKET #: 421144
TIME IN: 09:38 AM TIME OUT:09:54 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5647 License#:48393MH
Container#: License#:

	LBS	Tons
GROSS:	95600	47.80
TARE:	43800	21.90
NET:	**51800**	**25.90**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 466.20
: 0.00
TOTAL FEE: 466.20

Driver ID: Winter, Joshua

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/19/18 TICKET #: 421147
TIME IN: 09:59 AM TIME OUT:10:19 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5645 License#:48391MH
Container#: License#:

	LBS	Tons
GROSS:	101780	50.89
TARE:	40160	20.08
NET:	**61620**	**30.81**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 554.58
: 0.00
TOTAL FEE: 554.58

Driver ID: Parameter, Dave

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/20/18 TICKET #: 421260
TIME IN: 10:00 AM TIME OUT:10:19 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5647 License#:48393MH
Container#: License#:

	LBS	Tons
GROSS:	100640	50.32
TARE:	43600	21.80
NET:	**57040**	**28.52**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 513.36
: 0.00
TOTAL FEE: 513.36

Driver ID: Winter, Joshua

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/20/18 TICKET #: 421265
TIME IN: 10:22 AM TIME OUT:10:40 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5642 License#:98774MG
Container#: License#:

	LBS	Tons
GROSS:	94040	47.02
TARE:	40660	20.33
NET:	**53380**	**26.69**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 480.42
: 0.00
TOTAL FEE: 480.42

Driver ID: Bartlett, Frankie

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/20/18 TICKET #: 421310
TIME IN: 01:47 PM TIME OUT:02:04 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5647 License#:48393MH
Container#: License#:

	LBS	Tons
GROSS:	97080	48.54
TARE:	43500	21.75
NET:	**53580**	**26.79**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 482.22
: 0.00
TOTAL FEE: 482.22

Driver ID: Winter, Joshua

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/20/18 TICKET #: 421318
TIME IN: 02:10 PM TIME OUT:02:27 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5642 License#:98774MG
Container#: License#:

	LBS	Tons
GROSS:	89160	44.58
TARE:	40540	20.27
NET:	**48620**	**24.31**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 437.58
: 0.00
TOTAL FEE: 437.58

Driver ID: Bartlett, Frankie

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/28/18 TICKET #: 421642
TIME IN: 11:36 AM TIME OUT:11:54 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5642 License#:98774MG
Container#: License#:

	LBS	Tons
GROSS:	93340	46.67
TARE:	40600	20.30
NET:	**52740**	**26.37**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 474.66
: 0.00
TOTAL FEE: 474.66

Driver ID: Bartlett, Frankie

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:11/28/18 TICKET #: 421644
TIME IN: 12:08 PM TIME OUT:12:35 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5647 License#:48393MH
Container#: License#:

	LBS	Tons
GROSS:	99200	49.60
TARE:	43740	21.87
NET:	**55460**	**27.73**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 499.14
: 0.00
TOTAL FEE: 499.14

Driver ID: Winter, Joshua

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:12/14/18 TICKET #: 422592
TIME IN: 01:41 PM TIME OUT:01:58 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5644 License#:48401MH
Container#: License#:

	LBS	Tons
GROSS:	113360	56.68
TARE:	43820	21.91
NET:	**69540**	**34.77**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 625.86
: 0.00
TOTAL FEE: 625.86

Driver ID: Jayson, Leo

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:08/13/19 TICKET #: 434638
TIME IN: 08:40 AM TIME OUT:08:57 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5645 License#:48391MH
Container#: License#:

	LBS	Tons
GROSS:	113340	56.67
TARE:	39980	19.99
NET:	**73360**	**36.68**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 660.24
: 0.00
TOTAL FEE: 660.24

Driver ID: Bartlett, Frankie

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:08/13/19 TICKET #: 434648
TIME IN: 09:10 AM TIME OUT:09:34 AM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5873 License#:56853ML
Container#: License#:

	LBS	Tons
GROSS:	111460	55.73
TARE:	39060	19.53
NET:	**72400**	**36.20**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 651.60
: 0.00
TOTAL FEE: 651.60

Driver ID: Winter, Joshua

NOTE:

Weighmaster:Unattended User
{NOTE INT}

Development Authority of the North Country
Materials Management Facility
23400 NYS Route 177
Rodman, New York 13682
Tel:(315)661-3230

DATE:08/13/19 TICKET #: 434680
TIME IN: 12:18 PM TIME OUT:12:40 PM

Bill Acct:RICEENTE
Company:Riccelli Enterprises, Inc.
PO Box 6418
Syracuse NY 13217

Haul Acct:RICEENTE
Company:Riccelli Enterprises, Inc.

TRUCK#:5645 License#:48391MH
Container#: License#:

	LBS	Tons
GROSS:	109540	54.77
TARE:	39760	19.88
NET:	**69780**	**34.89**

MATERIAL:600 - Contaminated Soil
County :20 - St. Lawrence
W/C: 3324 - #18-44 J&L STEEL/STAR LAKE(SO

TIP FEE: 628.02
: 0.00
TOTAL FEE: 628.02

Driver ID: Bartlett, Frankie

NOTE:

Weighmaster:Unattended User
{NOTE INT}

This Memorandum

is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper No. 10 016

Carrier No. 74-709

Page 1 of 1

Sun Environmental Corp. (SYRACUSE)
(Name of carrier) (SCAC)

Date 11/29/18

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec.1.

TO:

Consignee Industrial Oil Tank Services

Street 120 Dry Road

City Oriskany State NY Zip Code 13424

FROM: Shipper J&L Steel

Street 1449 State Route 3

City Star Lake State NY Zip Code

24 hr. Emergency Contact Tel. No. 800-807-7455

Route

Vehicle Number 301/203

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1-TT		Non-RCRA, Non-DOT Regulated Material (Water)	EST 5500		G	
		JOB# TREC.0005 (DIRECT BILLED) Approval # JLS181126				

PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.
(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

_____ Signature

REMIT C.O.D. TO: ADDRESS

COD Amt: $

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ (Signature of Consignor)

TOTAL CHARGES $

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER J&L Steel

PER _____

CARRIER Sun Environmental Corp.

PER _____

DATE 11/29/18

4

Permanent post-office address of shipper.

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STRAIGHT BILL OF LADING – SHORT FORM

NOTICE: Shippers of hazardous materials must enter 24-hour emergency response telephone number under "Emergency Response Phone Number.

Date 12/11/18

Bill of Lading No. JLS181211

Shipper No. JLS181211

Carrier No.

Memorandum

Page E.T.C.
(Name of Carrier)

TO: Consignee Industrial Oil Tank	FROM: Shipper J+L Steel
Street	Street
Destination Oriskany, NY Zip Code	Origin Star Lake, NY Zip Code
Route: Vehicle No. SCAC	Emergency Response Phone Number

No. Shipping Units	+HM	Kind of Packaging, Description of Articles Special Marks and Exceptions (Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation with ordinary care. See Section 2(e) of National Motor Freight Classification, Item 360.)	Weight (Subject to Correction)*	Rate or Class	CHARGES
1 T/L		Non Rec.- Non Haz. Water	5000 Gal		
		AS AN AGENT FOR NYDEC Kurt Ballenstein TREC			

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading state whether weight is "carrier's or shipper's weight".

REMIT C.O.D. TO: ADDRESS

C.O.D. Amt. $

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES: $

Note–Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

$ _____ per _____

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.

The carrier shall not make delivery of this shipment without payment of freight and all other charges.

_____
(Signature of Consignor)

FREIGHT CHARGES
Check Appropriate Box:
☐ Freight prepaid
☐ Collect

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment or (2) in the applicable motor carrier classification or tariff, if this is a motor carrier shipment. Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Mark with "RQ" if appropriate to designate Hazardous Materials as defined in the U.S. Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading per 172.201(a)(1) (iii) of Title 49 Code of Federal Regulations. Also when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material.

The format and content of hazardous item list is the responsibility of individual company interpretation of requirements as described in 49 Code of Federal Regulations 172, Subpart C-Shipping Papers. Such description consists of the following per Sections 172.201 (Hazardous Material Table) and Sections 172.202 and 172.203: Proper shipping name, hazardous class, UN identification number, packing group, and subsidiary class(es).

Note: Liability limitation for loss or damage in this shipment may be applicable. See 49 United States Code, Sections 14706(c (1)(A) and (B).

SHIPPER J+L Steel

PER C. Bu

This is to certify that the above named materials are properly classified, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the U.S. Department of Transportation.

CARRIER Page E.T.C.

PER Robert Simon

Carrier acknowledges receipt of packages and any required placards. Carrier certifies emergency response information was made available and/or carrier has the U.S. Department of Transportation emergency response guidebook or equivalent documentation in the vehicle. Property described above is received in good order, except as noted.

This Memorandum

is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper No. 10493

Carrier No. 7A-709

Page 1 of 1

Sun Environmental Corp. (SYRACUSE) (Name of carrier) (SCAC)

Date 11/30/18

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec.1.

TO:
Consignee Industrial Oil Tank Services
Street 120 Dry Road
City Oriskany State NY Zip Code 13424

FROM:
Shipper J&L Steel
Street 1449 State Route 3
City Star Lake State NY Zip Code
24 hr. Emergency Contact Tel. No. 800-807-7455

Route

Vehicle Number 307/703

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1-TT		Non-RCRA, Non-DOT Regulated Material (Water)	5500		G	
		JOB# TREC.0005 (DIRECT BILLED) Approval # JLS181136				

PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____." (2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172. (3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

_____ Signature

REMIT C.O.D. TO: ADDRESS

COD Amt: $

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES $

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ (Signature of Consignor)

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER J&L Steel

PER _____

DATE 11/30/18

CARRIER Sun Environmental Corp.

PER _____

DATE 11/30/18

4

Permanent post-office address of shipper.

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This Memorandum

is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper No. _____

Carrier No. 7M-209

Page 1 of 1

Sun Env Corp (Name of carrier) (SCAC)

Date 12/5/18

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec.1.

TO:
Consignee Industrial Oil Tank Services
Street 124 Quarry Road
City Quincy State VT Zip Code 32324

FROM:
Shipper J+L Steel
Street 1449 State Route 3
City Star Lake State VT Zip Code
24 hr. Emergency Contact Tel. No. 800-807-7455

Vehicle Number 301/203

Route

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1-TT		Non RCRA Non-DOT Regulated Material (Water)	5,000	est	G	
		Job = TRIC 0005 (Direct Bill)				
		APP # JLS101126				

PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____." (2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172. (3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of Item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

_____ Signature

REMIT C.O.D. TO:
ADDRESS

COD Amt: $

C.O.D. FEE:
PREPAID ☐
COLLECT ☐ $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ (Signature of Consignor)

TOTAL CHARGES $

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER J+L Steel

PER Kurt C. Ballerstein

CARRIER Sun Env Corp

PER _____

DATE _____

4

Permanent post-office address of shipper.

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STRAIGHT BILL OF LADING – SHORT FORM

NOTICE: Shippers of hazardous materials must enter 24-hour emergency response telephone number under "Emergency Response Phone Number.

Date 12-7-18

Bill of Lading No. JLS181207

Shipper No. JLS181205

Carrier No.

Memorandum PAGE ETC

(Name of Carrier)

TO:
Consignee INDUSTRIAL OIL TANK SVC. CORP

Street 120 DRY ROAD

Destination ORISKANY NY

Zip Code 13424

Route:

FROM:
Shipper J & L STEEL

Street 4669 ROUTE 3

Origin STAR LAKE, NY

Zip Code 13690

Vehicle No. 4891

SCAC

Emergency Response Phone Number

No. Shipping Units	+HM	Kind of Packaging, Description of Articles Special Marks and Exceptions (Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation with ordinary care. See Section 2(e) of National Motor Freight Classification, Item 360.)	Weight (Subject to Correction)*	Rate or Class	CHARGES
1		NON-RCRA / NON-DOT REGULATED LIQUID	5000 gallons		

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading state whether weight is "carrier's or shipper's weight".

REMIT C.O.D. TO: ADDRESS

C.O.D. Amt. $

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES: $

Note–Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

$ _____ per _____

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.

The carrier shall not make delivery of this shipment without payment of freight and all other charges.

(Signature of Consignor)

FREIGHT CHARGES
Check Appropriate Box:
☐ Freight prepaid
☐ Collect

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (conten and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any pers or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to sa destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said pro erty, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classifications in effect the date hereof, if this is a rail or a rail-water shipment or (2) in the applicable motor carrier classification or tariff, if this is a motor carrier shipment. Shipper hereby certifies that he is familiar with the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by t shipper and accepted for himself and his assigns.

Mark with "RQ" if appropriate to designate Hazardous Materials as defined in the U.S. Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading per 172.201(a)(1) (iii) of Title 49 Code of Federal Regulations. Also when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material.

The format and content of hazardous item list is the responsibility of individual company interpretation of requirements as described in 49 Code of Federal Regulations 172, Subpart C-Shipping Papers. Such description consists of the following per Sections 172.201 (Hazardous Material Table) and Sections 172.202 and 172.203: Proper shipping name, hazardous class, UN identification number, packing group, and subsidiary class(es).

Note: Liability limitation for lo or damage in this shipme may be applicable. See United States Code, Sectio 14706(c (1)(A) and (B).

SHIPPER J & L STEEL

PER Jeff L. Neumann JEFF NEUMANN

CARRIER PAGE ETC

PER Robert Thomas

This is to certify that the above named materials are properly classified, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the U.S. Department of Transportation.

Carrier acknowledges receipt of packages and any required placards. Carrier certifies emergency response info tion was made available and/or carrier has the U.S. Department of Transportation emergency response guide or equivalent documentation in the vehicle. Property described above is received in good order, except as note

STRAIGHT BILL OF LADING – SHORT FORM

NOTICE: Shippers of hazardous materials must enter 24-hour emergency response telephone number under "Emergency Response Phone Number.

Date 12-6-18

Bill of Lading No. JLS181206

Shipper No. JLS181205

Carrier No.

Memorandum

PAGE ETC (Name of Carrier)

TO:
Consignee INDUSTRIAL OIL TANK SVC CORP

FROM:
Shipper J & L STEEL

Street 120 DRY ROAD

Street 4669 ROUTE 3

Destination ORISKANY NY

Origin STAR LAKE NY

Zip Code 13424

Zip Code 13690

Route:

Vehicle No. 4891

SCAC

Emergency Response Phone Number

No. Shipping Units	+HM	Kind of Packaging, Description of Articles Special Marks and Exceptions (Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation with ordinary care. See Section 2(e) of National Motor Freight Classification, Item 360.)	Weight (Subject to Correction)*	Rate or Class	CHARGES
		NON-RCRA / NON-DOT REGULATED LIQUID	5000 gallons		

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading state whether weight is "carrier's or shipper's weight".

REMIT C.O.D. TO: ADDRESS

C.O.D. Amt. $

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES: $

Note–Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

$ _____ per _____

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.

The carrier shall not make delivery of this shipment without payment of freight and all other charges.

(Signature of Consignor)

FREIGHT CHARGES
Check Appropriate Box:
☐ Freight prepaid
☐ Collect

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (conten and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any pers or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to sa destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said pro erty, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classifications in effect the date hereof, if this is a rail or a rail-water shipment or (2) in the applicable motor carrier classification or tariff, if this is a motor carrier shipment. Shipper hereby certifies that he is familiar with the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by t shipper and accepted for himself and his assigns.

Mark with "RQ" if appropriate to designate Hazardous Materials as defined in the U.S. Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading per 172.201(a)(1) (iii) of Title 49 Code of Federal Regulations. Also when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply unless a specific exception from the requirement is provided in the Regulation for a particular material.

The format and content of hazardous item list is the responsibility of individual company interpretation of requirements as described in 49 Code of Federal Regulations 172, Subpart C-Shipping Papers. Such description consists of the following per Sections 172.201 (Hazardous Material Table) and Sections 172.202 and 172.203: Proper shipping name, hazardous class, UN identification number, packing group, and subsidiary class(es).

Note. Liability limitation for lo or damage in this shipme may be applicable. See United States Code, Sectio 14706(c (1)(A) and (B).

SHIPPER J & L STEEL

CARRIER PAGE ETC

PER Jeremy Neumann JEREMY NEUMANN

PER Robert Simon

This is to certify that the above named materials are properly classified, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the U.S. Department of Transportation.

Carrier acknowledges receipt of packages and any required placards. Carrier certifies emergency response info tion was made available and/or carrier has the U.S. Department of Transportation emergency response guide or equivalent documentation in the vehicle. Property described above is received in good order, except as not

STRAIGHT BILL OF LADING – SHORT FORM

NOTICE: Shippers of hazardous materials must enter 24-hour emergency response telephone number under "Emergency Response Phone Number.

Date 12/5/2018 Bill of Lading No. JLS181205

Shipper No. JLS181205

Memorandum Page E.T.C. (Name of Carrier) Carrier No.

TO: Consignee Industrial Oil Tank Svc. Corp.	FROM: Shipper J & L Steel
Street 120 Dry Road	Street 4669 Route 3
Destination Oriskany, NY Zip Code 13424	Origin Star Lake, NY Zip Code 13690
Route: Vehicle No. 4891 SCAC	Emergency Response Phone Number

No. Shipping Units	+HM	Kind of Packaging, Description of Articles Special Marks and Exceptions. Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation with ordinary care. See Section 2(e) of National Motor Freight Classification, Item 360.	~~Weight~~ (Subject to Correction)*	Rate or Class	CHARGES
1 TT		NON-RCRA/NON-DOT Regulated Liquid	5,000 gallons		
		12/5/2018 – Bill D. Pickle IOTSC			

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading state whether weight is "carrier's or shipper's weight".

REMIT C.O.D. TO: ADDRESS

C.O.D. Amt. $

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES: $

Note–Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

$ _____ per _____

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.

The carrier shall not make delivery of this shipment without payment of freight and all other charges.

_____ (Signature of Consignor)

FREIGHT CHARGES

Check Appropriate Box:

☐ Freight prepaid

☐ Collect

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment or (2) in the applicable motor carrier classification or tariff, if this is a motor carrier shipment. Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Mark with "RQ" if appropriate to designate Hazardous Materials as defined in the U.S. Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading per 172.201(a)(1) (iii) of Title 49 Code of Federal Regulations. Also when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material.

The format and content of hazardous item list is the responsibility of individual company interpretation of requirements as described in 49 Code of Federal Regulations 172, Subpart C-Shipping Papers. Such description consists of the following per Sections 172.201 (Hazardous Material Table) and Sections 172.202 and 172.203: Proper shipping name, hazardous class, UN identification number, packing group, and subsidiary class(es).

Note: Liability limitation for loss or damage in this shipment may be applicable. See 49 United States Code, Sections 14706(c (1)(A) and (B).

SHIPPER J & L Steel

PER Robert Simon

CARRIER Page E.T.C.

PER Robert Simon

This is to certify that the above named materials are properly classified, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the U.S. Department of Transportation.

Carrier acknowledges receipt of packages and any required placards. Carrier certifies emergency response information was made available and/or carrier has the U.S. Department of Transportation emergency response guidebook or equivalent documentation in the vehicle. Property described above is received in good order, except as noted.

ENVIRONMENTAL PRODUCTS & SERVICES OF VERMONT, INC

24-Hour Emergency Phone Number
1-800-843-8265

Please print or type

BILL OF LADING

Generator EPA ID # NYR000197608

1. Document No. SYR17940

2. Page 1 of 1

3. Generator's Name and Mailing Address
J & L STEEL
CROSSROADS OF STATE RT. 3 AND COUNTY RD. 60
STAR LAKE NY 13690

4. Generator's Phone (518) 365-0955

Site Address
SAME

5. Transporter 1 Company Name
ENVIRONMENTAL PROD & SVCS OF VT, INC

6. EPA ID # NYR000115733

A. State Transporter's ID PT7361R (VA.)

B. Transporter 1 Phone 800 843-8265

7. Transporter 2 Company Name

8. EPA ID #

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
INDUSTRIAL OIL TANK SERVICE CORP.
120 DRY RD.
ORISKANY NY 13424
HM

10. EPA ID # NYR000005298

E. State Facility's ID

F. Facility's Phone 315 736-6080

GENERATOR

	11. Shipping Name	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt /Vol.
a.	NON-RCRA, NON-DOT LIQUIDS, N.O.S.(OIL CONTAMINATED WATER)	001	TT	4500	G
b.					
c.					
d.					

G. Additional Descriptions for Materials Listed Above

a. APP#NOAPPNEEDED

b.

c.

d. JOB#N18555 ~~PO#441517N~~

15. Special Handling Instructions and Additional Information
1)

16. GENERATOR'S CERTIFICATION: I hereby certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulation of the Department of Transportation. The materials described on this document are not subject to federal uniform hazardous waste manifest requirements.

Printed/Typed Name: Kurt Ballerstein (AS AN AGENT FOR NYDEC)
Signature: [signature] TREC
Date: Month 12 Day 11 Year 15

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: DAVE MONDO
Signature: [signature]
Date: Month 12 Day 11 Year 15

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the materials covered by this bill of lading except as noted in item 19.
Printed/Typed Name:
Signature:
Date: Month Day Year

BILL OF LADING

ENVIRONMENTAL PRODUCTS & SERVICES OF VERMONT, INC

24-Hour Emergency Phone Numl
1-800-843-82

Please print or type

BILL OF LADING

Generator EPA ID #: NYR000197608

1. Document No.: SYR17955
2. Page 1 of

3. Generator's Name and Mailing Address
J & L STEEL
CROSSROADS OF STATE RT. 3 AND COUNTY RD. 60
STAR LAKE NY 13690

4. Generator's Phone (518) 365-0955

Site Address: SAME

5. Transporter 1 Company Name: ENVIRONMENTAL PROD & SVCS OF VT, INC
6. EPA ID #: NYR000115733

A. State Transporter's ID: 53720 (VT)
B. Transporter 1 Phone: 800 843-8265

7. Transporter 2 Company Name:
8. EPA ID #:

C. State Transporter's ID:
D. Transporter 2 Phone:

9. Designated Facility Name and Site Address
INDUSTRIAL OIL TANK SERVICE CORP.
120 DRY RD.
ORISKANY NY 13424
HM

10. EPA ID #: NYR000005298

E. State Facility's ID:
F. Facility's Phone: 315 736-6080

GENERATOR

	11. Shipping Name	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit WL/Vol.
a.	NON-RCRA, NON-DOT LIQUIDS, N.O.S.(OIL CONTAMINATED WATER)	001	TT	1,356	G
b.					
c.					
d.					

G. Additional Descriptions for Materials Listed Above

a. APP#NOAPPNEEDED
c.
b.
d. JOB#N18555

15. Special Handling Instructions and Additional Information
1)

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportatio according to the applicable regulation of the Department of Transportation. The materials described on this document are not subject to federal uniform hazardous waste manifest requirements.

Printed/Typed Name: JEREMY NEUMANN
Signature:
Date: Month 12 Day 14 Ye 1

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Anthony Woolson
Signature: Anthony Woolson
Date: Month 12 Day 14 Ye 1

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Ye

FACILITY

19. Discrepancy Indication Space

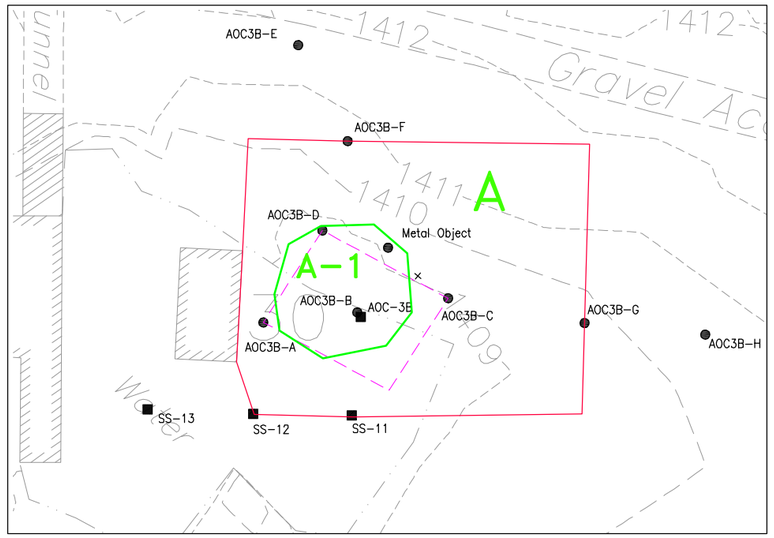
20. Facility Owner or Operator; Certification of receipt of the materials covered by this bill of lading except as noted in item 19.
Printed/Typed Name:
Signature:
Date: Month Day Ye

BILL OF LADING

ARO-GRAPH CORP. (315) 463-8693

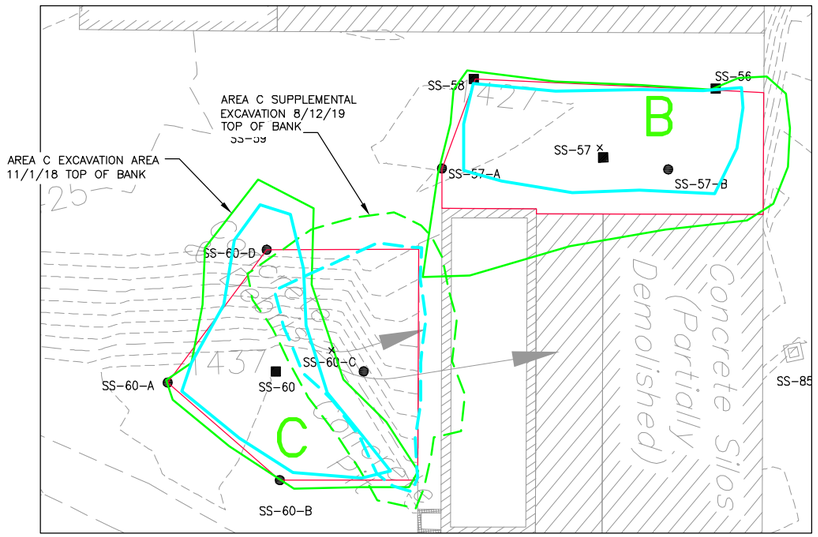
APPENDIX D

SURVEY MAP



EXCAVATION AREA A

NOT TO SCALE



EXCAVATION AREAS B & C

NOT TO SCALE

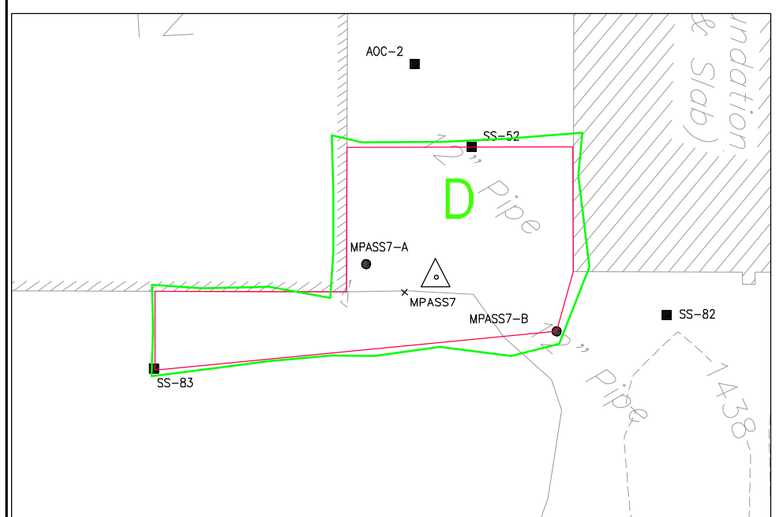
LEGEND:

- PREVIOUS SAMPLE LOCATIONS WHERE TOTAL PCB CONCENTRATIONS ARE BELOW THE 6NYCRR PART 375 COMMERCIAL SCOs.
- PDI SAMPLE LOCATIONS
- SUPPLEMENTAL PDI SAMPLE LOCATIONS
- DESIGN EXCAVATION AREA
- TSCA EXCAVATION
- STOCKPILE AREA
- SUPPORT/EQUIPMENT LAYDOWN AREA
- EXCAVATION TOP OF BANK
- EXCAVATION BOTTOM OF BANK

NOTE (EXCAVATION AREA A)

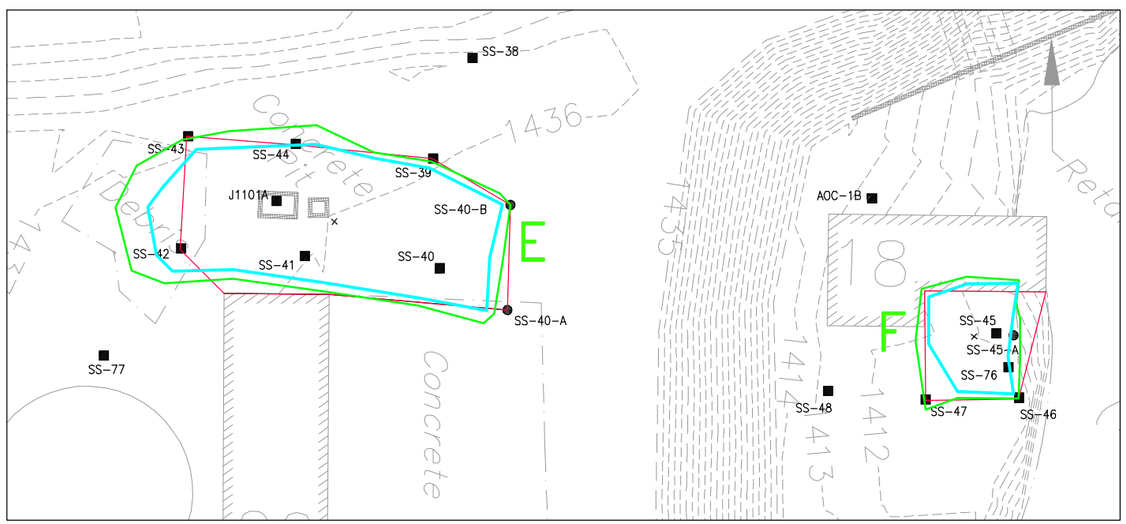
1. POST EXCAVATION NOT COMPLETED DUE TO SITE CONDITIONS AS DESCRIBED IN SECTION 2.5

	AREA (SQ FT)	CUT	FILL	NET
AREA A	1018.74	91.32	1.49	89.82<Cut>
AREA B	3864.98	316.79	80.07	236.73<Cut>
AREA C (11/1/18)	2768.48	165.88	22.01	143.87<Cut>
AREA C (8/12/19)	2803.22	50.76	29.11	21.66 <CUT>
AREA D	4738.44	18.28	13.85	4.44<Cut>
AREA E	3807.15	182.69	0.49	182.20<Cut>
AREA F	829.67	62.48	0.08	62.40<Cut>



EXCAVATION AREA D

NOT TO SCALE



EXCAVATION AREAS E & F

NOT TO SCALE

FIGURE D.1

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

JONES & LAUGHLIN/BENSON MINE

AS-BUILT EXCAVATION AREAS

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

FILE NAME: P:\NYSDEC PROGRAM\447415 WA #3 J&L STEEL SITE CHARACTERIZATION\10.0 TECHNICAL CATEGORIES\10.1 CAD - GIS\FIGURES\IRM WORK PLAN\447415-IRM-003-VOLUMES.DWG

APPENDIX E

DAILY REPORTS

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, Albany, New York 12233 7014
Phone: (518) 402 9662 **FAX:** (518) 402 9679
Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 10/24/2018	**REPORT #:** 1

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Sunny/Partial Cloud	Partly Cloudy
TEMPERATURE	33	40
WIND	NW 5-10	NW 10-15

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Mobilization activities including establishment of rally point, decontamination pad, excavation survey locations, Ground penetrating radar, site clearing of surficial vegetation

DISCUSSIONS/COMMENTS: David Pacini (OSHA) visited site at 12:30 inspecting on-going demolition activities by R.E.D Contractor and Parsons activities. He had no issues with Parsons operations at the time. All activities performed today went as expected with no major concerns for safety or production

ISSUES: While performing vegetation clearing in area "A" a possible PCB source contamination object was recovered at or near the surface of the excavation area. Object appeared to be an electrical transformer and there was significant soil staining in the adjacent area. Photo attached. Also, demolition spoils from buildings in areas "B" and "C" need to be removed prior to PCB excavation up to 7' at NE corner of Area "C". Coordination with NYSDEC resulted in scheduled meeting w/ Manassa Burrows NYSDEC Project Manger and RED Contractor on Monday October 29th to establish specifics.

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No Monitoring today

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
10/24/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Survey	D	10:00	1500			GPS
Ground Penetrating Radar	D	10:00	1545			GPR Unit
Site Mobilization	D	10:00	1500			Excavation of Decon pad, site clearing
PARSONS						
Project Oversight	D	9:00	1600			Coordination with on-site personnel and subcontractors
SUBS/VISITORS						
Mark Hall		Periodic				Town of Clifton Fine
David Pacini		12:30	13:00			OSHA

EQUIPMENT:

Equipment Type	*On-*	*Description*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task*	*Demob*	*Tasks*
TREC									
Komatsu 138 Excavator	Yes	Small Excavtaor	Previous day	10:00	Brush clearing	Create decon pad		1545	
Weel loader	Yes	material	Previous day	10:00				1545	
GPR	Yes	Ground penetrating Radar	10:00	10:00				1545	
GPS	Yes	Survey	10:00	10:00				1545	
PARSONS									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING	For Decon pad	300 s.f.	
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
PERIMETER FENCE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time Out

Decon Pad Construction Prior to fabric placement

Area of Overburden in areas "B" and "C"

Komatsu 138 for Excavation

Area "A" vegetation clearing beginning

Decon Pad Construction completed

Possible Source Contamination Object (Electrical Transformer) with soil staining to left

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, Albany, New York 12233-7014
Phone: (518) 402-9662 **FAX:** (518) 402-9679
Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 10/25/2018	**REPORT #:** 2

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Mostly Cloudy, light snow	Mostly Cloudy, light snow
TEMPERATURE	29	32
WIND	NW 0-5	NW 0-5

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Site vegetation clearing in area "E."
Begin excavation of Area "A" and establishment of staging area for TSCA soils.
PID and CAMP monitoring in progress in TSCA area "A1."

DISCUSSIONS/COMMENTS: Work was interrupted in Area "E" at 10:30 due to demolition contractor needing access to area to haul asbestos containing material off site. During interruption, TREC established a staging area in "A" for TSCA soils. GPR work was not performed in area "E" due to unsafe terrain and surficial demolition debris cover.

ISSUES: Some discussion of best method and schedule for removing demolition overburden in Areas "B" and "C". TREC interested in working Saturday October 27th in order to mitigate lost time during Thursday shutdown.
Soil Staining around buried transformers in TSCA Area "A1" is of concern due to depth. Appears to extend below 2" excavation in SE corner of area. Will advise once 2' is excavated in entire area

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS: CAMP Monitoring begun in TSCA area, upwind unit could not zero calibrate so may require adjusting data.

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
10/25/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Site Clearing	D	8:00	1500			Excavation of superficial vegetation
Ground Penetrating Radar	D	8:00	11:00			GPR Unit
Excavation	D	0:00	1500			Excavation of TSCA soils, Payloading to soil staging area
PARSONS						
Project Oversight	D	9:00	1600			Coordination with on-site personnel and subcontractors
Air Monitoring	D	1300	1600			PID and Dustrak systems
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no., etc.)*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*	*Demob Time*	*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	8:30				1545	
Weel loader	Yes	Komatsu 671, 100 hp	ON-SITE	13:30				1545	
GPR	Yes	Ground penetrating Radar	ON-SITE	8:30	10:30			1545	
PARSONS									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING	For Staging area	1500 s.f.	Adjacent Area "A" for TSCA soils
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE	For TSCA area	1500 l.f.	Around Area "A"
EXCLUSION AREA TAPE	For TSCA area	3000 l.f.	Around Area "A"
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time Out

Vegetation and debris clearing in Area "E"

CAMP system set up at downwind (SE) edge of TSCA Area "A"

Stained soils in SE region of Area "A" near where two transformers were uncovered

Soil loading in TSCA area "A"

Stained soils in SE region of Area "A" near where two transformers were uncovered

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, Albany, New York 12233 7014
Phone: (518) 402 9662 **FAX:** (518) 402 9679
Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 10/26/2018	**REPORT #:** 3

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Clear	Clear
TEMPERATURE	20	40
WIND	NW 0-5	SE 0-5

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Continue excavation of Area "A" and staging soil for later removal
PID and CAMP monitoring in progress in TSCA area "A1". TSCA area excavated to 2' as required and soil stockpiled and covered. Excavation of stockpiling.
Activity to proceed for remainder of day. Uncovered transformer/source object placed Area "A" began at 1245. Recovered transformer/source contamination
objects placed in containment drums for storage and later disposal.

DISCUSSIONS/COMMENTS: TREC continues to work safely. Construction water is no concern. PID values below 0.3 ppm within excavation limits and below
0.2 ppm in perimeter

ISSUES: Expected rain in Saturday forcast is concern for construction water, but due to convex topography of excavation area, no water should
escape excavation. Will monitor situation as it develops
Confirmatory soil sampling-no issues, due to ship Saturday 10/27/18
Weather-no issues today

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS: CAMP Monitoring failed due to equipment malfunction. New system will be used tomorrow 10/27/18

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
10/26/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #
J&L A1-A through J&L A1-H	11:10	8028/PCBs	48 hr.-Tuesday 10/27/18	Container # 445794	783465958747

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Site Clearing	D	11:00	12:00	12:45	13:30	Excavation of superficial vegetation
Excavation	D	9:45	11:00	13:30	16:00	Excavation of TSCA soils
Payloading	D	9:45	11:00	13:30	16:00	Payloading to soil staging area
PARSONS						
Project Oversight	D	8:00	12:00	12:45	16:00	Coordination with on-site personnel and subcontractors
Air Monitoring	D	9:00	12:00	12:45	16:00	PID and Dustrak systems
Soil Sampling	D	11:00	12:00			Collect and prepare soil scmples with plastic scoop, glassware, coolers
SUBS/VISITORS						
Site Caretaker						Friendly visit

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*	*Demob Time*	*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	9:45	12:00	12:45	1600	na	Soil excavation/site clearing
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	9:45	12:00	12:45	1600	na	payloading soil
PARSONS									
Dustrak	yes	Dustrak II	ON-SITE	9:45	12:00	12:45	1600	na	Air Monitoring
PID	yes	MINI-RAE 3000	ON-SITE	9:45	12:00	12:45	1600	na	Air Monitoring

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
TREC			
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING	For Staging area	1500 s.f.	Coverage of TSCA Soils
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM	For source contam. Objects	1	placed objects in drum, labelled and sealed
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
PARSONS			
5 GAL PAIL W/LID			
DI WATER			
ICE	1 bag for keeping soil cool	1 -5 lb. bag	

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time Out

Sample Processing

Uncovered debris including electrical transformers suspected to be source contamination

Beginning of Area "A" Excavation to 1'

Cleared Brush from Area "A" to SE of excavation area

TSCA Soil Stockpile West of excavation area

2' TSCA Soils Excavation in process

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Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 10/27/2018	**REPORT #:** 4

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy	Cloudy
TEMPERATURE	35	40
WIND	SE 5-10	SE 5-10

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Continue excavation of Area "A" and staging soil for later removal

DISCUSSIONS/COMMENTS: TREC continues to work safely. Construction water is no concern. PID values below 0.3 ppm within excavation limits and below 0.2 ppm in perimeter

ISSUES:

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS:

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
10/27/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Site Clearing	D	10:15	13:30			Excavation of superficial vegetation
Excavation	D	9:00	10:00			Excavation of Area "A" non-haz
Payloading	D	9:00	10:00			Payloading to soil staging area
PARSONS						
Project Oversight	D	9:00	13:30			Coordination with on-site personnel and subcontractors
Air Monitoring	D	9:00	10:15			PID and Dustrak systems
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*	*Demob Time*	*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	9:00	13:30			na	Soil excavation/site clearing
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	9:00	13:30			na	payloading soil
PARSONS									
Dustrak	yes	Dustrak II	ON-SITE	9:00	10:15			na	Air Monitoring
PID	yes	MINI-RAE 3000	ON-SITE	9:00	13:30			na	Air Monitoring

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time Out

Southwest corner of "A" showing 6-10" of water

Southwest corner of "A" showing 6-10" of water

Area "A" excavation to depth of 1' (view southwest)

Area "A" Stockpile on northern edge of excavation

Area "A" excavation to depth of 1' (view southwest)

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Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 10/29/2018	**REPORT #:** 5

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy, Light Rain	Cloudy
TEMPERATURE	35	40
WIND	na	na

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Continue excavation of Area "A" and staging soil for later removal, continue clearing Area "E" and begin excavation and soil staging

DISCUSSIONS/COMMENTS: TREC continues to work safely. Area "A" has 1-2' of water in previously excavated area. PID values below 0.3 ppm within excavation limits and below 0.2 ppm in perimeter

ISSUES: Rain water creating inability to finish in Area "A", but expected to dry out by end of week. Still no trucking available until profile is accepted by disposal facility. May be next week before trucking begins.

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS:

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
10/29/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #
JL A1-C (Resample due to broken container received by Eurofins/Spectrum Labs today)	15:30	8082	48 hr		

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Site Clearing	D	8:15	8:50			Excavation of superficial vegetation
Excavation	D	9:00	11:15	11:45	16:00	Excavation of Area "A and E" non-haz
Payloading	D			11:45	16:00	Payloading to soil staging area
PARSONS						
Project Oversight	D	8:00	11:35	11:45	16:00	Coordination with on-site personnel and subcontractors
Air Monitoring	D	9:00	11:15	11:45	16:00	PID and Dustrak systems
SUBS/VISITORS						
Manassa Burrows		10:00	10:30			Discussed overburden removal in Areas "B" and "C" by R.E.D. Contractors
Mark Hall		10:15				Voiced concerns about continuing activity despite current challenges

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*	*Demob Time*	*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	8:15	11:15	11:30	16:00	na	Soil excavation/site clearing
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE			11:30	16:00	na	payloading soil
PARSONS									
Dustrak	yes	Dustrak II	ON-SITE	9:00		11:15	11:45	16:00	Air Monitoring
PID	yes	MINI-RAE 3000	ON-SITE	9:00		11:15	11:45	16:00	Air Monitoring

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING	Soil staging for Area E	3000 s.f.	
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time Out

Area "E" site clearing

Area "A" flooded excavation

Area "E" soil loading looking Southwest

Area "A" soil head space PID reading at 0.2 ppm

Area "A" flooded excavation

Area "A" excavation to depth of 1' (view southwest)

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 10/30/2018	**REPORT #:** 6

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Overnight snow, Cloudy	Cloudy
TEMPERATURE	31	35
WIND	na	na

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Continue excavation of Area "E" and stockpiling until 1400 hours. Moved to Area "D" and begin clearing superficial vegetation.

DISCUSSIONS/COMMENTS: No issues completing Area "E" excavation. Air monitoring showing nothing significant. RED contractor to relocate Areas "B" and "C" overburden at 7:30 a.m. Wednesday October 31

ISSUES: Area "A" still has 1-2' of standing water and is not completed
Delay of trucking due to broken samples received by lab and profile processing by landfill

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS:

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
10/30/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Site Clearing	D	14:00	16:00			Excavation of superficial vegetation
Excavation	D	8:30	1:30			Excavation of soils in Area "E"
Payloading	D	8:30	1:30			Payloading to soil staging area
PARSONS						
Project Oversight	D	8:00	11:35	11:45	16:00	Coordination with on-site personnel and subcontractors
Air Monitoring	D	9:00	11:15	11:45	16:00	PID and Dustrak systems
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*	*Demob Time*	*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	8:30	13:30	14:00	16:00	na	Soil excavation/site clearing
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	8:30	13:30			na	payloading soil
PARSONS									
Dustrak	yes	Dustrak II	ON-SITE	9:00		11:15	11:45	16:00	Air Monitoring
PID	yes	MINI-RAE 3000	ON-SITE	9:00		11:15	11:45	16:00	Air Monitoring

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING	Soil staging for Area E	1000 s.f.	
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time Out

Area "E" looking West

Area "E" showing excavation done Monday October 29

Soil stockpile from Area "E" on top of Area "D"

Area "D" looking East towards vegetation area clearing with soil stockpile to the south

Area "E" showing 50% excavation completed

Area "E" showing 100% excavation

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 10/31/2018	**REPORT #:** 7

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy,light rain	Cloudy, light rain
TEMPERATURE	35	35
WIND	na	na

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Begin excavation of area "D" and stockpiling
RED begin removing overburden from areas "B" and "C" to expose original grade for excavation
Area "B" also begun excavation after RED removed overburden

DISCUSSIONS/COMMENTS: Some difficulty determining precise elevations for overburden removal, but soil color change indicates where overburden ends and native soils begin.

ISSUES: Rain creating slick conditions and potentially unsafe situations.

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS:

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
10/31/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Excavation	D	8:15	13:30	14:00	16:00	Excavation of Areas D and B
Payloading	D	8:15	13:30	14:00	16:00	Payloading to soil staging area
PARSONS						
Project Oversight	D	8:15	13:30	14:00	16:00	Coordination with on-site personnel and subcontractors
Air Monitoring	D	8:15	13:30	14:00	16:00	PID and Dustrak systems

SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	8:15		13:30	14:00	16:00	Soil excavation/site clearing
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	8:15		13:30	14:00	16:00	payloading soil
PARSONS									
Dustrak	yes	Dustrak II	ON-SITE	8:15		13:30	14:00	16:00	Air Monitoring
PID	yes	MINI-RAE 3000	ON-SITE	8:15		13:30	14:00	16:00	Air Monitoring

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING	Soil staging for Area B	1300 s.f.	
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time Out

Area "D" looking northeast

Area "D" looking north after clearing and before excavation

Overburden removal in Area C on northern toe of slope

Overburden removal in Area B on western toe of slope

Area "D" looking northeast during excavation

Area "D" looking north during excavation

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/1/2018	**REPORT #:** 8

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy, Rain	Cloudy, Rain, Fog
TEMPERATURE	44	44
WIND	SE 0-5 mph	SE 0-5 mph

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Continued excavtation and stockpiling in Area "B"
Began excavating and stockpiling in Area "C"

DISCUSSIONS/COMMENTS: Sampled soil stockpiles for PCBs, ignitability, corrosivity, pH, liquid filter test for non-hazardous waste disposal facility profile

ISSUES: Rain, creating very wet excavation areas, slick travel, and potential contamination issues

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS:

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/1/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #
JL-AX through JL-FX	8:30	8082, pH, 1030,9010/9030, Filter liquid test	48 hrs.	na	783548203936

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Excavation	D	8:15	14:50			Excavation of Areas B and C
Payloading	D	8:15	14:50			Payloading to soil staging area
PARSONS						
Project Oversight	D	8:15	15:30			Coordination with on-site personnel and subcontractors
Air Monitoring	D	8:15	15:30			PID and Dustrak systems
Soil Sampling	D	8:30	10:00			Sampled all stockpiles
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no.*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	8:15		14:50			Soil excavation/site clearing
Wheel loader	Yes	Komatsu 271, 100 hp	ON-SITE	8:15		14:50			payloading soil
PARSONS									
Dustrak	yes	Dustrak II	ON-SITE	8:15		14:30			Air Monitoring
PID	yes	MINI-RAE 3000	ON-SITE	8:15		14:30			Air Monitoring

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING	Soil staging for Area C	1000 s.f.	
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE	soil sample		

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time Out

Area "C" looking east

Area "B" looking west during excavation

Area "C" during excavation

Area "B" post excavation

Area "B" post excavation, pre-cleanup

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Division of Environmental Remediation
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Phone: (518) 402 9662 **FAX:** (518) 402 9679
Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/2/2018	**REPORT #:** 9

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy, Rain, Fog	Cloudy, Rain, Fog
TEMPERATURE	42	43
WIND	SE 0-5 mph	SE 0-5 mph

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Continued excavtation in Area "C"
Remobilized in Area "A" once flooding was discovered in SE corner of excavation. Deployed 50' of oil boom and created dams on NW and SE corners of Building 30 to redirect water flow from adjacent Building 31 and encourage site to drain

DISCUSSIONS/COMMENTS: Flooding observed in Area "A" at 8:30 upon routine inspection of excavated areas, boom deployed and dams created
Minimal release of contaminants from Area "A" into stream due to quick response and spill containment/soil damming

ISSUES: Major, long-term rain event has created difficulties.

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS:

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/2/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Excavation	D	8:15	12:30	14:00	16:00	Excavation of Areas C and dam created in Area A
Payloading	D	8:15	13:30	14:00	16:00	Payloading to soil staging area
PARSONS						
Project Oversight	D	8:15	13:30	14:00	16:00	Coordination with on-site personnel and subcontractors
Air Monitoring	D	8:15	13:30	14:00	16:00	PID and Dustrak systems
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	8:15		13:30	14:00	16:00	Soil excavation/site clearing
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	8:15		13:30	14:00	16:00	payloading soil
PARSONS									
Dustrak	yes	Dustrak II	ON-SITE	8:15		13:30	14:00	16:00	Air Monitoring
PID	yes	MINI-RAE 3000	ON-SITE	8:15		13:30	14:00	16:00	Air Monitoring

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time Out

Area "A" showing southwest corner flooded, photo looking east

Area "A" looking southwest with water flowing around both sides of Building 31 into excavation

Area between Building 30 (right) and 31 (left)

Temporary dam created between excavation in Area "A" and building 30

Area "A" looking West towards Buildings 31 and 30, caution tape demarkating excavation limits

Area "A" looking northeast showing oil boom in place between excavation and backwater flow

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Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/5/2018	**REPORT #:** 10

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy	Cloudy, rain
TEMPERATURE	32	38
WIND	SE 0-5 mph	SE 0-5 mph

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Excavate Area "F"

DISCUSSIONS/COMMENTS: Work being completed as expected, Water sampling done by Parsons in Area "A1"

ISSUES: Inspection of Area "A" indicates stabilization of water levels, with no visible turbidity in excavtation area

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS:

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/5/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #
JL-A1: 8082, 8270, OP, pH, M, CY, VOA	13:00	PCBs, Cyanide, pH, SVOAs, VOA, Hg, pesticides, reactivity,	48-72 hrs		783610412019

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Excavation	D	7:15	12:30	13:30	16:00	Excavation of Area "F"
Payloading	D	7:15	12:30	13:30	16:00	Payloading to soil staging area
PARSONS						
Project Oversight	D	7:15	12:30	13:30	16:00	Coordination with on-site personnel and subcontractors
Air Monitoring	D	7:15	12:30	13:30	16:00	PID and Dustrak systems
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	7:15	12:30	13:30	16:00		Soil excavation/site clearing
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	7:15	12:30	13:30	16:00		payloading soil
PARSONS									
Dustrak	yes	Dustrak II	ON-SITE	7:15	12:30	13:30	16:00		Air Monitoring
PID	yes	MINI-RAE 3000	ON-SITE	7:15	12:30	13:30	16:00		Air Monitoring

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time Out

Area "F" looking northeast prior to excavtation

Area "F" beginning excavation

Payloading excavated soil into stockpile area on top of Area "D"

Area "A" from which water samples were taken

Area "F" CAMP setup

Area "F" looking at excavation northeast

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/6/2018	**REPORT #:** 11

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy, Rain	Cloudy, rain
TEMPERATURE	38	42
WIND	SE 10-20 mph	SE 10-20 mph

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Backfill Area "F", Survey Areas B, C, E, F

DISCUSSIONS/COMMENTS: Work being completed as expected, survey results available within 2 hours of field work

ISSUES: Backfill material is ideal for compaction

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No Air monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/6/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Backfilling	D	7:15	12:30	13:30	16:00	Backfilling of Area "F"
Payloading	D	7:15	12:30	13:30	16:00	Payloading clean fill from stockpile to excavation area
PARSONS						
Project Oversight	D	7:15	12:30	13:30	16:00	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						
Thew Associates	D	7:00	10:00			Survey post-excavation in Areas B, C, E, F

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no.*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	7:15		12:30	13:30	16:00	Excavation backfilling
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	7:15		12:30	13:30	16:00	Payloading clean fill
PARSONS									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL	Clean sand from on-site	150 ton	backfill
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time Out

Area "F" looking north during first backfill load

Area "F" post backfill

Area "F" post backfill

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/7/2018	**REPORT #:** 12

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy, Rain	Cloudy, rain
TEMPERATURE	45	48
WIND	E/SE 0-5	E/SE 0-5

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Continue Backfilling Area "E", Begin Backfilling Areas "B" and "C"

DISCUSSIONS/COMMENTS: Work being completed as expected, material for backfill is excellent

ISSUES: Traffic and access to stockpile creates some minor delays due to demolition contractor scrap trucks. Less than one hour total delay from idling.

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No Air monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/7/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Backfilling	D	7:15	11:30	12:15	16:00	Backfilling of Areas E, B, and C
Payloading	D	7:15	11:30	12:15	16:00	Payloading clean fill from stockpile to excavation area
PARSONS						
Project Oversight	D	7:15	11:30	12:15	16:00	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	7:15		11:30	12:15	16:00	Excavation backfilling
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	7:15		11:30	12:15	16:00	Payloading clean fill
PARSONS									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL	Clean sand from on-site	200 ton	backfill
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

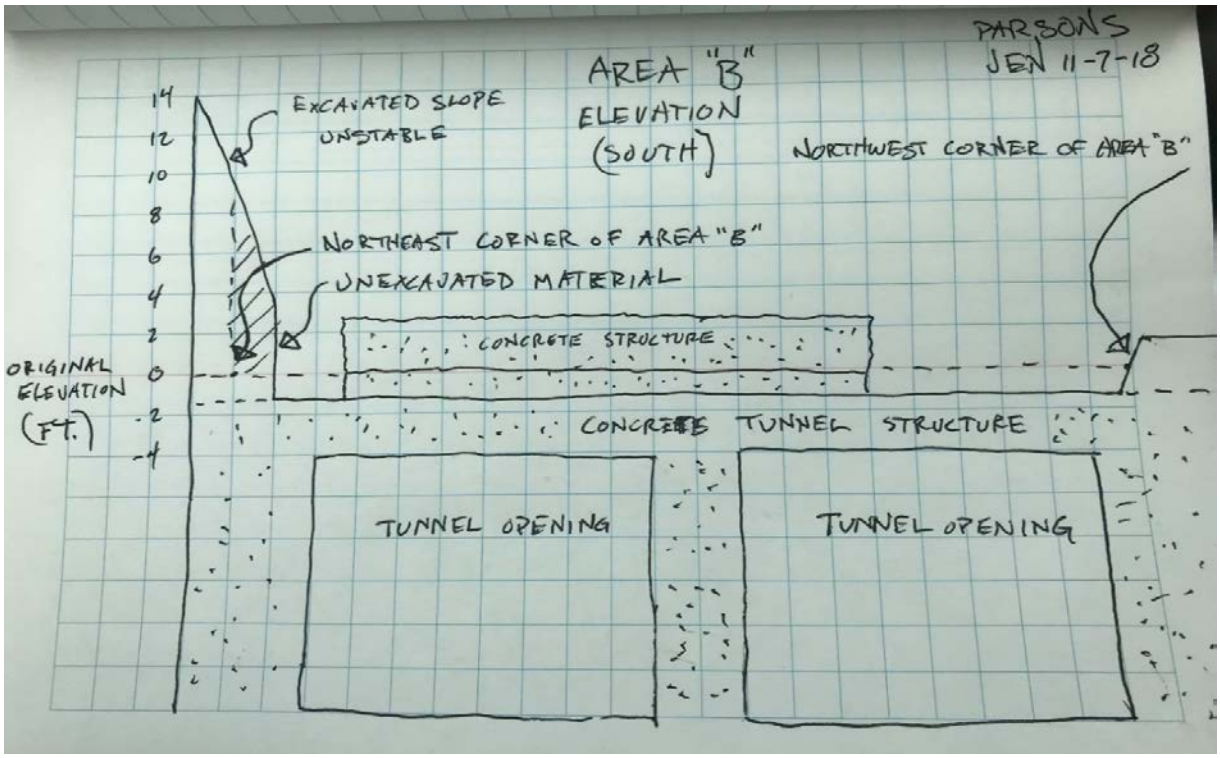
Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time Out

Area "E" looking East during backfilling

Area "E" looking East during backfilling

Area "B" looking North during backfilling

Area "B" looking West during backfilling



Section/Elevation Sketch depicting Area "B" looking Southeast and showing unstable slope on Northeast edge of excavation.
This condition created unsafe excavation area for removal of minimal volume of contaminated material

Area "E" post backfill

Area "B" looking East during backfilling

Area "B" showing uncontaminated surface water

Area "C" looking southwest during backfilling

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/8/2018	**REPORT #:** 13

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy	Cloudy
TEMPERATURE	38	42
WIND	E/SE 0-5	E/SE 0-5

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Continue backfilling Area "C", create dam to prevent additional water in Area "A"

DISCUSSIONS/COMMENTS:

ISSUES: Area "A" is completely inundated with water from nearby source, but dam creation prevents contamination of stream

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No Air monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/8/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Backfilling	D	8:00	9:00	9:25	11:30	Backfilling of Area C and dam creation
Payloading	D	8:00	9:00			Payloading clean fill from stockpile to excavation area
PARSONS						
Project Oversight	D	8:00	11:30			Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	8:00		11:30			Excavation backfilling
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	8:00		9:00			Payloading clean fill
PARSONS									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL	Clean sand from on-site	50 ton	backfill
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

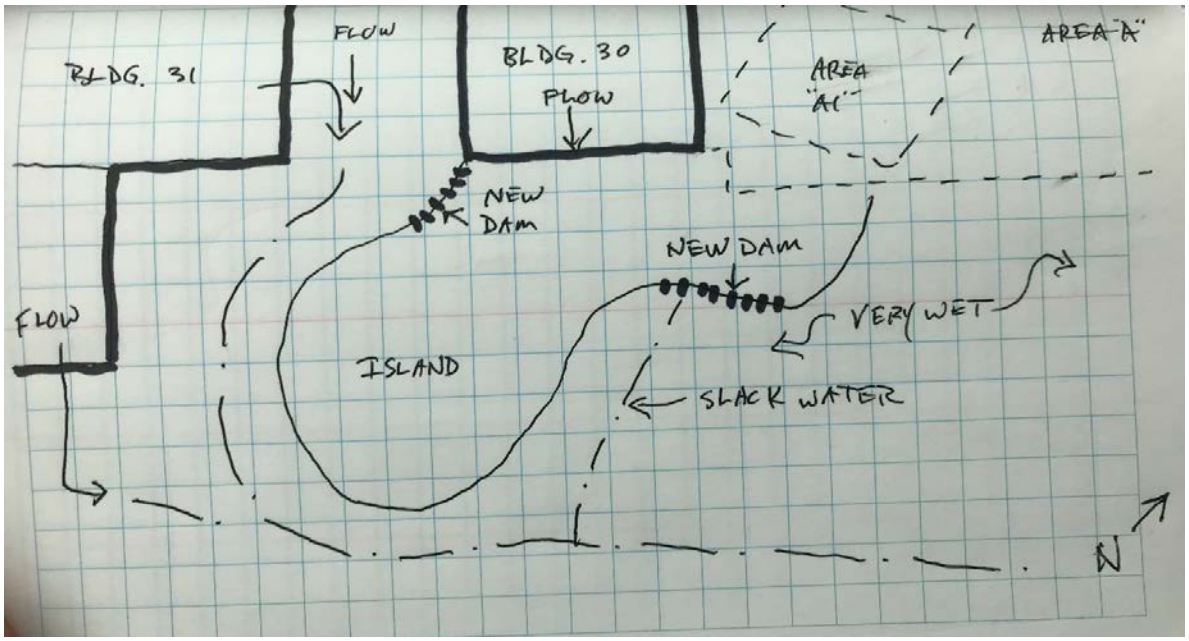
FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time Out



Area "A" Site Sketch depicting inundation

Area "C" looking East during backfilling

Area "A" looking North showing flooding in foreground

Area "A" looking North showing flooding in foreground

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/12/2018	**REPORT #:** 14

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Sunny	Sunny
TEMPERATURE	33	41
WIND	NA	NA

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Loading trucks from backfill stockpile and hauling to Area "A" staging

DISCUSSIONS/COMMENTS:

ISSUES: Stockpile will need to be regraded prior to demobilization due to steep slopes and access road must be improved after use. Minor filling and grading.

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No Air monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/12/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Backfilling	D	8:00	3:00			Excavation of stockpile and loading truck
Payloading	D	8:00	3:00			Pushing clean fill into large pile at Area A
PARSONS						
Project Oversight	D	8:00	3:00			Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	8:00		3:00			Excavation of clean fill stockpile
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	8:00		3:00			Payloading clean fill
PARSONS									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL	Clean sand from on-site	240-260 tons	backfill
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time Out

Clean fill stockpile being loaded for transport to Area A staging

Clean fill stockpile being loaded for transport to Area A staging

Area "A" looking North showing flooding in foreground

Area "A" looking North showing flooding in foreground

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, Albany, New York 12233 7014
Phone: (518) 402 9662 **FAX:** (518) 402 9679
Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/14/2018	**REPORT #:** 15

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy	Cloudy
TEMPERATURE	15	19
WIND	SW 5-10	SW 10-25

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Loading excavated non-hazardous waste soil from stockpiles into trucks for transfer to Rodman Landfill

DISCUSSIONS/COMMENTS: Area "A" non-haz completed first in order to provide suitable area for frac tank placement on Friday. Once "A" non-haz material is loaded, then relocation to Area "D" overall stockpile which contains spoils from Areas "B,C,D,E, and F". Ricelli Trucking provided 5 trucks for first load and 4 trucks for second load. Estimated volume removed is 190 c.y.

ISSUES: Once truck pup-trailer was damaged during loading because trailer cover was not retracted before partial bucket of soil was dumped into it. Cover was cleared of soil, retracted and loading resumed after short delay

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No Air monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/14/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Truck loading	D	7:00	9:30	12:15	15:30	Loading trucks and clearing area for Frac tanks
Payloading	D	7:00	9:30	12:15	13:30	Assist with truck loading
PARSONS						
Project Oversight	D	7:00	9:30	12:15	15:30	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	8:00	3:00				Loading trucks
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	8:00	3:00				Loading trucks
PARSONS									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING	Lining for Trucks and Trailers	4 Large rolls	Place liner inside truck and trailer body
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out
11/14/2018	A & D	Riccelli Trucking	NA	353/352/355/ 347/357	425/407/405/421/428	SW18-44	Rodman LF	13:30

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

Preparing Area "A" non-haz stockpile for loading

Clearing and grubbing area for frac tank placement and truck staging

Truck loading in Area "A" non-haz soils

Payloader scooping Area "D" non-haz soils for loading into trucks

Area "D" stockpile management during truck loading

Area "D" Stockpile loading

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Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/15/2018	**REPORT #:** 16

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy	Cloudy
TEMPERATURE	15	19
WIND	SW 5-10	SW 10-25

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Loading excavated non-hazardous waste soil from stockpiles into trucks for transfer to Rodman Landfill. One frac tank and one 4" dri-prime pump delivered to site for dewatering Area "A"

DISCUSSIONS/COMMENTS: Area "D" non-haz soil stockpile loaded onto Riccelli trucks with no issues. Estimated volume removed is 275 c.y. today or 460 c.y. from both days hauling

ISSUES: Ice in Area "A" and subarea "A1" may cause issues in pumping

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No Air monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/15/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor	D	13:00	14:30			Relocate Decon Pad
Truck loading	D	7:00	9:30	11:00	13:00	Loading trucks
Payloading	D	7:00	9:30	11:00	13:00	Assist with truck loading
PARSONS						
Project Oversight	D	7:00	9:30	11:00	13:00	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	7:00	9:30	11:00	13:00		Loading trucks
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	7:00	9:30	11:00	13:00		Loading trucks
Frac tank	Yes	Rain for Rent 21,000 gal.	10:00	na	na	na	na		
4" Dri-prime towable pump	Yes		10:00	na	na	na	na		
PARSONS									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING	Plastic lining	6 large rolls	Placed inside truck and trailer bodies
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out
11/15/2018	D	Riccelli Trucking	NA	344/354/353/ 355/352/357/ 347	425/407/405/421/428/ 408/427/	SW18-44	Rodman LF	13:30

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/16/2018	**REPORT #:** 17

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy	Cloudy
TEMPERATURE	22	27
WIND	S 5-10	S 5-10

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Landed two frac tanks from "Rain for Rent" in Area "A" after plowing access road.

DISCUSSIONS/COMMENTS: Preparations for pumping construction water are 50%. Water pump, hoses, and fittings to be installed Monday

ISSUES: 20" of snow fell from 12:00 a.m. to 6:30 a.m. causing significant slowdown in production due to no trucking availability. However, Monday Area "D" should be backfilled and "A" will be ready for pumping construction water.

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No Air monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/16/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor	D					
Truck loading	D					
Payloading	D	7:00	10:30			Snow Plowing
PARSONS						
Project Oversight	D	7:00	10:30			Coordination with on-site personnel and subcontractors
SUBS/VISITORS						
Rain For Rent Trucking		8:00	10:00			

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE						
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	7:00		10:30			Snow Plowing
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	8:00	na	na	na	na		
4" Dri-prime towable pump	Yes		10:00	na	na	na	na		
PARSONS									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out
11/15/2018	D	Riccelli Trucking	NA	344/354/353/ 355/352/357/ 347	425/407/405/421/428/ 408/427/	SW18-44	Rodman LF	13:30

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

Frac Tank backing into excavation area

Frac Tank backing into excavation area

Third Frac tank being landed

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/19/2018	**REPORT #:** 18

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Sunny	Sunny
TEMPERATURE	35	37
WIND	W 5-10	W 10-15

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Area "D" backfill and compaction activities including hauling 4 loads (truck and pup trailer) of soil Backfill completed around noon, and preparations for stockpile of backfill in area A begun east of excavation

DISCUSSIONS/COMMENTS:

ISSUES:

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No Air monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/19/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor						
Excavation	D	7:15	11:15	12:30	3:00	Backfill and compact clean soil and prep backfill area
Payloading	D			12:30	3:00	Move backfill
PARSONS						
Project Oversight	D			12:15	3:00	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	7:15	11:15	12:30	3:00		Backfill
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	12:15	4:30	12:30	3:00		Backfill
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	ON-SITE						
4" Dri-prime towable pump	Yes		ON-SITE						
PARSONS									
PID Air Monitor									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out
11/15/2018	D	Riccelli Trucking	NA	344/354/353/ 355/352/357/ 347	425/407/405/421/428/ 408/427/	SW18-44	Rodman LF	13:30

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

Pump prepared for action on pad beside area "A1"

Area A clear and prepped for additional backfill storage

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Phone: (518) 402 9662 **FAX:** (518) 402 9679
Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/20/2018	**REPORT #:** 19

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy	Rain/Snow mix
TEMPERATURE	35	27
WIND	W 0-5	W 10-15

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Loading of Riccelli trucks with non-haz waste in Area "A"

DISCUSSIONS/COMMENTS: Estimated 630 c.y. removed from site to date. Remainder is only in Area "A" beneath and adjacent pump pad. Water to be pumped
TSCA material is covered and ready for disposal after pumping and excavation Tuesday

ISSUES:

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS: PID levels all below 0.1 ppm over background

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/20/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor	D					
Excavation	D	7:30	11:45	12:15	1:30	Load contaminated soil into trucks
Payloading	D	7:30	11:45	12:15	1:30	Load contaminated soil into trucks
PARSONS						
Project Oversight	D	7:30	11:45	12:15	1:30	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	7:30	11:45	12:15	1:30		Truck Loading
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	7:30	11:45	12:15	1:30		Truck Loading
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	ON-SITE						
4" Dri-prime towable pump	Yes		ON-SITE						
PARSONS									
PID Air Monitor									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out
11/15/2018	D	Riccelli Trucking	NA	344/354/353/ 355/352/357/ 347	425/407/405/421/428/ 408/427/	SW18-44	Rodman LF	13:30

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

Pililing non-haz material in Area A for payloading to truck

Payloading into trucks

Clean Backfill being added to northeast corner of area A after excavation

Clean Backfill being compacted to northeast corner of area A after excavation

Stained soil and oil sheen in Area "A1"

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Division of Environmental Remediation
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Phone: (518) 402 9662 **FAX:** (518) 402 9679
Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/26/2018	**REPORT #:** 20

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy	Rain/Snow mix
TEMPERATURE	35	27
WIND	W 0-5	W 10-15

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Pumping of construction water in Area "A" and "A1" into frac tanks and excavation of additional contaminated soils in area "A1" for storage in TSCA area stockpile. Pumped an estimated 40,000 gallons of contaminated water prior to additional excavation
Ice covered surface of pond required some management by moving ice to non-haz area for later removal with non-haz soils
Estimated additional 3' of removal in Area "A1" making total removal in this area near 4' below original grade.

DISCUSSIONS/COMMENTS: Sampling conducted twice. Once after removing 2' additional material and a once after an additional 1' until exposed soil showed no significant staining and exhibited no significant odor. PID headspace readings from 2' samples were from 1.1 ppm over background to 3.8 ppm over background

ISSUES: Wet, frozen, icy, muddy conditions persisted all day and required extra caution in excavation and loading area, but created no major safety issues or incidents

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No Air monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/26/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #
JL-A1-A2 throug JL-A1-H2	0:00	8082	48 hours		920214790082

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor	D	8:30	11:30	12:15	4:30	4" DriPrime Pump
Excavation	D			12:15	4:30	Excavate contaminated soil
Payloading	D			12:15	4:30	Relocate contaminated soil
PARSONS						
Project Oversight	D	8:30	11:30	12:15	4:30	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	12:15	4:30				
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	12:15	4:30				Snow Plowing
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	ON-SITE	8:30	11:30	12:15	4:30		
4" Dri-prime towable pump	Yes		ON-SITE	8:30	11:30	12:15	4:30		
PARSONS									
PID Air Monitor									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

Pumping begins in area A1

Ice sheets collapse once pumping begins

Partial excavation of additional soil

Excavation refilled by construction water after initial additional excavation

PID reading headspace on 2' additional removal sample

Additional 1' removal after pumping for second time

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, Albany, New York 12233 7014
Phone: (518) 402 9662 **FAX:** (518) 402 9679
Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/28/2018	**REPORT #:** 21

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Light Snow 8" on ground	Light Snow 8" on ground
TEMPERATURE	29	29
WIND	W 0-5	NW 5-10

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Removed non-haz soil from Area "A". Backfill as needed.

DISCUSSIONS/COMMENTS: Poor weather caused delay of water removal truck.
TSCA Material estimated at <200 ton

ISSUES:

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS: PID levels all below 0.1 ppm over background

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/28/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor	D					
Excavation	D	8:00	12:00			Load contaminated soil into trucks
Payloading	D	8:00	12:00			Load contaminated soil into trucks
PARSONS						
Project Oversight	D	8:00	12:00			Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	8:00	12:00				Truck Loading
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	8:00	12:00				Truck Loading
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	ON-SITE						
4" Dri-prime towable pump	Yes		ON-SITE						
PARSONS									
PID Air Monitor									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

General Site Conditions with TSCA excavation on Left

Payloading into trucks

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 11/29/2018	**REPORT #:** 22

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Light Snow- 6" new snow	Light Snow
TEMPERATURE	28	30
WIND	NA	NA

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Plow access road to excavation and sand pit and remove debris/fallen trees.
Excavate and haul sand from pit to Area "A" and pump stored construction water from frac tanks to 5500 gallon truck.

DISCUSSIONS/COMMENTS:

ISSUES:

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
11/29/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor	D					
Excavation	D	7:30	11:45	12:15	2:00	Load backfill into truck
Payloading	D	7:30	11:45	12:15	2:00	Move backfill once dumped
PARSONS						
Project Oversight	D	7:30	11:45	12:15	2:00	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no.*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	7:30	11:45	12:15	1:30		Truck Loading
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	7:30	11:45	12:15	1:30		Truck Loading
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	ON-SITE						
4" Dri-prime towable pump	Yes		ON-SITE						
PARSONS									
PID Air Monitor									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Tractor/ Dump Plate	Trailer/Pup Plate Number	Manifest ID	Destination (Facility, Town, State)	Time Out
11/29/2018	A	Sun Environmental					Oriskany Falls, NY	13:30

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

Stockpiled backfill near Area "A"

Backfill staging at edge of Area "A"

Backfill staging at edge of Area "A"

Construction water pump truck arrives

Pumping of water

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Division of Environmental Remediation
625 Broadway, Albany, New York 12233 7014
Phone: (518) 402 9662 **FAX:** (518) 402 9679
Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 12/3/2018	**REPORT #:** 23

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Steady Rain	Steady Rain
TEMPERATURE	39	43
WIND	SW	SW

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: TSCA soil loaded into semi-trailers for transport to US Ecology. Page Trucking received estimate 100 tones of material into four trucks/trailers. TSCA soil staging area was also managed for runoff and dewatering
PARSONS signed as Agent for NYSDEC on Uniform Hazardous Waste Manifests

DISCUSSIONS/COMMENTS: Steady rain caused significant issues with TSCA soil once it was uncovered, then drier soil towards material that had been stored for longer. Slick conditions and some trucks getting temporarily stuck.

ISSUES: Water continued to infiltrate Excavation Area "A1" through permeable backfill and overtopped adjacent backfill to create potential for recontamination of clean areas. TREC used 50-75 c.y. of clean material to slowly displace accumulated construction water in "A" on SW edge (previously unfilled due to safety concern) Created a temporary road for excavator to access this area, fill and settle backfill. This created a complete backfill perimeter around Area "A1" to prevent further water intrusion. Building 30 was source of additional water and was 8-10" deep; whereas previously no water was present in building.

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS: No deviations above 0.2 ppm above background

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
12/3/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor	D					
Excavation	D	6:45	12:30	13:15	15:00	Load TSCA soil into trucks and backfill Area A to prevent more flooding
Payloading	D					
PARSONS						
Project Oversight	D	6:45	12:30	13:15	15:00	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no., etc.)*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	6:45	12:30	13:15	15:00		Truck Loading
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE						
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	ON-SITE						
4" Dri-prime towable pump	Yes		ON-SITE						
PARSONS									
PID Air Monitor									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Quantity	Waste Codes	Manifest ID	Destination (Facility, Town, State)	Time Out
12/3/2018	A1	Page ETC Trucking	RQ, UN3432, PCBs, Solid, 9, PGII ERG, #171	20000 KG	B007, PCB1, NORM	012728989 FLE	Wayne Disposal, Inc Site #2 Landfill, 49350 N I-94 Service Drive, Belleville, MI 48111	7:50
12/3/2018	A1	Page ETC Trucking	See Above	See Above	See Above	012728990 FLE	See Above	8:25
12/3/2018	A1	Page ETC Trucking	See Above	See Above	See Above	012728991 FLE	See Above	8:45
12/3/2018	A1	Page ETC Trucking	See Above	See Above	See Above	012728992 FLE	See Above	10:21
12/3/2018	A1	Page ETC Trucking	See Above	See Above	See Above	012728993 FLE	See Above	10:45

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

Trucking begins for TSCA soil

Excavator berming around TSCA Material to prevent runoff of construction water

Page Trucking accepting TSCA soil

View inside poly-lined trailer being loaded with TSCA soils

HAZ certification

Construction Water flooding in Area "A1"

Backfill placed to prevent additional flooding

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Phone: (518) 402 9662 **FAX:** (518) 402 9679
Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 12/4/2018	**REPORT #:** 24

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Lt. Snow	Snow
TEMPERATURE	17	19
WIND	NA	NA

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: TSCA soil loaded into semi-trailers for transport to US Ecology. US Bulk Transport Inc. received 30 tones of material into two trucks/trailers.
PARSONS signed as Agent for NYSDEC on Uniform Hazardous Waste Manifests

DISCUSSIONS/COMMENTS: Area "A1" appeared to be isolated from further flooding

ISSUES:
No water disposal trucks available, none expected until tomorrow.

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS: No deviations above 0.3 ppm above background

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
12/4/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor	D					
Excavation	D	8:00	12:30			Load TSCA soil into trucks, regrade TSCA soil staging area
Payloading	D					
PARSONS						
Project Oversight	D	8:00	12:30			Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no., etc.)*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	8:00	12:30				Truck Loading
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE						
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	ON-SITE						
4" Dri-prime towable pump	Yes		ON-SITE						
PARSONS									
PID Air Monitor									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
ACETYLENE			
CRUSHER RUN			
CLEAN FILL			
TOPSOIL			
PLASTIC SHEETING			
Yellow Tyvek			
respirators			
duct tape			
5 GAL PAIL W/LID			
55 GAL DRUM			
85 GAL OVERPACK DRUM			
DRUM LINERS			
SPEEDY DRY (40 LB BAG)			
ORANGE FENCING			
DEMARCATION FABRIC			
SILT FENCE			
EXCLUSION AREA TAPE			
		PARSONS	
5 GAL PAIL W/LID			
DI WATER			
ICE			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Quantity	Waste Codes	Manifest ID	Destination (Facility, Town, State)	Time Out
12/4/2018	A1	US Bulk Transport Inc.	RQ, UN3432, PCBs, Solid, 9, PGII ERG, #171	20000 KG	B007, PCB1, NORM	012728694 FLE	Wayne Disposal, Inc Site #2 Landfill, 49350 N I-94 Service Drive, Belleville, MI 48111	10:30
12/4/2018	A1	US Bulk Transport Inc.	See Above	See Above	See Above	012728695 FLE	See Above	11:45

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

Trucking begins for TSCA soil

Final truck being loaded

Truck view showing correct plackard for DOT

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Division of Environmental Remediation
625 Broadway, Albany, New York 12233 7014
Phone: (518) 402 9662 **FAX:** (518) 402 9679
Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 12/5/2018	**REPORT #:** 25

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Lt. Snow	Lt. Snow
TEMPERATURE	22	25
WIND	W 5-10	W 5-10

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Pumping construction water from frac tanks into tanker trucks and repair to TSCA staging area
11,000 gallons removed today; estimated 22,000 gallons removed total; estimated 25,000 gallons to be removed after pumping Area "A1" tomorrow
PARSONS and TREC signed as Agent bills of lading for water disposal to Industrial Oil

DISCUSSIONS/COMMENTS:
Two trucks per day is insufficient to prevent complete freezing of frac tanks, must encourage TREC to hire additional trucking company, find alternative means for preventing freezing

ISSUES:
Frac tanks developing 1-2" of ice on top of water

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
12/5/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor	D	8:30	11:30	12:05	14:00	Provide pump and labor to fill trucks
Excavation	D					
Payloading	D					
PARSONS						
Project Oversight	D	8:30	11:30	12:05	14:00	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no., etc.)*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE						Truck Loading
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE						
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	ON-SITE						
4" Dri-prime towable pump	Yes		ON-SITE						
3" trash pump	Yes	TREC	8:30						Truck loading
PARSONS									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Quantity	Waste Codes	Manifest ID	Destination (Facility, Town, State)	Time Out
12/5/2018	A1	Page ETC	Non-RCRA/Non-DOT Regulated Liquid	5000 gallons		JLS181206	Industrial Oil Tank SVC Corp., 120 Dry Road, Oriskany, NY 13424	10:30
12/5/2018	A1	Sun Environmental	See Above	5500 gallons		Unknown	See Above	13:00

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

Page Trucking arrived and begin pumping

Page truck information

Image showing connection from frac tank to trash pump, and thawing valve

Sun Env. Trucking informatio

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Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 12/6/2018	**REPORT #:** 26

SITE NAME: FORMER J & L STEEL SITE

SITE LOCATION: ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU

TREC PROJECT MANAGER: KEITH HAMBLEY

PARSONS PROJECT MANAGER: MATT VETTER

PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Heavy Snow	Heavy Snow
TEMPERATURE	21	24
WIND	W 5-10	W 5-10

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Pumping construction water from area A1 into frac tanks, excavate area A1 to remove PCB imp soils and survey depth of excavation, Page trucking removes 5000 gallons if impacted water

DISCUSSIONS/COMMENTS:
Water pumping revealed stained soils, excavation removed stained soils

ISSUES:
Heavy snow up to 2" per hour during entire work day

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
12/6/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #
JL-A1-A3 through JL-A1-H3	12:00	8082	48 hrs		466388174554

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor	D	7:00	12:25	13:30	14:00	Provide pump and labor to fill trucks
Excavation	D	10:00	12:00			Excavate Area A1 after water is pumped
Payloading	D	7:00	8:30			Clear snow for access
PARSONS						
Project Oversight	D	7:00	12:25	13:30	14:00	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						
Thew Assoc	D	9:30	10:30			Post excavation survey

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no., etc.)*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	10:00	12:00				Excavation Area A1
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	7:00	8:30				
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	ON-SITE						Receive water from Area A1
4" Dri-prime towable pump	Yes		ON-SITE	7:30	10:00				Pump Area A1
3" trash pump	Yes	TREC	8:30						Truck loading
PARSONS									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Quantity	Waste Codes	Manifest ID	Destination (Facility, Town, State)	Time Out
12/5/2018	A1	Page ETC	Non-RCRA/Non-DOT Regulated Liquid	5000 gallons		JLS181206	Industrial Oil Tank SVC Corp., 120 Dry Road, Oriskany, NY 13424	10:30
12/5/2018	A1	Sun Environmental	See Above	5500 gallons		Unknown	See Above	13:00

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

Begin pumping Area A1

Site conditions

Side slope stabilization on edge of Area A1 with backfill

Image showing frac tank/pump configuration

Stained soil removal from Area A1

Thew Associates survey of post excavation area A1

New York State Department of Environmental Conservation
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Phone: (518) 402 9662 **FAX:** (518) 402 9679
Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 12/7/2018	**REPORT #:** 27

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Heavy Snow	Snow
TEMPERATURE	10	13
WIND	NA	S 0-5

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Plow access roads, thaw frac tank valves and pump water into tank trucks. Estimated 5000 gal.

DISCUSSIONS/COMMENTS:

ISSUES:
Too much work for one only one truck of disposal. However, weather issues are major safety concern.

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
12/7/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #
JL-A1-A3 through JL-A1-H3	12:00	8082	48 hrs		466388174554

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor	D	8:00	11:30			Provide pump and labor to fill trucks
Excavation	D					
Payloading	D	8:00	9:00			Clear snow for access
PARSONS						
Project Oversight	D	8:00	11:30			Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no., etc.)*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE						
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	8:00	9:00				Clear snow
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	ON-SITE						Receive water from Area A1
4" Dri-prime towable pump	Yes		ON-SITE	8:00	11:00				
3" trash pump	Yes	TREC	8:30						Truck loading
PARSONS									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Quantity	Waste Codes	Manifest ID	Destination (Facility, Town, State)	Time Out
12/5/2018	A1	Page ETC	Non-RCRA/Non-DOT Regulated Liquid	5000 gallons		JLS181206	Industrial Oil Tank SVC Corp., 120 Dry Road, Oriskany, NY 13424	10:30
12/5/2018	A1	Sun Environmental	See Above	5500 gallons		Unknown	See Above	13:00

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

Pump set up from frac tank to truck

Thawing truck tank main valve

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 12/11/2018	**REPORT #:** 28

SITE NAME: FORMER J & L STEEL SITE

SITE LOCATION: ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU

TREC PROJECT MANAGER: KEITH HAMBLEY

PARSONS PROJECT MANAGER: MATT VETTER

PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Light Snow	Snow
TEMPERATURE	22	26
WIND	NA	NA

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Plow access roads, thaw frac tank valves and pump water into tank trucks. Estimated 9500 gal.

DISCUSSIONS/COMMENTS:
TREC used two kerosene salamanders to accelerate thawing of ice in frac tanks

ISSUES:

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
12/11/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor	D	8:00	11:30	12:00	16:30	Provide pump and labor to fill trucks
PARSONS						
Project Oversight	D	8:00	11:30	12:00	16:30	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no., etc.)*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE						
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE						
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	ON-SITE						
4" Dri-prime towable pump	Yes		ON-SITE						
3" trash pump	Yes	TREC	ON-SITE	11:30	12:00	16:30			Thawing, circulating tank
Portable gasoline generators (2) 4500	Yes	TREC	8:00	11:30	12:00	16:30			Thawing, circulating tank
Kerosene Salamanders (2)	Yes	TREC	8:00	11:30	12:00	16:30			Thawing, circulating tank
PARSONS									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Quantity	Waste Codes	Manifest ID	Destination (Facility, Town, State)	Time Out
12/11/2018	A1	Page ETC	Non-RCRA/Non-DOT	5000 gallons			Industrial Oil Tank SVC Corp., 120 Dry Road, Oriskany, NY 13424	10:30
12/11/2018	A1	Sun	See Above	5500 gallons			See Above	13:00

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

3" trash pump and heating equipment

Solid ice

Kerosene salamander inside frac tank

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 12/12/2018	**REPORT #:** 29

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy	Cloudy
TEMPERATURE	17	20
WIND	NA	NA

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Thaw frac tanks, use heated pressure washer to recirculate water
Analytical results received from laboratory confirming clean samples. Backfill to be completed.

DISCUSSIONS/COMMENTS:
TREC used two kerosene salamanders to accelerate thawing of ice in frac tanks, TREC brought in two additional laborers to assist in decon and draining of frac tanks

ISSUES:

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
12/12/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Operator	D	11:00	12:30			Backfill Area A1
Labor	D	6:30	11:30	12:00	15:30	Thaw and recirculate water in frac tanks
Labor	D	6:30	11:30	12:00	15:30	Thaw and recirculate water in frac tanks
PARSONS						
Project Oversight	D	6:30	11:30	12:00	15:30	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no., etc.)*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	11:00	12:30				Backfill Area A1
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE						
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	ON-SITE						
Mi-T-M Heater/Pressure washer	Yes	TREC	6:30	11:30	12:00		16:30		Thawing, circulating tank water
4" Dri-prime towable pump	Yes		ON-SITE						
3" trash pump	Yes	TREC	ON-SITE						
Portable gasoline generators (2) 4500	Yes	TREC	ON-SITE	11:30	12:00		16:30		Thawing, circulating tank
Kerosene Salamanders (2)	Yes	TREC	ON-SITE	11:30	12:00		16:30		Thawing, circulating tank
PARSONS									

Backfill completed

Heater/pressure washer thawing

Backfill 75% complete

Backfilled Area A1

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 12/13/2018	**REPORT #:** 30

SITE NAME: FORMER J & L STEEL SITE

SITE LOCATION: ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU

TREC PROJECT MANAGER: KEITH HAMBLEY

PARSONS PROJECT MANAGER: MATT VETTER

PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy	Cloudy
TEMPERATURE	19	22
WIND	NA	NA

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Thaw frac tanks, use heated pressure washer to recirculate water

DISCUSSIONS/COMMENTS:

ISSUES:

HEALTH AND SAFETY:

LEVEL OF PROTECTION: PPE LEVEL D

IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO

LIST DEVIATIONS: NO DEVIATIONS

ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO

LIST DEVIATIONS: No monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
12/13/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor	D	7:30	11:30	12:00	14:00	Thaw and recirculate water in frac tanks
Labor	D	7:30	11:30	12:00	14:00	Thaw and recirculate water in frac tanks
Labor	D	7:30	11:30	12:00	14:00	Thaw and recirculate water in frac tanks
PARSONS						
Project Oversight	D	7:30	11:30	12:00	14:00	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no., etc.)*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	11:00	12:30				Backfill Area A1
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE						
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	ON-SITE						
Mi-T-M Heater/Pressure washer	Yes	TREC	7:30	11:30	12:00		14:00		Thawing, circulating tank water
4" Dri-prime towable pump	Yes		ON-SITE						
3" trash pump	Yes	TREC	ON-SITE						
Portable gasoline generators (2) 4500	Yes	TREC	7:30	11:30	12:00		14:00		Thawing, circulating tank
Kerosene Salamanders (2)	Yes	TREC	7:30	11:30	12:00		14:00		Thawing, circulating tank
PARSONS									

Backfill completed

Heater/pressure washer thawing

Backfill 75% complete

Backfilled Area A1

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 12/14/2018	**REPORT #:** 31

SITE NAME: FORMER J & L STEEL SITE

SITE LOCATION: ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: WILLIAM WU

TREC PROJECT MANAGER: KEITH HAMBLEY

PARSONS PROJECT MANAGER: MATT VETTER

PARSONS FIELD CONTACT: JEREMY NEUMANN

	AM	**PM**
WEATHER	Cloudy	Cloudy
TEMPERATURE	19	22
WIND	NA	NA

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Thaw frac tanks, use heated pressure washer to recirculate water
Removal of ice buildup, removal of 1400 gallons of contaminated water and sediment by using a vac truck (EPS). Alconox and hot water decontamination of frac tan
Alconox decontamination of loader and excavator bucket after loading last 36 tons of non-haz soil into Riccelli truck and trailer. Wipe samples taken from buckets.

DISCUSSIONS/COMMENTS:
3 Frac tanks, 4" pump, hoses, decon pad fabric, drum with transformers left of site

ISSUES:

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [ ] YES [ ] NO
LIST DEVIATIONS: No monitoring conducted

SITE REPRESENTATIVE:
Jeremy Neumann
REPRESENTATIVE SIGNATURE:

DATE:
12/14/2018

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #
Wipe Sample conducted by TREC	14:00				

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor/Operator	D	6:00	11:30	12:00	16:00	Drain and clean tanks, load soil, general cleanup
Labor	D	6:00	11:30	12:00	16:00	Drain and clean tanks, load soil, general cleanup
Labor	D	6:00	11:30	12:00	16:00	Drain and clean tanks, load soil, general cleanup
PARSONS						
Project Oversight	D	6:00	11:30	12:00	16:00	Coordination with on-site personnel and subcontractors
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no., etc.)*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Komatsu 138 Excavator	Yes	Komatsu 138, 60 hp	ON-SITE	12:00	1:00				Load soil into trucks
Weel loader	Yes	Komatsu 271, 100 hp	ON-SITE	12:00	1:00				Load soil into trucks
Frac tank (2)	Yes	Rain for Rent 21,000 gal.	ON-SITE						
Mi-T-M Heater/Pressure washer	Yes	TREC	7:30	11:30	12:00		14:00		Cleaning tanks
4" Dri-prime towable pump	Yes		ON-SITE						
3" trash pump	Yes	TREC	ON-SITE						
Portable gasoline generators (2) 4500	Yes	TREC	7:30	11:30	12:00		14:00		Thawing, circulating tank
Kerosene Salamanders (2)	Yes	TREC	7:30	11:30	12:00		14:00		Thawing, circulating tank
PARSONS									

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Quantity	Waste Codes	Manifest ID	Destination (Facility, Town, State)	Time Out
12/14/2018	A	Riccelli		36 ton	na	94923	Rodman	13:00

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time

Frac tank pumping to vac truck

Decon of frac tanks

Non-haze soil loading

Decon of frac tanks

Clean tank

Bucket decon

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 8/8/2019	**REPORT #:** 32

SITE NAME: FORMER J & L STEEL SITE **SITE LOCATION:** ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: RANDY WHITCHER **TREC PROJECT MANAGER:** KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: MEGAN CLARK

	AM	**PM**
WEATHER	Partly Cloudy	Partly Cloudy
TEMPERATURE	67	78
WIND	SW at 6 mph	SW at 6 mph

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Thew surveys current elevations and marks out boundaries of planned Area C excavation. TREC begins excavating in Area C and hits significant amounts of demolition material (black soil, concrete, and rebar). TREC does not think that mini excavator can handle large concrete blocks and decides to stop work with current machine and try to get a larger one.

DISCUSSIONS/COMMENTS:
TREC leaving mini excavator at site to be loaded up tomorrow.

ISSUES:
Broken hydraulic line on mini excavator requirs stopping to get part and repair. TREC is not able to complete removal of demolition material with current excavator a will need to find a larger machine.

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS:

SITE REPRESENTATIVE:
Megan Clark
REPRESENTATIVE SIGNATURE:

DATE:
8/8/2019

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #
None					

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor/Operator	D	7:50	16:45			Remove demolition material from Area C; obtain replacement part and repair mini excavator
Labor	D	7:50	16:45			Use loader to push demolition material out of the way; obtain replacement part and repair mini excavator
PARSONS						
Project Oversight	D	7:45	16:45			Coordination with on-site personnel and subcontractors; CAMP
SUBS/VISITORS						
Surveryor	D	7:45	11:30			Survey area to determine excavation extent and current elevation.
Randy Whitcher	D	10:45	15:30			From NYSDEC; Observing excavation
Sean Howard	D	10:45	15:30			From NYSDEC; Observing excavation

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no., etc.)*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Kubota Mini Excavator	Yes	Kubota KK121-3	ON-SITE	9:00	11:00	15:00	16:00		Excavate in area C
Doosan Loader	Yes	Doosan DL200	ON-SITE	9:00	11:00				Push demolition material out of the
PARSONS									
DustTrak (x2)	Yes	DustTrak II	7:45	9:00	11:30	15:00	16:00		Air Monitoring
PID (x3)	Yes	Mini Rae 3000	7:45	9:00	11:30	15:00	16:00		Air Monitoring

Area C prior to removing demolition debris and beginning excavation, facing east.

Removing demolition material from Area C.

Excavating demolition material.

Example of large concrete blocks and rebar.

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 8/12/2019	**REPORT #:** 33

SITE NAME: FORMER J & L STEEL SITE

SITE LOCATION: ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: RANDY WHITCHER
TREC PROJECT MANAGER: KEITH HAMBLEY
PARSONS PROJECT MANAGER: MATT VETTER
PARSONS FIELD CONTACT: MEGAN CLARK

	AM	**PM**
WEATHER	Sunny	Sunny
TEMPERATURE	59	77
WIND	SW at 6 mph	SW at 6 mph

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Remove and stockpile overburden demolition material. Remove and stockpile top 1 ft of impacted soil on poly sheeting, awaiting transport and disposal. Cover impacted soil with poly sheeting for the night.

DISCUSSIONS/COMMENTS:
Impacted soil placed on poly sheeting and covered until disposal tomorrow morning.

ISSUES:
Encountered large (20 x 8 x 2 ft) block of concrete along north/northwest of excavation; unable to move with current equipment and will have to rent jackhammer if it needs to be removed.

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS:

SITE REPRESENTATIVE:
Megan Clark
REPRESENTATIVE SIGNATURE:

DATE:
8/12/2019

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #
None					

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor/Operator	D	7:30	12:00	12:30	15:00	Remove demolition material from Area C; excavate and stockpile impacted material.
Labor	D	7:50	12:00	12:30	15:00	Assisting with excavation of Area C and stockpiling of impacted material.
PARSONS						
Project Oversight	D	7:50	12:00	12:30	15:00	Coordination with on-site personnel and subcontractors; CAMP
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no., etc.)*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Kobelco Excavator	Yes	Kobelco Mark 17	7:30	8:00	12:00	12:30	14:45		Excavate in area C
PARSONS									
DustTrak (x2)	Yes	DustTrak II	7:30	8:00	15:00				Air Monitoring
PID (x3)	Yes	Mini Rae 3000	7:30	8:00	15:00				Air Monitoring

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
		TREC	
Poly sheeting	Staging and cover for stockpiled soil		
		PARSONS	
None			

Removing demolition debris.

Stockpile of impacted soil.

Large piece of concrete and rebar on north/northwest side of excavation.

Excavation at the end of the day, facing northwest.

Excavation at the end of the day, facing east.

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, Albany, New York 12233 7014
Phone: (518) 402 9662 **FAX:** (518) 402 9679
Website: www.dec.state.ny.us

DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 8/13/2019	**REPORT #:** 34

SITE NAME: FORMER J & L STEEL SITE

SITE LOCATION: ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: RANDY WHITCHER

TREC PROJECT MANAGER: KEITH HAMBLEY

PARSONS PROJECT MANAGER: MATT VETTER

PARSONS FIELD CONTACT: MEGAN CLARK

	AM	**PM**
WEATHER	Cloudy	Cloudy
TEMPERATURE	66	76
WIND	SSW at 3 mph	SSW at 3 mph

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Thew (surveyor) confirms excavation elevations and extent. After initial survey, additional material is removed from western side and northeast corner to meet elevation requirements. Elevations confirmed by surveyor. Three trucks plus three trailers loaded with excavated soil and sent to Rodman landfill for disposal. Six truckloads of sand brought from borrow pit as backfill. Begin grading area with previously removed overburden material.

DISCUSSIONS/COMMENTS:
NYSDEC confirms that concrete block in north/northwest side of excavation does not need to be removed.

ISSUES:
None

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS:

SITE REPRESENTATIVE:
Megan Clark
REPRESENTATIVE SIGNATURE:

DATE:
8/13/2019

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #
None					

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor/Operator	D	6:30	15:00			Load trucks with excavated soil; retrieve backfill material from borrow pit; backfill excavation and grade with demo material.
Labor	D	6:30	15:00			Coordinating with truck drivers and operator.
PARSONS						
Project Oversight	D	6:30	15:00			Coordination with on-site personnel and subcontractors; CAMP.
SUBS/VISITORS						
Surveyor	D	7:45	9:45			Confirming final excavation extent and elevations.

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no., etc.)*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Kobelco Excavator	Yes	Kobelco Mark 17	On-site	6:30am	15:00				Load trucks with excavated material and backfill/grade.
PARSONS									
DustTrak (x2)	Yes	DustTrak II	7:30	8:00	15:00				Air Monitoring
PID (x3)	Yes	Mini Rae 3000	7:30	8:00	15:00				Air Monitoring

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

MATERIALS:

MATERIAL	DESCRIPTION	APPROX QTY	TASKS PERFORMED
TREC			
Poly sheeting	Staging for stockpiled soil		
PARSONS			
None			

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

DISPOSAL:

Date	Exc. Area	Hauler	Part 364 ID No.	Quantity	Waste Codes	Manifest ID	Destination (Facility, Town, State)	Time Out
8/13/2019	C	Ricelli		~30 cy		090845	Rodman	7:15
8/13/2019	C	Ricelli		~30 cy		090842	Rodman	7:30
8/13/2019	C	Ricelli		~30 cy		090846	Rodman	10:45

IMPORT:

Date	Hauler	Material Type	Tractor/	Trailer/Pup Plate	Origin	Ticket/Bill of	Time In	Time
8/13/19	Ricelli	Backfill sand	56853-ML	NA	Borrow Pit	NA	11:35	11:40
8/13/19	Ricelli	Backfill sand	56853-ML	NA	Borrow Pit	NA	11:50	11:55
8/13/19	Ricelli	Backfill sand	56853-ML	NA	Borrow Pit	NA	12:05	12:10
8/13/19	Ricelli	Backfill sand	56853-ML	NA	Borrow Pit	NA	12:20	12:25
8/13/19	Ricelli	Backfill sand	56853-ML	NA	Borrow Pit	NA	12:30	12:35
8/13/19	Ricelli	Backfill sand	56853-ML	NA	Borrow Pit	NA	12:40	12:45

Excavation during survey, facing northwest.

Loading a truck for disposal at Rodman Landfill.

Dumping backfill material.

Backfilling excavation.

Grading with demo material.

Site conditions at the end of the day.

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DAILY ACTIVITY REPORT

SITE CODE:	**DATE:** 8/14/2019	**REPORT #:** 35

SITE NAME: FORMER J & L STEEL SITE

SITE LOCATION: ROUTE 3, STAR LAKE, NY

DEC PROJECT MANAGER: RANDY WHITCHER

TREC PROJECT MANAGER: KEITH HAMBLEY

PARSONS PROJECT MANAGER: MATT VETTER

PARSONS FIELD CONTACT: MEGAN CLARK

	AM	**PM**
WEATHER	Partly Cloudy	Partly Cloudy
TEMPERATURE	54	73
WIND	S at 1 mph	S at 1 mph

DESCRIPTION OF WORK PERFORMED BY CONTRACTORS: Finish grading site with demolition material.

DISCUSSIONS/COMMENTS:
Area is left in pre-work condition. Excavator left outside of front gate to be picked up by equipment rental company. Joe Bolla confirms that he will lock site.

ISSUES:
None

HEALTH AND SAFETY:
LEVEL OF PROTECTION: PPE LEVEL D
IS THE LEVEL OF PROTECTION IN CONFORMANCE WITH THE APPROVED HEALTH & SAFETY PLAN? [x] YES [ ] NO
LIST DEVIATIONS: NO DEVIATIONS
ARE ATMOMSPHERIC MONITORING RESULTS ACCEPTABLE? [x] YES [ ] NO
LIST DEVIATIONS:

SITE REPRESENTATIVE:
Megan Clark
REPRESENTATIVE SIGNATURE:

DATE:
8/14/2019

FORMER J L STEEL SITE
DAILY ACTIVITY REPORT

SAMPLING AND ANALYSIS:

SAMPLE ID	TIME TAKEN	ANALYSIS	TAT	COC#	FEDEX TRACKING #
None					

LABOR:

Labor Category	*PPE Level*	*In/ Task Start*	*Out/ Task End*	*In/ Task Start*	*Out/ Task End*	*Tasks/Equip Operated*
TREC						
Labor/Operator	D	7:00	10:00			Finish grading site with demolition material
PARSONS						
Project Oversight	D	7:00	10:00			Coordination with on-site personnel and subcontractors; CAMP.
SUBS/VISITORS						

EQUIPMENT:

Equipment Type	*On-Site?*	*Description (make, model, capacity, HP, size, prod no., etc.)*	*Arrival Time*	*Task Start*	*Task Stop*	*Task Start*	*Task Stop*		*Tasks Performed/Area of Work*
TREC									
Kobelco Excavator	Yes	Kobelco Mark 17	On-site	7:15	9:15				Site grading
PARSONS									
DustTrak (x2)	Yes	DustTrak II	7:30	8:00	15:00				Air Monitoring
PID (x3)	Yes	Mini Rae 3000	7:30	8:00	15:00				Air Monitoring

Site grading with demo material.

Site conditions at the end of work, facing northwest.

Site conditions at the end of work, facing north.

Site conditions at the end of work, facing east.

Site conditions at the end of work, facing northeast.