Remedial Action Completion Report
In Situ Chemical Oxidation
Enhanced by Soil Mixing
Kearsarge Metallurgical Corporation
Superfund Site

123 Hobbs Street
Conway, New Hampshire 03818

Prepared By:

Weston Solutions, Inc.
43 N. Main Street
Concord, New Hampshire 03301

Prepared For:

Federal Sites Section
Hazardous Waste Remediation Bureau
Waste Management Division
New Hampshire Department of Environmental Services
29 Hazen Drive
Concord, New Hampshire 03302-0095

and

U.S. Environmental Protection Agency, Region 1
5 Post Office Square, Suite 100
Mail Code OSRR07-1
Boston, Massachusetts 02109-3912

February 2016

FINAL
REMEDIAL ACTION COMPLETION REPORT
IN SITU CHEMICAL OXIDATION ENHANCED BY SOIL MIXING
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Weston Solutions, Inc.
43 N. Main Street
Concord, New Hampshire 03101-1501

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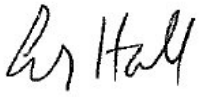
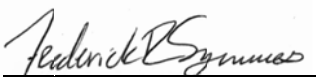


Erik Hall, P.E.
Senior Project Engineer



Frederick R. Symmes, P.E.
Project Manager

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LIST OF ACRONYMS

%	percent
1,1-DCE	1,1-dichloroethene
1,1,1-TCA	1,1,1-trichloroethane
µg/kg	micrograms per kilogram
Active	Active Environmental Technologies, Inc.
ARA	Absolute Resource Associates
AROD	Record of Decision Amendment
BASP	base-activated sodium persulfates
bgs	below ground surface
CKD	cement kiln dust
Coleman	Alvin J. Coleman & Son, Inc.
DAB	dual axis blender
EPA	United States Environmental Protection Agency
ft.	feet
GPS	global positioning system
GPTS	groundwater pump and treat system
ISCO	in situ chemical oxidation
ISOTEC	In-Situ Oxidative Technologies, Inc.
KMC	Kearsarge Metallurgical Corporation
LKD	lime kiln dust
LTC	Lang Tool Company
MFR	modified Fenton's reagent
MNA	monitored natural attenuation
NHDES	New Hampshire Department of Environmental Services
PID	photoionization detector
ppm	parts per million
QC	quality control
RA	remedial action
RFP	Request for Proposal
ROD	Record of Decision
Site	Kearsarge Metallurgical Corporation Superfund Site, Conway, New Hampshire
SRS	Soil Remediation Standards
SSHASP	Site-Specific Health and Safety Plan
VOCs	volatile organic compounds
WESTON®	Weston Solutions, Inc.

SECTION 1

BACKGROUND

1. BACKGROUND

1.1 INTRODUCTION

This Remedial Action Completion Report describes implementation of the contingent response action, in accordance with the 2012 *Record of Decision Amendment* (ROD Amendment), to treat soil impacted with chlorinated ethenes and ethanes at the Kearsarge Metallurgical Corporation (KMC) Superfund Site (Site) in Conway, New Hampshire. The KMC Site is New Hampshire Department of Environmental Services (NHDES) Site No. 198708002. Weston Solutions, Inc. (WESTON®) performed this work for NHDES and United States Environmental Protection Agency (EPA) Region 1 under WESTON's Contract with NHDES for Site Investigation, Remediation Design, Implementation Oversight at Petroleum and Hazardous Waste Sites; Comprehensive Environmental Response, Compensation, and Liability Act; and Brownfields Projects. The NHDES Work Scope Authorizations for this project are dated 27 August 2015 and 16 October 2015.

1.2 SITE LOCATION

The Site is located at 123 Hobbs Street, Conway, New Hampshire in an industrial park on the western edge of Conway village. The topography of the Site and nearby area is flat. There are several large buildings nearby that house various commercial enterprises. There is a residential area 900 feet (ft.) west of the Site. The Site and adjacent area including Conway Village are served by public water and sewer provided by the Conway Village Fire District. The closest public water supply wells are nearly 1 mile to the north of the Site. A Locus Plan is provided in Figure 1.

The area of the former KMC building is in the southwest portion of the Site and is surrounded by a 6-ft. high chain-link fence. A general site plan is provided in Figure 2. Much of the original KMC building has been razed and the area of the razed portions of the building converted to parking. The remaining portions of the KMC building have been restored to house an active business. The treatment area for this remedial action (RA) is east, and outside of the fenced area of the former KMC building. Prior to this RA, the treatment area was partially wooded and included a stand of poplar trees planted in 2004 to facilitate phytoremediation of some remaining contaminants at the Site (WESTON, 2004). A storm drain pipeline crosses the KMC property

east of the treatment area and conveys storm water runoff from the parking lot for the former Yield House property, located north of the Site, into Pequawket Pond. The decommissioned groundwater treatment building built by EPA in 1993 and operated until 2005 is in the northern portion of the KMC property. All of the treatment process equipment associated with the former groundwater treatment facility has been removed from the Site, and the former treatment plant building is in use by a private business.

1.3 SITE HISTORY

KMC manufactured stainless steel valves and materials at the Site from 1964 until the company ceased operation in 1982. The manufacturing process produced castings using the lost-wax process, which produced waste casting sands and solvents. The solvents and casting sands were disposed in a wooded wetland just east of the old KMC building. Solvents were also discharged through an on-site septic system that was located between the old KMC building and the solvent and casting sands disposal area. Investigations conducted after KMC ceased operations showed that groundwater at the Site was contaminated with volatile organic compounds (VOCs), predominantly 1,1,1-trichloroethane (1,1,1-TCA), and its breakdown products, particularly 1,1-dichloroethene (1,1-DCE). The Site was designated as a Superfund Site in 1984 (EPA, 2013).

EPA issued a *Record of Decision* (ROD) (EPA, 1990) for the Site in 1990 that selected both source control and management of migration remedies. The source control component of the remedy was performed in 1992 by removing and disposing of waste pile material, crushed drums, a solvent-contaminated septic tank, and contaminated soils in the vicinity of the former septic system. The management of migration component required construction and operation of a groundwater pump and treat system (GPTS). Construction of the GPTS was completed and operations commenced in 1993 (EPA, 2013).

In 2000, the groundwater extraction system was enhanced by construction of a groundwater collection trench and associated extraction well (identified as EW-13A) in the most contaminated area of the Site. In 2002, it was determined that a zone of subsurface soils and groundwater at the Site continued to be impacted by significant quantities of contaminants, and that groundwater cleanup objectives could not be attained by pump-and-treat in a reasonable period of time. That

determination led to a supplemental RA in 2003 that included excavation and off-site disposal of approximately 5,600 tons of soil in the most highly-contaminated area of the Site (WESTON, 2004). The 2003 RA also included:

- Removal of several extraction wells and a portion of the collection trench.
- Backfill of the excavated area with crushed stone.
- Installation of a replacement extraction well EW-13B in the area that was excavated and backfilled. Extraction well EW-13B was connected to the existing GPTS.

In December 2005, groundwater contaminant concentrations had decreased to the point where NHDES requested, and EPA approved discontinuing GPTS operation for a period of monitoring and analysis. The subsequent monitoring indicated that restarting of the GPTS was not necessary and that monitored natural attenuation (MNA) of the remaining area of groundwater contamination would likely result in attainment of groundwater cleanup goals. In 2012, EPA issued a ROD Amendment (EPA, 2012) that changed the groundwater remedy from pump-and-treat to MNA. The ROD Amendment specifies that if groundwater contaminant concentrations at the Site stop attenuating and instead increase to levels defined as "trigger conditions" in the ROD Amendment, then a contingent remedy will be implemented. Monitoring performed during 2014 as part of the MNA program indicated that at least one of those trigger conditions had been exceeded. Therefore, based on the requirements of the ROD Amendment and on groundwater contaminant concentration trends at the Site, EPA and NHDES determined that additional response actions were warranted. The first step of the contingent remedy specified in the ROD Amendment is the use of in situ chemical oxidation (ISCO) for treatment of soil and groundwater contamination at the site.

1.4 PROJECT PURPOSE AND SCOPE

The objectives of the additional response action were to:

- Provide treatment of the remaining contamination at the Site in a manner that is consistent with the ROD Amendment in order to achieve the cleanup levels for the Site.

- Minimize the risk that future response actions, other than MNA, are necessary at the Site.
- Help enable removal of the Site from the National Priorities List (NPL) at the earliest reasonable date.

This response action, in accordance with the 2012 ROD Amendment, consisted of treatment of a zone of contaminated soil at the Site via ISCO enhanced by soil mixing. Based on soil analytical data from the Site, the zone targeted for treatment was the interval 7 to 15 ft. below ground surface (bgs) (the Treatment Zone) over an area of approximately 10,000-square feet (the Treatment Area), as shown on Figure 2.

The treatment program and the Post-Treatment Performance Criteria were specified in the *Final Design Specifications Issued for Construction – Revision 1* (WESTON, 2015a).

The overall objectives of this RA are listed below:

- Reduce the concentrations of VOCs in soil in order to attain the groundwater cleanup goals for the Site. Specifically, achieve post-treatment soil criteria of:

  1,1-DCE 60 micrograms per kilogram (µg/kg)

  1,1,1-TCA 150 µg/kg.

- Thoroughly blend soil in the treatment zone with the ISCO reagents in a manner that provides effective contact between the ISCO reagents and the contaminated soils.
- Conduct work in a safe manner that is protective of human health and the environment.

A detailed description of the Modified Fenton's Reagent (MFR) technology is provided in Section 3 of the *ISCO Soil Mixing Treatment Program Summary Report* [In-Situ Oxidative Technologies, Inc. (ISOTEC), 2015b] that is provided in Appendix A.

Following implementation of this RA, EPA will issue an Explanation of Significant Differences that will formally document implementation of the contingent response action at the Site in accordance with the 2012 ROD Amendment.

1.5 DESIGN OF REMEDIAL ACTION AND PROCUREMENT OF ISCO SUBCONTRACTOR

In February 2015, with the approval of NHDES and EPA, WESTON commenced design of the response action. After an initial review of the soil conditions and contaminant distribution at the site, NHDES, EPA, and WESTON agreed that enhancing the ISCO program by combining it with in situ soil mixing would significantly increase the likelihood that response action would result in attainment of the site cleanup goals.

The design process included a laboratory-scale treatability test in order to evaluate the type and dose of ISCO reagents that, when combined with soil mixing, would provide the most effective treatment of the contaminants at the Site. The treatability test was performed by ISOTEC using soil and groundwater samples collected from the Site. Soil samples were collected via direct-push drilling from the Treatment Zone on 22 February 2015, and delivered to ISOTEC. During the treatability test, ISOTEC evaluated the following two ISCO reagents:

- Base-activated sodium persulfate (BASP), which consists of persulfate activated at high (>10.5) pH for oxidation of VOCs.
- Modified Fenton's Reagent (MFR), which consists of hydrogen peroxide activated with a chelated iron catalyst at neutral pH.

Three different doses of each of these two reagents were evaluated along with the appropriate controls during the treatability study as follows:

Laboratory-Scale Treatability Test Conditions		**Oxidant Reagent Evaluated**	
		BASP	**MFR**
Experiments Performed		**VOC Destruction and Total Oxidant Demand**	
Oxidant Dose (g/kg)*	Control	0	0
	Low	1	1
	Medium	5	5
	High	10	10
Experimental Duration (days)		6	4
Parameters Analyzed		VOCs & 1,4-Dioxane	VOCs & 1,4-Dioxane

Note: *Oxidant doses are presented as grams of oxidant reagent per kilogram of soil (in slurry) being tested

The results of the treatability test showed that the MFR and BASP reagents provided effective treatment of the site contaminants. Initially, BASP was selected as the ISCO reagent for the RA because of its greater persistence in the subsurface and because of possible safety risks associated with MFR. As a result, the ISCO/soil mixing subcontract design documents initially specified the use of BASP, but did allow for submittal of alternate proposals that involve the use of other reagents.

Following completion of the ISCO/Soil Mixing design, a Request for Proposal (RFP) for ISCO/soil mixing services was issued on 9 June 2015. The following contractors were solicited:

- Active Environmental Technologies, Mt. Holly, NJ
- Avanti Corporation, Alexandria, VA
- Charter Environmental, Boston, MA
- Geo-Solutions, New Kensington, PA
- Hayward Baker, Odenton, MD
- ISOTEC, Lawrenceville, NJ
- Lang Tool Co., Beaverton, MI
- Recon Remedial Construction Services, Houston, TX
- Redox Tech, LLC, Attleboro, MA
- Stone Environmental Inc., Concord, NH
- Summit Contracting LLC, Evansville, Indiana
- Vironex, Millersville, DE
- XDD Environmental, Stratham, NH

A bid walk was conducted on 17 June 2015, to allow interested subcontractors to inspect the Site. The bid walk was attended by six subcontractors along with representatives of WESTON and NHDES. Questions were received from interested subcontractors during the bid period. Those questions were answered in addenda to the RFP that were issued on the following dates:

- Addendum No. 1 21 June 2015
- Addendum No. 2 25 June 2015

Four proposals were received by the 1 July 2015 Bid Due Date. Proposals were received from:

- Geo-Solutions
- ISOTEC
- Recon Remedial Construction Services
- Redox Tech, LLC

After WESTON, NHDES, and EPA evaluated the proposals, ISOTEC and Redox Tech were considered to be responsive to the RFP and cost-competitive, and therefore, were issued a Request for Best and Final Offer on 17 July 2015. Following receipt and evaluation of the Best and Final Offers on 20 July 2015, ISOTEC was selected as the ISCO/Soil Mixing Subcontractor. The bases of this selection were ISOTEC's competitive pricing and their expertise with the use of multiple types of ISCO reagents in ISCO/soil mixing.

In their proposal, ISOTEC offered MFR as an option in place of BASP as the ISCO reagent. After full evaluation of the proposals for the ISCO/soil mixing subcontract, it was determined that it would be preferable to use MFR as the ISCO reagent for the following reasons:

1. Modified Fenton's reagent could be performed at neutral pH, while BASP required raising the pH of the groundwater to the 10.5 to 11.5 range. The elevated pH could persist in the groundwater for an extended period of time after completion of the ISCO program and possibly impact the adjacent Pequawket Pond.

2. The residuals from the breakdown of MFR are water, carbon dioxide, oxygen, and iron which are all innocuous, and in the case of iron, occurs naturally in the soils and groundwater at the Site. The residuals from BASP include sulfate, which would likely persist in the site groundwater for an extended period and possibly impact Pequawket Pond.

3. By enhancing the ISCO program with soil mixing, the lack of persistence of MFR is less of a concern because soil mixing causes rapid and thorough contact between the ISCO reagents and the soil and groundwater being treated.

4. Using MFR would eliminate the need to install a low-permeability subsurface wall to prevent the BASP and associated breakdown products from migrating to the culvert pipe bedding and catch basins that are immediately to the east of the Treatment Area.

5. ISOTEC demonstrated extensive experience safely implementing ISCO programs with MFR reagents, thereby addressing concerns about potential safety risks associated with MFR.

Based on the rationale listed above, MFR was selected as the ISCO reagent to be used by ISOTEC during their implementation of the ISCO/soil mixing subcontract at the KMC Site.

SECTION 2

CONSTRUCTION ACTIVITIES

2. CONSTRUCTION ACTIVITIES

This RA included clearing, grubbing, ISCO/soil mixing (using MFR), backfilling and site restoration. The bulk of the work was performed by two subcontractors as follows:

- ISOTEC performed the clearing and grubbing, and performed the ISCO. Lang Tool Company (LTC), a subcontractor to ISOTEC, provided the specialty soil mixing expertise and equipment.
- Following completion of the ISCO/soil mixing, Active Environmental Technologies (Active) performed the soil stabilization, backfilling, and site restoration work completed to date.

During construction, WESTON performed:

- Daily quality control (QC) and safety construction oversight.
- Soil sampling and submission of confirmatory performance monitoring samples to the analytical laboratory.
- Field testing.
- Daily reporting.
- Coordination with NHDES and EPA.

Figure 3 details the organizational structure of the project.

NHDES issued a Notice-to-Proceed with the construction activities to WESTON on 27 August 2015. WESTON and ISOTEC submitted Site-Specific Health and Safety Plans (SSHASP) and Work Plans to NHDES on 4 September 2015. Mobilization of equipment and site preparation commenced on 10 September 2015.

2.1 MOBILIZATION AND SITE PREPARATION

WESTON, ISOTEC, and LTC mobilized materials, instruments, personnel, and services required for implementing the RA to the Site on 10 September 2015, coincident with the arrival of heavy equipment and the soil mixing operations team. A kick-off meeting was conducted at the Site on 10 September 2015 with NHDES, WESTON, ISOTEC, LTC, the property owner, and representatives from the Town of Conway. Prior to commencement of work at the Site, WESTON and ISOTEC performed a pre-construction video survey to document conditions at the

Site. Between 10 and 12 September 2015, the Site was cleared and grubbed by Land and Mowing Solutions (a subcontractor to LTC) and LTC. The topsoil was stripped and stockpiled in two piles located north and south of the Treatment Area. After clearing and grubbing was complete, a temporary security fence was installed around the perimeter of the Site on 12 September 2015. Additional preparatory work included:

- Establishing site control for LTC global positioning system (GPS) equipment.
- Removal of monitoring wells MW-3006, MW-3008, MW-3009, MW-3010, and MW-3011. Those wells were in the Treatment Area and, therefore, needed to be removed prior to the excavation and soil mixing activities. Replacement monitoring wells are planned for installation in 2016.
- Protection of the remaining monitoring wells and one catch basin within the work area using precast concrete well tiles (MW-3004, MW-203A, MW-205, MW-114, EW-13B and CB 7-8).
- Installation of silt fence along the perimeter of the work area.
- Installation of a temporary water meter by Conway Village Fire District on the fire hydrant located northwest of the former water treatment building.
- Installation of a temporary water line from the temporary water meter to the ISCO reagent delivery equipment.
- Wet testing the reagent delivery system.
- Setup of LTC's office trailer.

During the clearing activities, monitoring well MW-3005 was accidentally damaged and was removed. That well will be replaced in 2016. The locations of the site features and elements relating to the RA implementation are shown on Figure 2.

2.2 SOIL MIXING AND ISCO IMPLEMENTATION

The ISCO/soil mixing work was conducted between 14 and 22 September 2015. The ISCO/soil mixing program consisted of the following:

1 The Treatment Area was laid out into 111 treatment cells as shown on Figure 4.

2 At each treatment cell, approximately 6 to 7 ft. of unsaturated overburden material were excavated from above the 7 to 15 ft. bgs Treatment Zone (The original plan was

based on an estimated water table of 2 to 3 ft. bgs, and therefore, included excavation of only 2 to 3 ft. of overburden prior to commencement of soil mixing. However, the water table was lower than expected because of the relatively dry weather in the vicinity of the Site over the 2 months prior to the project. Therefore, the lower water table at the Site allowed removal of almost all of the overburden down to the top of the Treatment Zone at 7 ft. bgs.) The excavated overburden materials were placed around the perimeter of the Treatment Area in a berm to contain swelling of the blended soils, if such swelling occurred during soil mixing.

3 After removal of the top 6 to 7 ft. of overburden from a group of treatment cells, the soil mixing tool, which is termed a dual axis blender (DAB), was used for aggressive mixing of the soils in the Treatment Zone while concurrently injecting the MFR reagents. Additional detail on the soil mixing/ISCO procedure is provided in Subsection 2.2.1.

4 The soil mixing/ISCO was performed one cell at a time and proceeded in a systematic pattern through the Treatment Area.

5 As the soil mixing/ISCO program progressed, a portion of the treated cells were sampled by WESTON and ISOTEC to verify adequate soil mixing and contact between impacted soils and MFR. Samples were visually inspected for homogeneity and were field screened for VOCs, hydrogen peroxide, and iron. A subset of the samples were couriered to Absolute Resource Associates (ARA) in Portsmouth, New Hampshire for analysis for halogenated VOCs. The results of the sampling and analyses are provided in Section 4.

A detailed description of the soil mixing, ISCO, and sampling procedures is provided in Sections 7 and 8 of the *ISCO Soil Mixing Treatment Program Summary Report* (ISOTEC, 2015b) in Appendix A. Daily documentation of the soil mixing/ISCO program is provided in WESTON's daily reports in Appendix B. Photos of site activities are also provided in Appendix B.

2.2.1 Soil Mixing/ISCO Procedure

After the top 6 to 7 ft. of overburden materials were excavated and placed into a berm around the perimeter of the Treatment Area, LTC used the DAB to blend the soils by plunging the mixing head through the 7 to 15 ft. bgs (approximately 455 to 447 ft. above mean sea level) Treatment Zone. During the initial soil mixing plunges in each cell, ISOTEC's chelated iron catalyst was applied to pre-treat the cells. After the catalyst was blended into each cell, hydrogen peroxide was injected through the DAB at rate of 2.13 pounds of 34% hydrogen peroxide per cubic foot of soil. The approximate total weights of catalyst and 34% hydrogen peroxide injected into the

Treatment Zone over the full duration of the ISCO/soil mixing program at the Site were 2,160 and 201,600 pounds, respectively.

The location and depth of the DAB mixing head were tracked using a GPS system mounted on the DAB. The tracking system enabled accurate positioning of the DAB in each treatment cell. Real-time monitoring and control of the reagent dispensing equipment was performed in order to accurately dispense the catalyst and the hydrogen peroxide to the DAB mixing head at all times. The catalyst batches were mixed using pre-weighed bags in a 100-gallon tank on the reagent delivery truck. The hydrogen peroxide was diluted from 34% to a range of 11% to 21% in 700-gallon tanks on the reagent truck. Scales were used to accurately dispense the correct amount of 34% hydrogen peroxide. A flow meter was used to measure the amount of water added to the catalyst and peroxide mix tanks. All treatment cells received the doses of catalyst and hydrogen peroxide specified in the *ISCO Summary Work Plan* (ISOTEC, 2015a) except for the following:

- Cells E12-S1, E12-S2, E13-S1, E13-S2, E13-S4, E14-S1, and E14-S2 received double volume of reagent because of remixing and re-treatment of those cells. The second round ISCO/soil mixing treatment was necessary at those locations because the results of the performance testing showed exceedances of the Post-Treatment Criteria for 1,1-DCE and/or 1,1,1-TCA in those or adjacent cells. Additional details on sampling results and re-treatment are provided in Section 4.

The mixing duration and volumes of catalyst and hydrogen peroxide applied to each cell are detailed in Table 3 of the *ISCO Soil Mixing Treatment Program Summary Report* (ISOTEC, 2015b) located in Appendix A. Table 5 of the *ISCO Soil Mixing Treatment Program Summary Report* (ISOTEC, 2015b) shows the depth to which each cell was mixed.

2.3 SITE RESTORATION

After the soil mixing/ISCO portion of the RA was complete and all performance monitoring data demonstrated compliance with the Post-Treatment Soil Criteria, restoration of the Site commenced. At completion of the soil mixing/ISCO program, the full Treatment Area was an open excavation with a depth of 4 to 7 ft. bgs. Unexpectedly, the treated soils in the bottom of the open excavation, and throughout the Treatment Zone, were a wet slurry-type mixture of the

very fine silty soils from the Treatment Zone. This slurry-type mixture presented significant challenges for backfilling of the open excavation.

Because of the liquid nature and the depth of the soil slurry remaining after soil mixing, the soil in the Treatment Zone required stabilization to increase its bearing capacity prior to backfilling. The existing shallow overburden soils excavated prior to treatment were supplemented by approximately 1,600 tons of clean sandy fill from a nearby quarry owned by A.J. Coleman & Sons, Inc. (Coleman). The shallow overburden/sand mixture was mixed with the treated soil slurry and backfilled into the Treatment Zone. These initial attempts did not result in sufficient stabilization of the soil slurry from the Treatment Zone.

To provide additional stabilization of the soil slurry NHDES and EPA approved the use of kiln dust as an additive to increase the strength to the remaining soil slurry which, at that point, was displaced above the water table. The following two sources of kiln dust were evaluated:

- Cement kiln dust (CKD) from Thomaston, Maine.
- Lime kiln dust (LKD) from Bedford and Marbleton, Quebec, Canada.

Analytical results from these materials were reviewed by WESTON, NHDES, and EPA and found to be acceptable for stabilizing the remaining soil slurry. Further discussion of the soil amendments is provided in Subsection 4.4. Initially, two loads of CKD (approximately 50 tons) were delivered from Dragon Products Company in Thomaston, Maine. Once on-site, this material was mixed with the soil slurry using an excavator and found to not be as reactive as anticipated, and its use was discontinued. Subsequently, nine loads of LKD (approximately 165 tons) were delivered from the Graymont (QC), Inc. facilities in Bedford and Marbleton, Quebec facilities. The LKD was mixed with the soil slurry and found to be sufficiently reactive to stabilize the shallow soils for grading with a bull dozer. The CKD and LKD analytical data and truck delivery receipts are provided in Appendix C.

Final grading of the Site was completed using the topsoil that was stockpiled during the initial grubbing of the Site. A mix of wetland and upland grass seed along with hay mulch was applied over the top soil in accordance with the *Technical Specifications – Site Restoration* (WESTON, 2015b). Because restoration occurred at the end of the growing season, the silt fence will remain

in-place on the downgradient portions of the Site until vegetation is established in spring 2016. The wetland and upland seed mixtures are included as Appendix D. Additional details on the site restoration efforts including photos are provided in the daily reports in Appendix B. Visual observations during the Final Site Inspection indicated active germination and growth of vegetation in the restoration area as of 5 November 2015 because of the unseasonably warm weather. Figure 5 depicts the general grading and locations of the swales of the restored Site. A survey of the restored site conditions will be conducted by a licensed surveyor in 2016.

During site restoration activities, a hydraulic line compression fitting failed on the excavator resulting in surface spill of approximately 8 gallons of hydraulic fluid under the excavator. The spilled hydraulic fluid and associated impacted soils were immediately containerized and properly disposed of off-site by Active. Additional details can be found in the daily report for 2 October 2015 in Appendix B.

SECTION 3

CHRONOLOGY OF EVENTS

3. CHRONOLOGY OF EVENTS

Site activities commenced on 10 September 2015 and were completed on 5 November 2015. The following is a tabular summary of the major events. A Gant chart of the project schedule is presented as Figure 6.

Activity	Start Date	End Date
Record of Decision Amendment (ROD Amendment) issued	18 Sept 2012	18 Sept 2012
NHDES notification to EPA that groundwater monitoring results trigger ROD Amendment requirement to perform a RA	23 Oct 2014	23 Oct 2014
Technical Memorandum regarding RA issued by WESTON to NHDES	15 Dec 2014	13 Jan 2015
Remedial Design	4 Feb 2015	9 June 2015
Bid Walk for RA	17 June 2015	17 June 2015
Notice to Proceed	27 Aug 2015	27 Aug 2015
Planning and preparation of Work Plans and SSHASP	25 Aug 2015	4 Sept 2015
Mobilization of ISCO soil mixing equipment	8 Sept 2015	10 Sept 2015
Kick-off meeting at the Site	10 Sept 2015	10 Sept 2015
Site Preparation including: ▪ Notifications to Conway Village Fire and Police Departments of Site work ▪ Utility locating (Dig Safe call) ▪ Designate safety zone (mark perimeter of work area) ▪ Traffic controls ▪ Set up staging areas ▪ Establish of GPS control points ▪ Clearing and grubbing ▪ Stripping and stockpiling of topsoil ▪ Install water line from hydrant to soil mixing equipment ▪ Chemical procurement ▪ Establish dust control and erosion and sediment control measures ▪ Install monitor well protection	10 Sept 2015	12 Sept 2015
Excavate overburden and stockpile overburden soils above the Treatment Zone (ongoing during soil mixing activities)	12 Sept 2015	20 Sept 2015
MFR deliveries	14 Sept 2015	18 Sept 2015
Perform ISCO Enhanced by Soil Mixing and Performance Monitoring	14 Sept 2015	22 Sept 2015
Receipt of final soil samples demonstrating compliance with the Post-Treatment Soil Criteria	23 Sept 2015	23 Sept 2015
Demobilization of Soil Mixing Equipment	23 Sept 2015	23 Sept 2015
Mobilization of Site Restoration Contractor	28 Sept 2015	28 Sept 2015

Activity	Start Date	End Date
Site Restoration	28 Sept 2015	21 Oct 2015
Demobilization of Site Restoration Contractor	21 Oct 2015	21 Oct 2015
Inspection of the restored Site with NHDES	5 Nov 2015	5 Nov 2015
Removal of temporary security fence	5 Nov 2015	5 Nov 2015

SECTION 4

PERFORMANCE STANDARDS AND CONSTRUCTION QUALITY CONTROL

4. PERFORMANCE STANDARDS AND CONSTRUCTION QUALITY CONTROL

4.1 PERFORMANCE MONITORING

WESTON performed construction oversight throughout the soil mixing/ISCO and site restoration programs. This oversight included continuous supervision of the DAB and reagent dispensing operations. In addition, samples of the treated soils were collected for field testing and for analysis at an off-site laboratory.

In accordance with the *Work Plan* (WESTON, 2015c), Quality Assurance/QC samples were collected each morning from a minimum of one of the cells that were treated the previous day. All of the cells that were treated on the first day of ISCO/soil mixing operations were tested on the second day. The soil samples were collected using a tube sampler mounted on an off-road forklift. Following removal of the tube sampler from the subsurface, the soil samples were extracted from the sampling tube and placed in 5-gallon buckets. The soil samples were:

- Visually inspected to confirm adequate soil mixing.
- Placed in a jar, and the headspace of the jar was tested with a photoionization detector (PID).
- Tested for residual ISCO reagent concentrations using field test kits for hydrogen peroxide and iron. Field testing for hydrogen peroxide was conducted using Quantofix Peroxide 100 test strips. A Hach Iron Color Disc Test Kit, Model IR-18A was used to measure iron in water from the sample.

Samples of the soil with the highest PID reading within a sampled cell were submitted to ARA for analysis for halogenated VOCs via EPA Method 8260C. The samples were analyzed on a 24-hour turn-around-time in order to provide rapid feedback on the effectiveness of the ISCO/soil mixing process. A duplicate sample was analyzed for every 10 samples analyzed.

Each of the cells that were treated during Day 1 of soil mixing (14 September 2015) had VOC samples collected at three depths (approximately 9, 11, and 13 ft. bgs). For the remainder of the treated cells, the depths of VOC samples were selected with a bias toward depths where historical soil data indicated higher contaminant levels. The VOC samples were collected from 56 of the 111 treatment cells (51%). Figure 4 and Table 1 detail the cells from which the samples

were collected and provide the analytical data for 1,1,1-TCA and 1,1-DCE in those samples. The full analytical data packages are provided in Appendix E.

Three treatment cells of the 56 cells tested for VOCs did not meet the Post-Treatment Soil Criteria for 1,1-DCE (60 µg/kg) and/or 1,1,1-TCA (150 µg/kg) after the first round of ISCO/soil mixing treatment. Those cells were re-mixed, re-treated with a second full dose of ISCO reagents, and resampled for off-site analysis of VOCs. Additional adjacent cells were re-treated at the same time as the exceeding cells in order to provide a treatment buffer around the areas of exceedances. Following resampling, all re-treated cells met the Post-Treatment Soil Criteria. The following is a summary of re-treated cells:

- Cell E13-S2 was re-treated because of exceedances of the Post-Treatment Soil Criteria for 1,1-DCE and 1,1,1-TCA.
- Cell E14-S1 was re-treated because of an exceedance of the Post-Treatment Soil Criterion for 1,1-DCE.
- Cells E12-S1 and E12-S2 did not have exceedances of the Post-Treatment Soil Criteria but were re-treated to provide a treatment buffer around Cell E13-S2.
- Cells E13-S1 and E14-S2 did not have exceedances but were re-treated to provide a treatment buffer around Cells E13-S2 and E14-S1.
- Cell E13-S4 was re-treated because of and exceedance of Post-Treatment Soil Criterion for 1,1-DCE.

4.2 STORM DRAIN MONITORING

Because of the proximity of the storm drain to the Treatment Area (Figures 2 and 4), and to ensure no impacts to the nearby surface water by site activities, a water sample from the storm drain was collected daily during the RA from catch basins CB 5-6 and CB 6-7 and monitored for hydrogen peroxide and iron. Daily visual inspections showed that water in the storm drain at CB 5-6 and CB 6-7 was not flowing because of the high water level in Pequawket Pond, which caused water to back up into the storm drain pipeline. Field testing for hydrogen peroxide was conducted using Quantofix Peroxide 100 test strips. A Hach Iron Color Disc Test Kit, Model IR-18A was used to test for iron. Hydrogen peroxide was not detected [the detection limit was 1 part per million (ppm)] in the catch basins, and the dissolved iron concentrations remained at or below the background concentrations (1 ppm). In addition, three samples were collected on

14 and 19 September 2015 and 2 October 2015, from catch basin CB5-6 and analyzed for halogenated VOCs via EPA Method 8260C by ARA. Results were non-detect at 2 micrograms per liter for each of the samples analyzed, indicating no impacts from site activities to the storm drain system. The hydrogen peroxide and dissolved iron results are reported in Table 2. Full analytical data packages are included as Appendix F.

4.3 SANDY FILL BACKFILL MATERIAL EVALUATION

Two samples were collected on 2 October 2015 of the sandy fill delivered from the Coleman Quarry, located in Conway, New Hampshire, and analyzed for halogenated VOCs via EPA Method 8260C by ARA. Results were non-detect indicating no exceedances of the NHDES Soil Remediation Standards (SRS). Full analytical data packages are included as Appendix G. In addition, visual inspection of the sandy fill did not indicate any manmade or deleterious material, oil, odor, or sheen. As a result, the material was considered suitable for use as backfill at the Site.

4.4 CEMENT AND LIME KILN DUST ANALYTICAL DATA REVIEW

Prior to the use of the CKD and LKD on-site, WESTON compared the analytical data for metals for each product to the NHDES SRS. Analytes were at or below the NHDES SRS except for arsenic in the CKD which was slightly above the SRS value of 23.6 mg/kg. Verbal approval was granted by NHDES and EPA to use the CKD because of the low risk of exposure and low risk of leachability considering the low volume of CKD mixed with native soil; the low permeability of the material; and the fact that the soil mixture was being placed above the water table at the Site. Analytical results are included as Appendix H.

4.5 RECOMMENDATIONS FOR IMPROVED IMPLEMENTATION OF ISCO VIA SOIL MIXING

Modifications that would have improved the implementation and/or outcome of the RA are provided herein as recommendations that may improve the performance and efficiency of future ISCO/soil mixing projects at other sites.

Recommendation: If, at completion of the ISCO/soil mixing process, the treated soils have very low bearing capacity (a slurry consistency), then use the soil mixing equipment for mixing in reagents that will stabilize those soils prior to backfilling of the overlying soils.

As discussed in Section 2, the low bearing capacity of the soil slurry in the Treatment Zone that resulted from the soil mixing/ISCO process presented significant challenges that slowed and added costs to backfilling and restoration of the Site. To address this challenge, and expedite backfilling, it would have been advantageous to stabilize the slurry at the conclusion of the ISCO/soil mixing process and prior to commencement of backfilling. This stabilization process would likely have involved mixing portland cement, LKD, or other stabilization reagent into the slurry after attainment of the Post-Treatment Performance Criteria was confirmed. This enhancement could have been performed with the soil mixing equipment prior to demobilization of that equipment from the Site.

Because of the relatively short persistence of MFR in the subsurface, the cost impacts of using the expensive soil mixing equipment for the post-ISCO stabilization process should be relatively minimal. The rationale for this is that when MFR is used, confirmation sampling can be performed 1 to 2 days after completion of the ISCO/soil mixing program. For BASP, it may be necessary to wait up to 2 weeks after completion of ISCO/soil mixing before collection of the final confirmation samples. This additional duration associated with BASP could result in significantly higher soil mixing equipment costs.

Recommendation: Stabilization reagents should be reactive chemically, and not just physical bulking agents. The use of sand and partially hydrated CKD, which have little or no reactivity with water, did not provide efficient stabilization of the slurry that resulted from the ISCO/soil mixing process. Reactive LKD provided much more effective stabilization of the slurry. Based on experience at other sites, it is expected that portland cement would also have provided effective stabilization. The available stabilization reagents should be tested on-site for stabilization of the slurry early in the ISCO soil mixing process in order to calculate the proper dose. This approach will enable timely procurement and delivery of the most cost-effective stabilization reagent, when necessary.

SECTION 5

FINAL INSPECTION

5. FINAL INSPECTION

Mr. Andrew Hoffman, P.E. of NHDES and Mr. Erik Hall, P.E. of WESTON conducted a post-restoration site walk on 5 November 2015. At that time, the surface soils at the Site were observed to be stable, with no indications of settlement or soft areas. Indications of germination of vegetation were observed. The site grading and swale configuration was found to be acceptable by NHDES. An additional site inspection will be conducted in 2016 to ensure the vegetation is established and the erosion control measures are removed.

SECTION 6

OPERATION AND MAINTENANCE ACTIVITIES

6. OPERATION AND MAINTENANCE ACTIVITIES

After the vegetation is established within the disturbed area, the erosion control measures will be removed in 2016. Additional topsoil, seed, and hay mulch may be required if there are areas where vegetation is not established.

Upon receiving direction from NHDES and EPA, four monitoring wells (MW-3006A, 3008A, 3009A, 3010A) will be installed and developed to replace the six monitoring wells (MWs-3005, 3006, 3008, 3009, 3010, and 3011) removed as part of the RA. Two soil samples (one from the "mixed" matrix based on PID field screening and one from native undisturbed silt at bottom of ISCO mixing zone) will be collected from each monitoring well borehole and analyzed for VOCs by the State of New Hampshire Health and Human Services Laboratory. Slug tests will be performed on all newly installed wells to assess the hydraulic conductivity of the subsurface soils. At the time of slug testing, a comprehensive round of static water levels will be recorded from new and existing wells at the Site. These data will be incorporated into a post-treatment monitoring report along with the additional groundwater sampling data collected by NHDES in 2016.

An elevation survey of the restored site surface conditions and a location and elevation survey of the monitoring well network at the Site also will be conducted in 2016.

SECTION 7

CONTACT INFORMATION

7. CONTACT INFORMATION

Table 3 shows the contact information for key personnel and contractors who were involved with this RA.

SECTION 8

REFERENCES

8. REFERENCES

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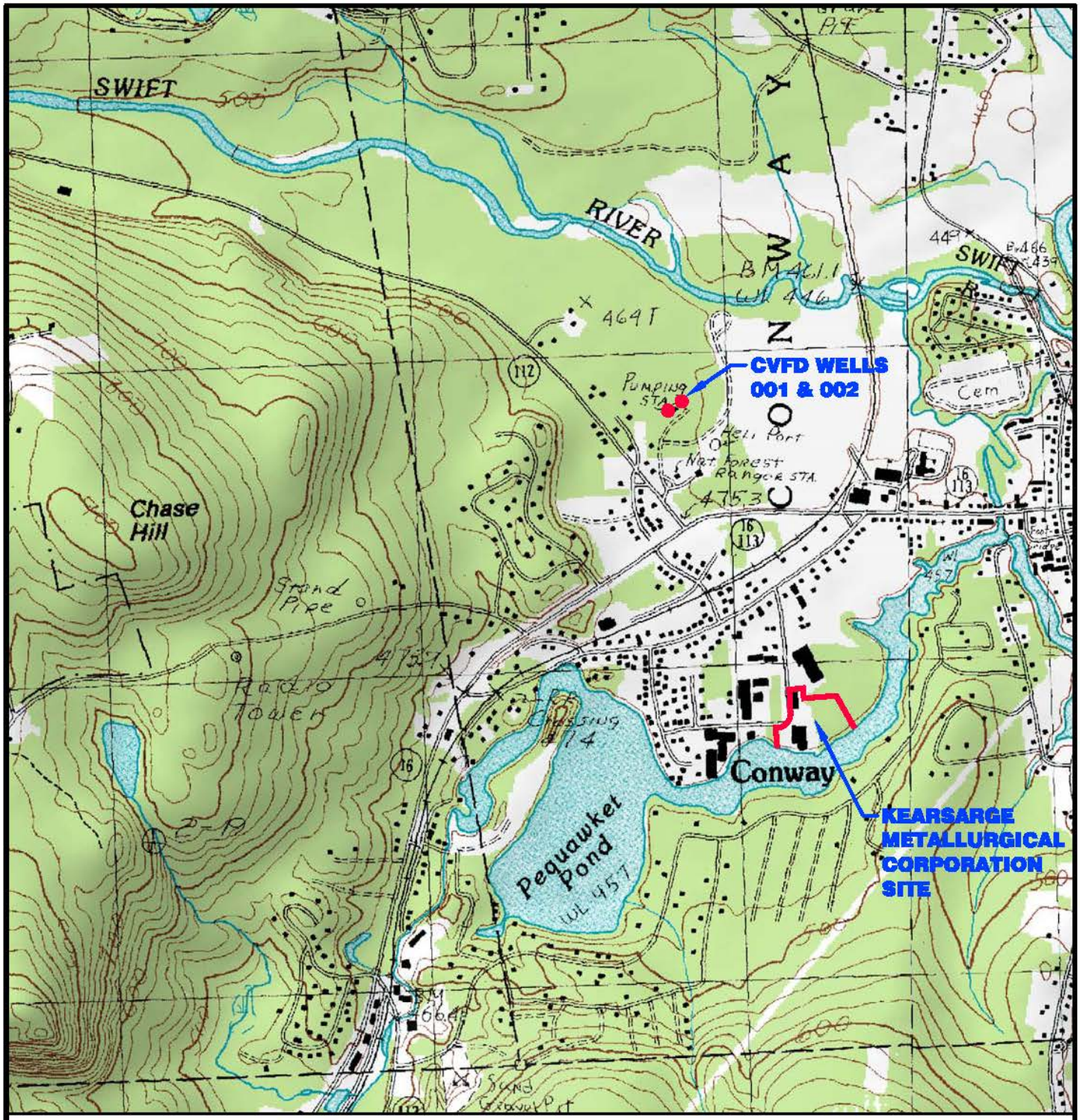
WESTON. 2015c. *Work Plan - In-Situ Chemical Oxidation Via Soil Mixing, Kearsarge Metallurgical Corp Superfund Site, Conway, New Hampshire*. Revision 1, 4 September.

FIGURES



SOURCE:
DELORME 3-D TOPOQUADS SOFTWARE; NEW HAMPSHIRE & VERMONT 3-D TOPOQUADS CD

GRAPHIC SCALE
1500 750 0 750 1500
APPROXIMATE SCALE IN FEET

SITE LOCATION MAP

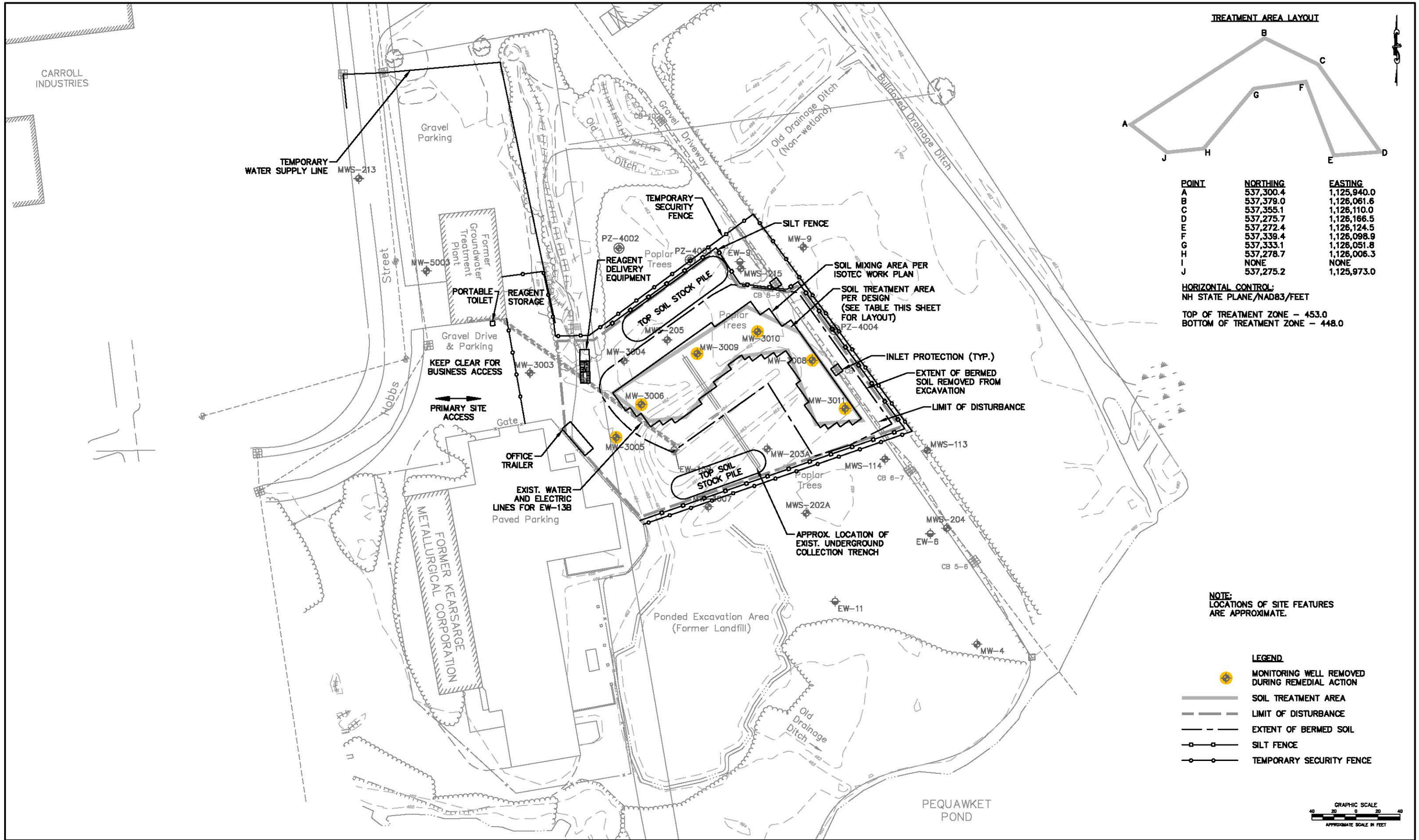
WESTON SOLUTIONS
CONCORD NEW HAMPSHIRE

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

REMEDIAL ACTION COMPLETION REPORT, IN SITU CHEMICAL OXIDATION VIA SOIL MIXING, KEARSARGE METALLURGICAL CORP. SUPERFUND SITE, CONWAY, NH

DRAWN	DATE	DES. ENG.	DATE	W.O. NO.
BEG	DEC 2015			20133.001.001
CHECKED	DATE	SCALE	REVISION	FIGURE NO.
EJH	DEC 2015	AS SHOWN		1

M:\Design\DWG\KRSARGE\2015\Completion Report\FIG 1.dwg, Layout1, 2/24/2016 3:30:29 PM, girardeb, 1:1



TREATMENT AREA LAYOUT

POINT	NORTHING	EASTING
A	537,300.4	1,125,940.0
B	537,379.0	1,126,061.6
C	537,355.1	1,126,110.0
D	537,275.7	1,126,166.5
E	537,272.4	1,126,124.5
F	537,339.4	1,126,098.9
G	537,333.1	1,126,051.8
H	537,278.7	1,126,006.3
I	NONE	NONE
J	537,275.2	1,125,973.0

HORIZONTAL CONTROL:
NH STATE PLANE/NAD83/FEET

TOP OF TREATMENT ZONE – 453.0
BOTTOM OF TREATMENT ZONE – 448.0

NOTE:
LOCATIONS OF SITE FEATURES ARE APPROXIMATE.

LEGEND

- MONITORING WELL REMOVED DURING REMEDIAL ACTION
- SOIL TREATMENT AREA
- LIMIT OF DISTURBANCE
- EXTENT OF BERMED SOIL
- SILT FENCE
- TEMPORARY SECURITY FENCE

GRAPHIC SCALE
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APPROXIMATE SCALE IN FEET

NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

REMEDIAL ACTION COMPLETION REPORT, IN SITU CHEMICAL OXIDATION VIA SOIL MIXING, KEARSARGE METALLURGICAL CORP. SUPERFUND SITE, CONWAY, NH

WESTON SOLUTIONS CONCORD NEW HAMPSHIRE

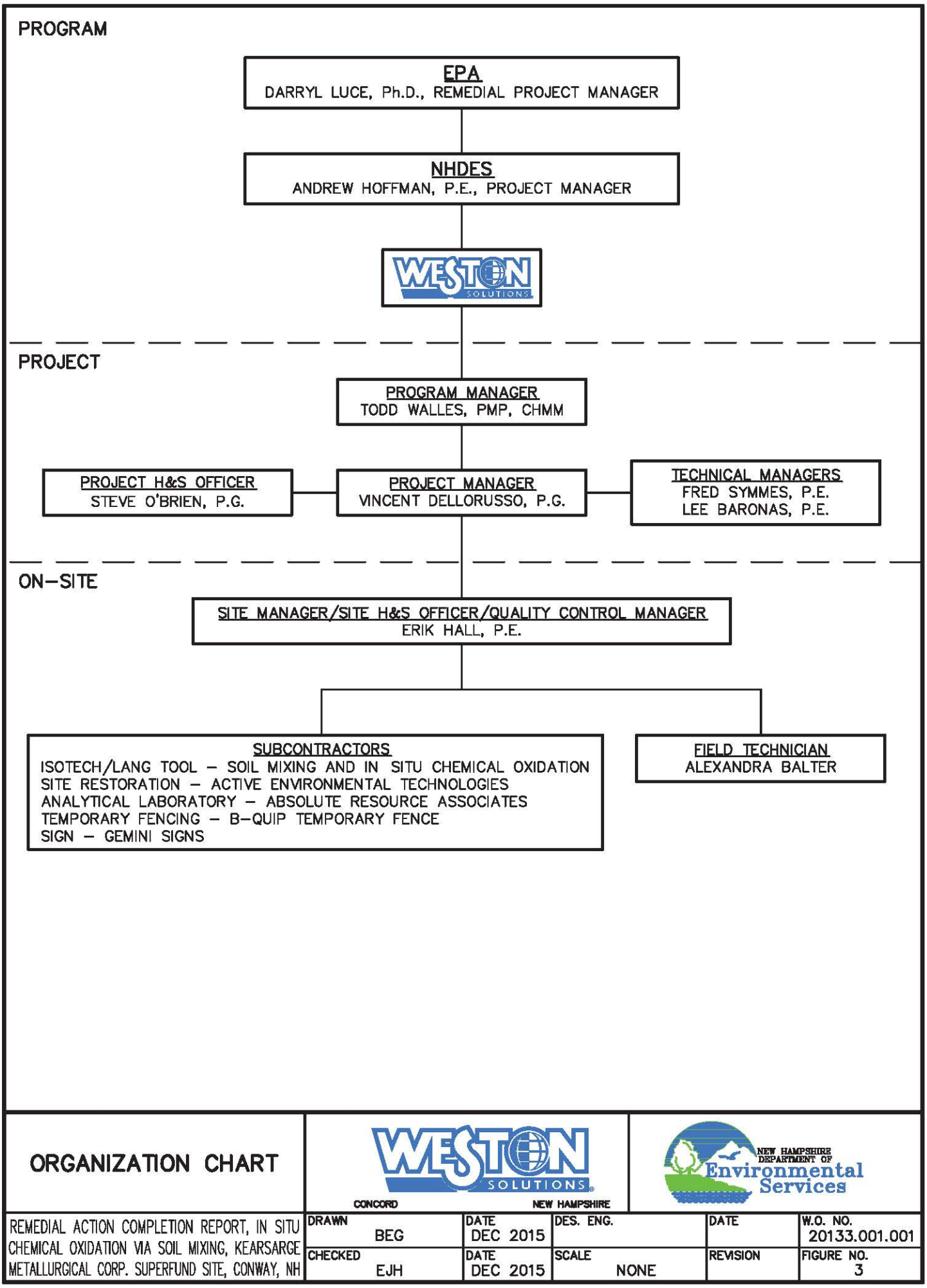
NEW HAMPSHIRE DEPARTMENT OF Environmental Services

	CHECKED	DATE	CLIENT APPROVALS	DATE
DES. ENG.				
PROJ. ENG.				
PROJ. MGR.				
APPROVED				
APPROVED			ISSUED FOR	DATE

SOIL TREATMENT SITE PLAN

DRAWN	DATE	FIGURE NO.	REV. NO.
BEG	DEC 2015	2	
SCALE	W.O. NO.	SHT. ___ OF ___	
AS SHOWN	20133.001.001		

M:\Design\DWG\KRSARGE\2015\Completion Report\FIG 2.dwg, Layout1, 2/24/2016 3:33:58 PM, girardeb, 1:2



ORGANIZATION CHART

WESTON SOLUTIONS
CONCORD NEW HAMPSHIRE

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

REMEDIAL ACTION COMPLETION REPORT, IN SITU CHEMICAL OXIDATION VIA SOIL MIXING, KEARSARGE METALLURGICAL CORP. SUPERFUND SITE, CONWAY, NH

DRAWN	DATE	DES. ENG.	DATE	W.O. NO.
BEG	DEC 2015			20133.001.001
CHECKED	**DATE**	**SCALE**	**REVISION**	**FIGURE NO.**
EJH	DEC 2015	NONE		3

M:\Design\DWG\KRSARGE\2015\Completion Report\FIG 3.dwg, Layout1, 2/24/2016 3:32:56 PM, girardeb, 1:1

NOTES:
1) ALL CELLS ARE 10'x10', 10'x5', OR 5'x5'.
2) PROJECT ACTION LIMIT: 60 ug/kg FOR 1,1-DCE AND 150 ug/kg FOR 1,1,1-TCA
3) CELLS E12S1, E12S2, E13S1, E13S2, E14S1, & E14S2 WERE RE-TREATED ON 9/17/15 AND RE-SAMPLED ON 9/18/15. RESULTS FOR 6 RE-TREATED CELLS MET PROJECT ACTION GOALS.
4) CELL E13S4 WAS RE-TREATED ON 9/21/15 AT 12:38 AND WAS RE-SAMPLED AT 14:38. RESULTS FOR THE RE-TREATED SAMPLE MET PROJECT ACTION GOALS.

NO.	DATE	APPR.	REVISION

NO.	DATE	APPR.	REVISION

REMEDIAL ACTION COMPLETION REPORT, IN SITU CHEMICAL OXIDATION VIA SOIL MIXING, KEARSARGE METALLURGICAL CORP. SUPERFUND SITE, CONWAY, NH

WESTON SOLUTIONS CONCORD NEW HAMPSHIRE

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

CHECKED	DATE	CLIENT APPROVALS	DATE
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APPROVED			

SOIL MIXING WITH ISCO

DRAWN	DATE	FIGURE NO.	REV. NO.
BEG	DEC 2015	4	
SCALE	W.O. NO.	SHT. ____ OF ____	
AS SHOWN	20133.001.001		

M:\Design\DWG\KRSARGE\2015\Completion Report\FIG 4.dwg, Layout1, 2/24/2016 3:35:00 PM, girardeb, 1:2

CARROLL INDUSTRIES

Gravel Parking

MWS-213

Street

Hobbs

MW-5003

Former Groundwater Treatment Plant

Gravel Drive & Parking

MW-3003

Gate

Paved Parking

FORMER KEARSARGE METALLURGICAL CORPORATION

CB-10

Old Ditch

Gravel Driveway

Old Drainage Ditch (Non-wetland)

Bulldozed Drainage Ditch

PZ-4002

Poplar Trees

PZ-4003

EW-9

MW-9

MWS-215

CB 8

Poplar Trees

MWS-205

MW-3004

PZ-4004

CB 7

SOIL TREATMENT AREA

EW-13B

MW-203A

MWS-113

MWS-114

CB 6-7

Poplar Trees

MW-3007

MWS-202A

MWS-204

EW-6

CB 5-6

Ponded Excavation Area (Former Landfill)

EW-11

MW-4

Old Drainage Ditch

PEQUAWKET POND

LEGEND

- SWALE
- DIRECTION OF GRADING
- SILT FENCE

NOTES:

1) EXISTING CONTOURS DO NOT ACCURATELY DEPICT THE RESTORED CONDITIONS.
2) A FINAL GRADING SURVEY WILL BE CONDUCTED IN SPRING, 2016.

GRAPHIC SCALE
40 20 0 20 40
APPROXIMATE SCALE IN FEET

NO.	DATE	APPR.	REVISION
NO.	DATE	APPR.	REVISION

REMEDIAL ACTION COMPLETION REPORT, IN SITU CHEMICAL OXIDATION VIA SOIL MIXING, KEARSARGE METALLURGICAL CORP. SUPERFUND SITE, CONWAY, NH

WESTON SOLUTIONS CONCORD NEW HAMPSHIRE

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

CHECKED	DATE	CLIENT APPROVALS	DATE
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PROJ. MGR.			
APPROVED			
APPROVED		ISSUED FOR	DATE

GRADING PLAN

DRAWN: BEG	DATE: DEC 2015	FIGURE NO.: 5	REV. NO.
SCALE: AS SHOWN	W.O. NO.: 20133.001.001	SHT. ___ OF ___	

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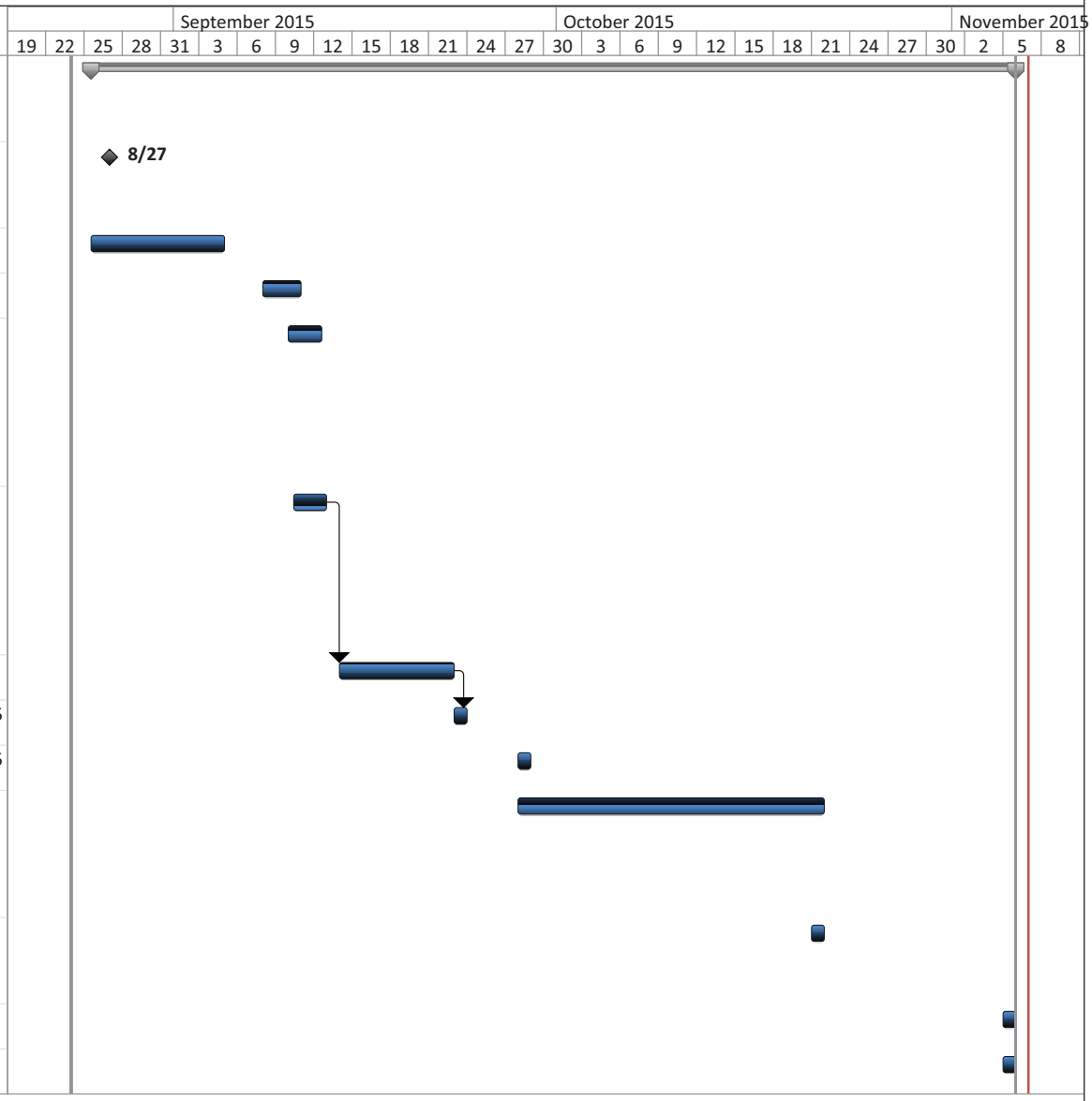
Figure 6 - Project Schedule

ID	Task Name	Start	Finish
0	**Kearsarge Metallurgical Corp. Superfund Site Remediation Schedule**	**Tue 8/25/15**	**Thu 11/5/15**
1	Notice to Proceed	Thu 8/27/15	Thu 8/27/15
2	**Planning and preparation of submittals**	Tue 8/25/15	Fri 9/4/15
3	**Mobilization of ISCO Subcontractor**	Tue 9/8/15	Thu 9/10/15
4	**Site Preparation (utility locating, safety zone establishment, fencing, clearing and grubbing, traffic controls and notifications, establish staging areas)**	Thu 9/10/15	Sat 9/12/15
5	**Establish dust control and erosion and sediment control measures, monitor well protection, strip top soil and stockpile, excavate shallow soil from treatment area**	Thu 9/10/15	Sat 9/12/15
6	**Perform ISCO via Soil Mixing**	Mon 9/14/15	Tue 9/22/15
7	**Demobilization of ISCO Subcontractor**	Wed 9/23/15	Wed 9/23/15
8	**Mobilization of Restoration Subcontractor**	Mon 9/28/15	Mon 9/28/15
9	**Site Restoration (Backfill treatment area, place stockpiled topsoil, regrade the site, restore access way, and complete final seed planting)**	Mon 9/28/15	Wed 10/21/15
10	**Demobilization of Restoration Subcontractor and Secure Site**	Wed 10/21/15	Wed 10/21/15
11	**Site walk with NHDES**	Thu 11/5/15	Thu 11/5/15
12	**Removal of temporary security fence**	Thu 11/5/15	Thu 11/5/15



Kearsarge Metallurgical Corp. Superfund Site
In Situ Chemical Oxidation Via Soil Mixing Schedule
Fri 12/18/15

WESTON SOLUTIONS

Task Milestone Progress
Split Summary

TABLES

Table 1
Treatment Performance Monitoring Data
In Situ Chemical Oxidation Enhanced by Soil Mixing
Kearsarge Metallurgical Corporation Superfund Site
Conway, New Hampshire

Date of ISCO/Soil Mixing	Cell Location[a]	Start time of ISCO/Soil Mixing	Stop time of ISCO/Soil Mixing	Total Soil Mixing Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After ISCO/ Soil Mixing	PID Screening (ppmv)	Post-Treatment Hydrogen Peroxide Concentration[b] (ppm)	Post-Treatment Dissolved Iron Concentration[c] (ppm)	Post-Treatment 1,1,1-TCA Concentration[d] (µg/kg)	Post-Treatment 1,1-DCE Concentration[e] (µg/kg)	Comments
14-Sep	E17-S14	10:45	11:04	19	15-Sep	9	Next Day	0.0	0	20	NA	NA	
						11		0.0	0	14	NA	NA	
						13		0.0	0	28	100 U	40 U	Sample sent to lab on 9/15. Results received on 9/16.
14-Sep	E17-S13	11:05	11:20	15	15-Sep	9	Next Day	0.0	0	12	NA	NA	
						11		0.0	0	63	NA	NA	
						13		0.0	0	32	50 U	20 U	Sample sent to lab on 9/15. Results received on 9/16.
14-Sep	E17-S11	11:36	11:42	7	15-Sep	9	Next Day	0.0	0	10	NA	NA	
						11		0.0	0	12	NA	NA	
						13		0.0	0	18	100 U	40 U	Sample sent to lab on 9/15. Results received on 9/16.
14-Sep	E17-S9	11:52	12:17	25	15-Sep	9	Next Day	0.0	0	14	NA	NA	
						11		0.0	0	9	NA	NA	
						13		0.0	0	15	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.
14-Sep	E17-S7	13:07	13:22	15	15-Sep	9	Next Day	0.0	0	14	NA	NA	
						11		0.0	0	8	NA	NA	
						13		0.0	0	5	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.

Notes are provided on Page 8 of this table.

Table 1
Treatment Performance Monitoring Data
In Situ Chemical Oxidation Enhanced by Soil Mixing
Kearsarge Metallurgical Corporation Superfund Site
Conway, New Hampshire

Date of ISCO/Soil Mixing	Cell Location[a]	Start time of ISCO/Soil Mixing	Stop time of ISCO/Soil Mixing	Total Soil Mixing Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After ISCO/ Soil Mixing	PID Screening (ppmv)	Post-Treatment Hydrogen Peroxide Concentration[b] (ppm)	Post-Treatment Dissolved Iron Concentration[c] (ppm)	Post-Treatment 1,1,1-TCA Concentration[d] (µg/kg)	Post-Treatment 1,1-DCE Concentration[e] (µg/kg)	Comments
14-Sep	E17-S6	13:23	13:38	15	15-Sep	9	Next Day	0.0	0	11	NA	NA	
						11		0.0	0	6	NA	NA	
						13		0.0	0	12	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
14-Sep	E17-S5	13:39	14:08	29	15-Sep	9	Next Day	0.0	0	6	NA	NA	
						11		0.0	0	4	NA	NA	
						13		0.0	0	6	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.
14-Sep	E13-S2	16:16	16:33	17	15-Sep	9	Next Day	0.0	0	12	NA	NA	
						11		0.0	0	8	NA	NA	
						13		0.0	0	8	200	110	Sample sent to lab on on 9/16. Results received on 9/17. Exceedance detected. Cell retreated on 9/17. Analytical data received on 9/19/15 with results below project goals.
											60	40	Duplicate sample sent to lab on 9/16. Results received on 9/17.
14-Sep	E14-S1	15:05	15:19	14	15-Sep	9	Next Day	0.0	0	6	NA	NA	
						11		0.0	0	12	NA	NA	
						13		0.0	0	8	100 U	160	Sample sent to lab on on 9/16. Results received on 9/17. Exceedance detected. Cell retreated on 9/17. Analytical data received on 9/19/15 with results below project goals.

Notes are provided on Page 8 of this table.

Table 1
Treatment Performance Monitoring Data
In Situ Chemical Oxidation Enhanced by Soil Mixing
Kearsarge Metallurgical Corporation Superfund Site
Conway, New Hampshire

Date of ISCO/Soil Mixing	Cell Location[a]	Start time of ISCO/Soil Mixing	Stop time of ISCO/Soil Mixing	Total Soil Mixing Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After ISCO/ Soil Mixing	PID Screening (ppmv)	Post-Treatment Hydrogen Peroxide Concentration[b] (ppm)	Post-Treatment Dissolved Iron Concentration[c] (ppm)	Post-Treatment 1,1,1-TCA Concentration[d] (µg/kg)	Post-Treatment 1,1-DCE Concentration[e] (µg/kg)	Comments
14-Sep	E15-S2	15:20	15:35	15	15-Sep	9	Next Day	0.0	0	14	NA	NA	
						11		0.0	0	10	NA	NA	
						13		0.0	0	8	100 U	50	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E11-S2	9:00	9:18	18	16-Sep	11	Next Day	0.0	0	5	NA	NA	
						13		0.0	0	10	100	60	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E7-S1	12:05	12:22	17	16-Sep	13	Next Day	0.0	1	12	100	30	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E9-S2	10:46	11:08	22	16-Sep	9	Next Day	0.0	0.0	4	NA	NA	
						11		0.0	0.0	9	100	50	
						13		0.0	0.8	6	NA	NA	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E10-S1	8:38	8:59	21	16-Sep	13	Next Day	0.0	0.0	6	100	30	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E8-S1	11:09	11:31	22	16-Sep	13	Next Day	0.0	0.0	7	100	60	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E6-S2	13:37	13:57	20	16-Sep	13	Next Day	0.1	0.0	4	100	30 J	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E5-S2	14:19	14:39	20	16-Sep	13	Next Day	0.1	0.0	10	50 J	20 J	Sample sent to lab on 9/16. Results received on 9/17.
											50 J	30 J	Duplicate Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E5-S1	13:58	14:18	20	16-Sep	13	Next Day	0.0	0.0	5	100	30	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E3-S2	15:41	16:03	22	16-Sep	13	Next Day	0.1	0.0	4	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E3-S1	15:20	15:40	20	16-Sep	13	Next Day	0.1	0.0	8	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.

Notes are provided on Page 8 of this table.

Table 1
Treatment Performance Monitoring Data
In Situ Chemical Oxidation Enhanced by Soil Mixing
Kearsarge Metallurgical Corporation Superfund Site
Conway, New Hampshire

Date of ISCO/Soil Mixing	Cell Location[a]	Start time of ISCO/Soil Mixing	Stop time of ISCO/Soil Mixing	Total Soil Mixing Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After ISCO/ Soil Mixing	PID Screening (ppmv)	Post-Treatment Hydrogen Peroxide Concentration[b] (ppm)	Post-Treatment Dissolved Iron Concentration[c] (ppm)	Post-Treatment 1,1,1-TCA Concentration[d] (µg/kg)	Post-Treatment 1,1-DCE Concentration[e] (µg/kg)	Comments
16-Sep	E4-S3	15:20	15:50	30	17-Sep	11	Next Day	0.0	1.0	5	100	40	Sample sent to lab on 9/17. Results received on 9/18.
						13		0.0	0.0	10	NA	NA	
16-Sep	E5-S3	15:50	16:20	30	17-Sep	11	Next Day	0.0	1.0	3	NA	NA	
						13		0.0	0.0	6	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
16-Sep	E16-S14	9:22	9:46	24	17-Sep	11	Next Day	0.1	0.0	9	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
						13		0.1	0.0	5	NA	NA	
16-Sep	E16-S11	10:28	10:48	20	17-Sep	13	Next Day	0.0	0.0	8	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
16-Sep	E1-S2	8:10	8:36	26	17-Sep	13	Next Day	0.0	0.0	7	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
16-Sep	E16-S6	12:33	12:54	21	17-Sep	13	Next Day	0.1	0.0	2	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
16-Sep	E16-S9	11:09	11:28	19	17-Sep	13	Next Day	0.1	0.0	9	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
16-Sep	E16-S3	13:43	14:08	25	17-Sep	13	Next Day	0.1	0.0	7	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
17-Sep	E10-S3	9:48	10:17	29	18-Sep	13	Next Day	0.1	0.0	7	100	30 J	Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E13-S3	11:07	11:37	20	18-Sep	13	Next Day	0.1	0.0	4	100 U	40 J	Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E14-S12	14:59	15:11	12	18-Sep	13	Next Day	0.0	0.0	10	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E14-S3	11:37	12:00	23	18-Sep	13	Next Day	0.2	0.0	2	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E15-S8	13:02	13:14	12	18-Sep	13	Next Day	0.0	0.0	5	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E15-S10	13:27	13:50	23	18-Sep	13	Next Day	0.0	0.0	3	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.

Notes are provided on Page 8 of this table.

Table 1
Treatment Performance Monitoring Data
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Conway, New Hampshire

Date of ISCO/Soil Mixing	Cell Location[a]	Start time of ISCO/Soil Mixing	Stop time of ISCO/Soil Mixing	Total Soil Mixing Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After ISCO/ Soil Mixing	PID Screening (ppmv)	Post-Treatment Hydrogen Peroxide Concentration[b] (ppm)	Post-Treatment Dissolved Iron Concentration[c] (ppm)	Post-Treatment 1,1,1-TCA Concentration[d] (µg/kg)	Post-Treatment 1,1-DCE Concentration[e] (µg/kg)	Comments
17-Sep	E15-S14	15:23	15:50	27	18-Sep	13	Next Day	0.0	0.0	8	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
											100 U	30 U	Duplicate sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E15-S3	12:33	12:59	26	18-Sep	13	Next Day	0.0	0.0	7	100 U	50 U	Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E12-S1	17:42	17:59	17	18-Sep	11	Next Day	0.0	0.0	3	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Results received on 9/19.
						13		0.0	0.0	5	NA	NA	Retreated cell on 9/17.
17-Sep	E12-S2	17:24	17:42	18	18-Sep	11	Next Day	0.0	0.0	5	NA	NA	Retreated cell on 9/17.
						13		0.1	0.0	5	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E13-S1	17:14	17:24	10	18-Sep	11	Next Day	0.0	0.0	3	NA	NA	Retreated cell on 9/17.
						13		0.0	0.0	6	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E13-S2	16:50	17:14	24	18-Sep	11	Next Day	0.0	0.0	4	NA	NA	Retreated cell on 9/17.
						13		0.1	0.0	5	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E14-S1	16:37	16:50	13	18-Sep	11	Next Day	0.1	0.0	6	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Results received on 9/19.
						13		0.0	0.0	8	NA	NA	Retreated cell on 9/17.

Notes are provided on Page 8 of this table.

Table 1
Treatment Performance Monitoring Data
In Situ Chemical Oxidation Enhanced by Soil Mixing
Kearsarge Metallurgical Corporation Superfund Site
Conway, New Hampshire

Date of ISCO/Soil Mixing	Cell Location[a]	Start time of ISCO/Soil Mixing	Stop time of ISCO/Soil Mixing	Total Soil Mixing Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After ISCO/ Soil Mixing	PID Screening (ppmv)	Post-Treatment Hydrogen Peroxide Concentration[b] (ppm)	Post-Treatment Dissolved Iron Concentration[c] (ppm)	Post-Treatment 1,1,1-TCA Concentration[d] (µg/kg)	Post-Treatment 1,1-DCE Concentration[e] (µg/kg)	Comments
17-Sep	E14-S2	16:06	16:37	31	18-Sep	11	Next Day	0.0	0.0	7	NA	NA	Retreated cell on 9/17.
						13		0.0	0.0	3	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Results received on 9/19.
18-Sep	E2-S4	7:56	8:06	10	19-Sep	13	Next Day	0.1	0.0	5	100 U	20 U	Sample Sent to Lab 9/19. Results received on 9/21.
18-Sep	E4-S4	9:15	9:46	31	19-Sep	13	Next Day	0.1	0.0	12	100 U	30 U	Sample Sent to Lab 9/19. Results received on 9/21.
18-Sep	E3-S5	13:19	13:49	30	19-Sep	13	Next Day	0.1	0.0	13	100 U	20 U	Sample Sent to Lab 9/19. Results received on 9/21.
											100 U	30 J	Duplicate Sample Sent to Lab 9/19. Results received on 9/21.
18-Sep	E5-S4	9:47	10:16	29	19-Sep	13	Next Day	0.1	0.0	3	100 U	20 U	Sample Sent to Lab 9/19. Results received on 9/21.
18-Sep	E14-S4	14:26	14:56	30	19-Sep	13	Next Day	0.0	0.0	8	100 U	30 U	Sample Sent to Lab 9/19. Results received on 9/21.
18-Sep	E4-S5	13:50	14:18	28	19-Sep	13	Next Day	0.1	0.0	4	100 U	30 U	Sample Sent to Lab 9/19. Results received on 9/21.
18-Sep	E15-S4	14:56	15:18	22	19-Sep	13	Next Day	0.0	0.0	6	100 U	30 U	Sample Sent to Lab 9/19. Results received on 9/21.
18-Sep	E5-S5	16:18	16:47	29	19-Sep	13	Next Day	0.1	0.0	7	100 U	30 J	Sample Sent to Lab 9/19. Results received on 9/21.
18-Sep	E7-S4	10:37	11:02	25	19-Sep	13	Next Day	0.1	0.0	5	100 U	30 U	Sample Sent to Lab 9/19. Results received on 9/21.
18-Sep	E10-S4	11:42	12:13	31	19-Sep	13	Next Day	0.0	0.0	24	100 U	30 U	Sample Sent to Lab 9/19. Results received on 9/21.
18-Sep	E11-S4	13:11	13:32	21	19-Sep	13	Next Day	0.0	0.0	12	100 U	30 U	Sample Sent to Lab 9/19. Results received on 9/21.

Notes are provided on Page 8 of this table.

Table 1
Treatment Performance Monitoring Data
In Situ Chemical Oxidation Enhanced by Soil Mixing
Kearsarge Metallurgical Corporation Superfund Site
Conway, New Hampshire

Date of ISCO/Soil Mixing	Cell Location[a]	Start time of ISCO/Soil Mixing	Stop time of ISCO/Soil Mixing	Total Soil Mixing Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After ISCO/ Soil Mixing	PID Screening (ppmv)	Post-Treatment Hydrogen Peroxide Concentration[b] (ppm)	Post-Treatment Dissolved Iron Concentration[c] (ppm)	Post-Treatment 1,1,1-TCA Concentration[d] (µg/kg)	Post-Treatment 1,1-DCE Concentration[e] (µg/kg)	Comments
18-Sep	E13-S4	13:52	14:26	34	19-Sep	13	Next Day	0.1	0.0	13	100 U	80	Sample sent to lab on on 9/19. Results received on 9/21. Exceedance detected. Cell retreated on 9/21. Analytical data received on 9/22 with results below Post-Treatment Criteria.
19-Sep	E5-S6	8:32	8:45	13	21-Sep	13	Approx. 47 hrs	0.0	0.0	4	100 U	30 U	Sample Sent to Lab 9/21. Results received on 9/22.
19-Sep	E8-S5	9:45	10:15	30	21-Sep	13	Approx. 46 hrs	0.1	0.0	10	Lab broke sample bottle. Cell was resampled at 14:30 on 9/21.		Sample Sent to Lab 9/21.
19-Sep	E13-S5	10:25	10:47	22	21-Sep	13	Approx. 45 hrs	0.0	0.0	10	100 U	40 U	Sample Sent to Lab 9/21. Results received on 9/22.
19-Sep	E15-S6	11:40	12:05	25	21-Sep	13	Approx. 44 hrs	0.0	0.0	6	100 U	30 U	Sample Sent to Lab 9/21. Results received on 9/22.
21-Sep	E13-S4	12:38	13:12	33	21-Sep	13	Approx. 4 hrs	0.0	2.5	13	100 U	40 U	Sample Sent to Lab 9/19. Cell was retreated on 9/21 at 12:38. Cell was resampled at 14:38 on 9/21. Analytical data received on 9/22.
21-Sep	E8-S5	9:45	10:15	30	21-Sep	13	Approx. 2 days	0.0	10.0	10	70 J	20 J	Sample Sent to Lab 9/21. Lab broke sample bottle. Cell was resampled at approx. 14:30 on 9/21. Results received on 9/22.

Notes are provided on Page 8 of this table.

Table 1
Treatment Performance Monitoring Data
In Situ Chemical Oxidation Enhanced by Soil Mixing
Kearsarge Metallurgical Corporation Superfund Site
Conway, New Hampshire

Notes:

[a] Cell Locations = ID locations of the treatment cells that were sampled after the cell was treated with ISCO and soil mixing.

[b] Field testing for hydrogen peroxide was conducted using Quantofix Peroxide 100 test strips.

[c] Field testing for total iron was conducted using Hach Iron Color Disc Test Kit, Model IR-18A .

[d] 1,1,1-TCA = 1,1,1-Trichloroethane (Post-Treatment Criterion is≤150 µg/kg)

[e] 1,1-DCE = 1,1-Dichloroethene (Post-Treatment Criterion is≤60 µg/kg)

ft bgs = Feet below ground surface.

ppmv = Parts per million by volume

ppm = Parts per million

NA = Not Analyzed

µg/kg = Micrograms per kilogram

Sample Collection Time = Samples collected the morning after day of ISCO/soil mixing.

U = Analyte was not detected. Reporting limit is shown.

Green shading indicates results were non-detect for the compounds indicated.

Yellow highlighting indicates detection at or below the Post-Treatment Criterion for the compound indicated.

Red highlighting indicates detection above the Post-Treatment Criterion for the compound indicated.

Orange highlighting indicates cell was re-treated with ISCO and soil mixing, and then re-sampled because of exceedance of the one or more of the Post-Treatment Criteria after the first round of ISCO and mixing. The results for the sample collected after the second ISCO treatment and mixing met the Post-Treatment Criteria.

Blue highlighting indicates cell was re-treated with ISCO and soil mixing, and then re-sampled because of an exceedance of one or more of the Post-Treatment Criteria in adjacent cell(s) after the first round of ISCO and mixing. The results for the sample collected after the second ISCO/soil mixing treatment met the Post-Treatment Criteria.

Table 2
Catch Basin Monitoring Data
In Situ Chemical Oxidation Enhanced by Soil Mixing
Kearsarge Metallurgical Superfund Site
Conway, New Hampshire

Catch Basin Location	Date	Time	Collected By	Hydrogen Peroxide Concentration (ppm)	Dissolved Iron Concentration (ppm)	Notes
CB5-6	9/15/2015	1630	AB	0	1.0	
	9/16/2015	1115	AB	0	0.4	
	9/16/2015	1643	AB	0	0.1	
	9/17/2015	1021	AB	0	1.4	
	9/17/2015	1610	AB	0	0.3	
	9/18/2015	1102	AB	0	0.6	
	9/18/2015	1610	AB	0	0.2	
	9/19/2015	0915	AB	0	0.8	
	9/19/2015	1200	AB	0	0.8	
	9/21/2015	0910	EH	0	0.0	
	9/21/2015	1515	EH	0	0.8	
CB6-7	9/16/2015	1115	AB	0	1.0	
	9/16/2015	1643	AB	0	0.5	
	9/17/2015	1011	AB	0	1.0	
	9/17/2015	1620	AB	0	0.2	
	9/18/2015	1112	AB	0	0.8	
	9/18/2015	1603	AB	0	0.1	
	9/19/2015	0915	AB	0	1.0	
	9/19/2015	1200	AB	0	1.0	
	9/21/2015	0915	EH	0	0.0	
	9/21/2015	1510	EH	0	0.8	

Notes:
ppm = Parts per million

Table 3
Contact Information
In Situ Chemical Oxidation Enhanced by Soil Mixing
Kearsarge Superfund Site
Conway, New Hampshire

Agency/Company	Project Title	Personnel	Address	Phone
EPA	Remedial Project Manager	Mr. Darryl Luce, Ph.D.	US Environmental Protection Agency 5 Post Office Square, Suite 100 Mail Code OSRR07-1 Boston, MA 02109-3912	(617) 918-1336
NHDES	Project Manager	Mr. Andrew Hoffman, P.E.	New Hampshire Department of Environmental Services 29 Hazen Drive Concord, NH 03301	(603) 271-6778
WESTON	Program Manager	Mr. Todd Walles, PMP, CHMM	Weston Solutions 124 Hebron Avenue Glastonbury, CT 06033	(860) 368-3200
WESTON	Project Manager	Mr. Vincent DelloRusso, P.G.	Weston Solutions 2501 Jolly Road, Suite 100 Okemos, Michigan 48864	(603) 656-5457
WESTON	Technical Manager	Mr. Fred Symmes, P.E.	Weston Solutions 43 N. Main Street Concord, NH 03302	(603) 656-5412
WESTON	Site Superintendent	Mr. Erik Hall, P.E.	Weston Solutions 43 N. Main Street Concord, NH 03302	(603) 656-5436
ISOTECH	Project Manager	Mr. Mike Temple	ISOTEC - In-Situ Oxidative Technologies11 Princess Road Suite A Lawrenceville, NJ 08648	(609) 803-3513
LTC	Project Manager	Mr. Bill Lang	Lang Tool Company 2520 Glidden Road Beaverton, MI 48612	(989) 435-9864
ACTIVE	Project Manager	Mr. JR Evangelista	Active Environmental Technologies 230 Pine St. Mt. Holly, NJ 08060	(609) 864-0822

Notes:
EPA = United States Environmental Protection Agency
NHDES = New Hampshire Department of Environmental Services
WESTON = Weston Solutions, Inc.

APPENDIX A

ISOTEC ISCO SOIL MIXING TREATMENT PROGRAM SUMMARY REPORT

ISCO SOIL MIXING TREATMENT PROGRAM SUMMARY REPORT

ISCO SOIL MIXING REMEDIAL SERVICES
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NEW HAMPSHIRE
WORK ORDER NO. 20118.015.003
NHDES SITE NO. 198708002, PROJECT NO. 13323

JANUARY 5, 2015

PREPARED FOR

WESTON SOLUTIONS, INC.
45 CONSTITUTION AVENUE, SUITE 100
CONCORD, NH 03301

ISOTEC PROPOSAL NO. 801991(R)

In-Situ Oxidative Technologies, Inc.
11 Princess Road, Suite A
Lawrenceville, New Jersey 08648
Phone: (609) 275-8500
Fax: (609) 275-9608
www.insituoxidation.com

SBA Certified Small Business

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ACRONYMS

1,1-DCE	1,1-Dichloroethene
1,1,1-TCA	1,1,1-Trichloroethane
ARA	Absolute Resource Associates
BASP	Base activated sodium persulfate
bgs	Below ground surface
COC	Contaminants of Concern
CPR	Cardiopulmonary Resuscitation
DAB	LTC Dual Axis Blender
DPW	Department of Public Works
DTW	Depth to Water
ft	Feet
ft^2	Square ft
g/kg	Grams per kilogram
GPS	Global positioning system
GPTS	Groundwater Pump and Treat System
HASP	Health and Safety Plan
ISCO	In-situ chemical oxidation
ISOTEC	In-Situ Oxidative Technologies, Inc.
JSA	Job safety analysis
KMC	Kearsarge Superfund Site
lbs	Pounds
lbs/ft^3	Pounds per cubic feet
lbs/yd^3	Pounds per cubic yard
LPS	Loss prevention system
LTC	Lang Tool Co.
MFR	Modified Fenton's Reagent
MSDS	Material safety data sheets
MSL	Mean Sea Level
MW	Monitoring well
NHDES	New Hampshire Department of Environmental Services
PID	Photo-ionization detector
PFM	Project field manager
PFT	Project field technician
PPE	Personal protective equipment
PPM	Parts per million
RFP	Request for proposal
SERC	New Hampshire State Emergency Response Commission
SOD	Soil Oxidant Demand
SSHO	Site Health and Safety Officer
TAT	Turnaround Time
µg/kg	Micrograms per kilogram
USEPA	United States Environmental Protection Agency
VOCs	Volatile organic contaminants
Weston	Weston Solutions, Inc.
yd^3	Cubic yards

Executive Summary

In-Situ Oxidative Technologies, Inc. (ISOTEC), along with our teaming partner Lang Tool Company (LTC), was retained by Weston Solutions, Inc. (Weston), on behalf of the New Hampshire Department of Environmental Services (NHDES) and the United States Environmental Protection Agency (USEPA) for in-situ chemical oxidation (ISCO) soil mixing remediation services of impacted soil and groundwater at the Kearsarge Metallurgical Corporation (KMC) Superfund Site (KMC Site), located in Conway, New Hampshire. Weston acted as the Oversight Engineer for the project and was responsible for preparing final submittals to the NHDES and USEPA for field implementation activities. Constituents of concern (COCs) at the subject site include volatile organic compounds (VOCs) primarily consisting of 1,1,1-trichloroethane (1,1,1-TCA) and 1,1-dichloroethene (1,1-DCE). Permitting for the treatment program activities is governed by the NHDES and USEPA guidelines.

Per specifications provided within the request for proposal (RFP) and subsequent Addendums, ISCO via modified Fenton's reagent (MFR) was utilized as the remedial technology for the soil mixing program. Reagents are directly blended into or around areas of known contamination in the subsurface to treat contaminants of concern (COCs) *in-situ*. Additional work completed along with soil mixing activities included preparatory earthwork, soil erosion/sediment control, dust control, excavation activities, technical support, quality control, on site sample collection and analysis, chemical deliveries/management, chemical preparation/mixing, and health and safety oversight. Post-treatment restoration work was completed by others (Active Environmental, procured by Weston) following completion of all soil-mixing related activities and following our demobilization from the site.

The remedial design strategy selected for the site consisted of ISCO soil mixing via MFR technology, targeting an approximately 10,000 square feet (ft^2) area within the 7-15 feet (ft) below ground surface (bgs) interval, or approximately 2,963 cubic yards (yd^3). Actual location of the treated area and limit of disturbance is shown on Figure 1.

A total of 44,710 gallons of reagent (34,360 gallons of ~17-21% stabilized hydrogen peroxide and 10,350 gallons of ISOTEC catalyst) were mixed into the target area over the duration of the soil mixing program (Table 3). Actual reagent volume mixed into the treatment area deviated slightly from the original design and is discussed below in Section 7.2. Detailed summary of daily activities completed at the site each day including mixed cell locations, volumes of reagent mixed into the treatment area, sampling locations and relevant field activities are provided as Appendix I (ISOTEC Daily Reports) and Appendix II (LTC Daily Reports). Detailed summary of samples collected along with relevant data is provided as Table 4.

Summary of field activities completed at the KMC site is provided below:

- Modification to the original scope of work which primarily consisted of switching from base activated sodium persulfate (BASP) technology to MFR technology (relatively GREENER technology compared to BASP); exclusion of the barrier wall on the eastern edge of the treatment area; exclusion of the construction entrance and decontamination pad; and exclusion of the wastewater treatment program. Details of the modified work were presented in the *ISCO Summary Work Plan, ISCO Soil Mixing Remedial Services – Kearsarge Matallurgical Corp. Superfund Site*, dated September 4, 2015, prepared by ISOTEC and approved by Weston.
- Mobilization of ISOTEC and LTC equipment and personnel (hereinafter referred to as ISOTEC). Site kick-off meeting between ISOTEC, Weston, NHDES, property owner and township officials. Notification of field activities to the township Fire and Police Departments in case any emergencies were encountered. Notification and permission from the township department of public works (DPW) to utilize a nearby fire hydrant for water supply. Placement of the Dig Safe call for utility verification.
- Initial land clearing, global positioning survey (GPS) of the treatment area, video documentation of current site conditions along the buildings and fence line to show existing conditions, protection of wells and catch basins, installation of the silt fence, installation of the safety perimeter fence, excavation and stockpiling of the upper top soil, excavation of vadose zone soils (non-impacted soils) down to the current water table (deeper than originally planned), placement of excavated soils as a temporary berm/ dike around the edge of the treatment area to prevent run-off, and delineation of the treatment area rows and cells.
- Chemical delivery management and containment, soil mixing of MFR into the treatment area and subsequent sample collection and analysis; re-mixing of select cells based on exceedances detected following the initial mixing attempt; confirmation that each cell was treated to below site specific criteria.
- Health and safety oversight including modifications and amendments to certain procedures based on comments from Weston field personnel.
- Demobilization activities and transfer of certain pieces of rental equipment to Active Environmental who were procured by Weston to complete final site restoration.

Section 1 Site Characteristics

The Kearsarge Site is located at 123 Hobbs Street in Conway, NH, in an industrial park on the western edge of Conway. There is a residential area 900-feet west of the KMC property with the nearest public water supply well located 1 mile to the north of the site. Past business operations (manufacturing of stainless steel valves and materials that produced waste solvents and casting sands that were disposed of at the site) at the subject site have resulted in groundwater impacts with VOCs, primarily consisting of 1,1,1-TCA and 1,1-DCE. Majority of the former KMC building has been razed and transformed into a paved parking area. The remaining portions of the KMC building have been restored to house active commercial enterprises. The remaining groundwater impacted area resides in the southeast portion of the site within a partially wooded wetland, referred to as the Culvert Area. Site remediation activities however, are exempt from wetland permitting (the substantive technical requirements are still applicable and have been incorporated into the RFP specifications). The site is a relatively flat area that required some clearing and grubbing in order to access the proposed treatment area limits. Previous remedial activities have included source area excavations, phytoremediation, removal of waste pit materials/drums and the installation and operation of a groundwater pump and treat system (GPTS).

The Culvert Area is underlain by a thin layer of fine sand (8 to 14 ft thick) underlain by two low permeability layers, consisting of a discontinuous tan clayey silt layer on top of a grey silt layer. The grey clay/silt layer appears to have limited the vertical downward migration of the contaminants as only the upper few feet of this media warrant treatment. The low permeability silt layer slopes steeply downward from a high of 8 ft bgs in the Culvert Area to a low of greater than 40 ft bgs in the Hobbs Street Area. Depth to groundwater (GW) is relatively shallow at the site and has been detected as shallow as 3 ft bgs in the past, depending on the time of year when sampled. During September 2015, depth to groundwater was closer to 6-7 ft bgs within the target treatment area and allowed for deeper excavation of vadose zone soils to be removed, than originally anticipated.

The approximate area targeted for soil mixing activities was estimated to be 10,000 ft^2 at depths between 7-15 ft bgs for a total estimated soil treatment volume of approximately 2,963 yd^3. Because the current depth to water was deeper than anticipated, only minimal vadose zone soils were included within the soil mixing treatment. All attempts were made by ISOTEC to maintain treatment within only the dimensions specified with the RFP as shown on Figure 1, which included adjustments to a few cell dimensions (E17-S10 and E17-S11) in the vicinity of catch basin CB 7-8, to ensure that the catch basin was not damaged during field activities. The proposed

treatment area was divided into smaller treatment cells as shown on Figure 2. The equipment/chemical storage layout is provided as Figure 3.

Section 2 Treatment Program Objectives

The overall objectives of the treatment program based on specifications provided in the RFP are listed below:

- Ensure that all remediation efforts are performed in a safe manner, protective of human health and the environment;
- Ensure that all proposed activities are performed in a well-thought out, and coordinated manner;
- Ensure reagent solution is prepared and delivered based on design specifications, to ensure that the proposed treatment area is remediated to below specific criteria set for the site;
- Ensure complete and thorough soil mixing is occurring between reagents and impacted soils through verification sampling and visual observations; and
- Minimize disturbance to the site to the extent practicable, and conduct field work in a manner that minimizes disturbance to the neighboring active business operations.

The soil mixing remediation program was implemented with the objective to achieve reduction of VOCs in site soils to levels below Post-Treatment Criteria set for the site. Specifically, the following criteria were designated for site remediation goals with samples usually collected the day following soil-mixing activities. Acceptable values for 1,1-DCE and 1,1,1-TCA are represented as micrograms per kilogram (µg/kg).

Table 1: Post-Treatment Soils Criteria

Test Parameter by EPA Method 8260 C	Acceptable Value
1,1-DCE	≤60 µg/kg
1,1,1-TCA	≤150 µg/kg
1,4-Dioxane	Information only

Samples were collected by ISOTEC/ Weston field personnel and shipped to an analytical laboratory for VOC analysis; along with on-site analysis for additional parameters as discussed in Section 7.3.

Section 3 Technology Overview

Both MFR and BASP proved to be successful towards destruction of site COCs during the March-April 2015 bench testing performed by ISOTEC. MFR was selected as the treatment remedy due to lower overall reagent costs compared to BASP, and because MFR is a "relatively Greener technology" that produces much lower concentrations of byproducts when compared to BASP, which are not expected to have significant impact on nearby potential sensitive receptors (i.e. Pequawket Pond and nearby drain culvert). A summary description of the technology selected for the KMC Site is provided below.

3.1 Modified Fenton's Reagent (MFR)

The MFR process combines proprietary chelated iron complex catalysts[1], mobility control agents, oxidizers, and stabilizers in an optimal chemical formulation over a wide range of pH conditions, including the circum-neutral pH conditions, and employs site-specific delivery systems to destroy the targeted COCs. The process generates powerful free radicals when the catalyst reacts with hydrogen peroxide which includes hydroxyl radicals, superoxide radicals and hydroperoxide anions, which are very effective in treating a wide range of organic contaminants. The principal chemical reactions associated with the MFR process are provided below.

$H_2O_2 + Fe^{2+} \rightarrow OH\bullet + OH^- + Fe^{3+}$

$H_2O_2 + OH\bullet \rightarrow HO_2\bullet + H_2O$

$HO_2\bullet \rightarrow H^+ + O_2\bullet^-$

$HO_2\bullet + O_2\bullet^- \rightarrow HO_2^- + O_2$

Where

H_2O_2 = Hydrogen Peroxide; Fe^{2+} = Ferrous Ion;
Fe^{3+} = Ferric Ion; $OH\bullet$ = Hydroxyl Radicals;
OH^- = Hydroxide Ion; $O_2\bullet^-$ = Superoxide Radicals;
HO_2^- = Hydroperoxide Anion; and
$HO_2\bullet$ = Perhydroxyl Radical

MFR allows application of Fenton's reagent without use of strong acids that are known to cause strong exothermic reaction conditions in a traditional Fenton's reaction. MFR uses proprietary stabilizers that allow for a controlled and more gradual decomposition of hydrogen peroxide facilitating safe injection of this oxidant into the subsurface. The use of chelating agents and stabilizers allows significantly improved radial coverage in the treatment area minimizing the loss of iron via precipitation and peroxide to catalytic decomposition (by transition metals). The reaction can occur under natural pH conditions of the subsurface (i.e. pH 5 to 8) eliminating the need for pH adjustment.

[1] ISOTEC catalysts consist of proprietary chelated iron complexes, which remain soluble under a range of pH conditions including neutral pH.

Section 4 Project Coordination

ISOTEC performed majority of the work tasks as specified in the RFP and only subcontracted out small portions of the proposed work (i.e. clearing/grubbing to Land and Mowing Solutions out of Randolph, Vermont).

Tasks handled by Weston (or others) included obtaining site access and permitting, placement of a project information sign, submission of all collected samples to a certified laboratory for analysis, perimeter air monitoring, catch basin monitoring, procurement of a contractor to install perimeter fencing, backfill and site restoration following soil mixing activities (Active Environmental), removal and disposal of erosion and sediment control measures, and restoration of disturbed monitoring wells in the treatment area.

4.1 Project Field Staffing

The project was managed by Prasad Kakarla, P.E., Technical Director and Mike Temple, Senior Project Manager. The ISOTEC field crew consisted of one project field manager and 2 field technicians who assisted LTC with forklift operation, mixing operations, data collection, chemical inventory management, sampling and daily reporting. The LTC crew was managed by Bill Lang, owner of LTC; along with a 3 man crew who managed site clearing/preparation activities, GPS services, excavating, sample collection, chemical preparation and ISCO soil mixing activities. The project field manager also served as the site health and safety officer (SSHO). Weston provided a dedicated field over sight supervisor (Erik Hall) for the duration of field activities, and a field technician to assist with sample collection and monitoring.

4.2 List of Subcontractors

The only subcontractors who worked at the site under the direction of ISOTEC were Land and Mowing Solutions, LLC., out of Randolph, Vermont.

4.3 List of Major Equipment

ISOTEC was equipped with the following major equipment required to complete the scope of work.

- LTC dual axis blender
- LTC-290 tool carrier
- LTC additive mixing truck
- LTC soil sampler
- Excavator
- Dozer

- Wood chipper/mulcher
- GPS equipment
- Service truck
- Fork Lift
- Portable generator
- Eye wash station, first aid kit, fire extinguishers, spill containment materials
- Chemical Mixing Tanks
- Secondary Containment (capable of 110% containment)
- Field Monitoring Instrumentation (i.e. iron and hydrogen peroxide test kits, bottleware)
- Portable bathroom
- Temporary snow fence/ cones/ delineators

4.4 List of Permits and Approvals/ Utility Markout

Weston procured the necessary permits/approval from the NHDES/EPA to perform the proposed remediation activities and handled all laboratory sample analysis requirements; provided temporary fencing around the site for security; provided control points (as needed) for the edges of the proposed work areas; and handle any site access issues. ISOTEC/Weston notified the township Fire and Police Departments about the scheduled work and provided material data safety sheets (MSDS) of reagents stored on-site to the Fire Department (Chief Solomon). Leslie Cartie, Hazardous Materials Coordinator, at the New Hampshire State Emergency Response Commission (SERC) was also notified about the treatment program activities.

ISOTEC coordinated with the Town of Conway for permission to utilize a nearby fire hydrant for water usage and notified Dig Safe (NH Dig Safe Number is 2015 3610958) to perform a mark out of any identified utilities in the area. Utility providers who came to the site did not detect any known utilities in the proposed work areas. The electric and water lines that run from EM-13B to the former groundwater treatment plant were confirmed to be out of service prior to excavating activities.

All major deliveries were discussed with the property owner (John Hurteau) and access was provided to the 2 neighboring business operations adjacent to the site, for the duration of treatment program activities.

Section 5 Project Schedule

The completed project schedule for all site activities is provided below. All work activities completed on-site were performed Monday through Saturday from 7:00 AM to 5:00 PM (longer hours were required on a few days to complete active mixing/ sampling activities). Daily progress calls were completed each day of the treatment program to discuss field operations and results of the sampling data that were provided the day following collection. Confirmation from Weston that all samples were below site detection limits occurred on September 22, 2015.

Table 2: KMC Project Implementation Schedule

Activity	Start Date	End Date
Notice of Selection	**July 29, 2015**	**July 29, 2015**
Notice to Proceed	**August 26, 2015**	**August 26, 2015**
Planning and preparation of submittals	**August 17, 2015**	**September 4, 2015**
Mobilization (Equipment Mobilization)	**September 8, 2015**	**September 10, 2015**
Kick-off meeting at the site (ISOTEC, LTC, Weston, NHDES, Conway Township Officials and property owner)	**September 10, 2015**	**September 12, 2015**
Site Preparation Activities	**September 10, 2015**	**September 12, 2015**
Perform ISCO via Soil Mixing and required sampling, chemical delivery management	**September 14, 2015**	**September 22, 2015**
Demobilization	**September 23, 2015**	**September 23, 2015**

Section 6 Mobilization/Demobilization

6.1 Pre-Construction Meeting/ Submittals

A pre-construction kickoff meeting was held on September 10, 2015 between ISOTEC/LTC, Weston, NHDES, Conway Township Officials and the property owner to confirm the proposed scope of work, access points, staging areas, support areas and any miscellaneous items that needed to be finalized prior to start of intrusive field activities.

Prior to field implementation all required planning documents were submitted to Weston for review and approval including the approved work plan and site specific health and safety plan (HASP). As needed, additional documents related to field activities and required permitting for personnel were submitted to Weston.

6.2 Mobilization

Mobilization activities occurred from September 8-10, 2015 and included transportation and staging of ISOTEC/LTC equipment, materials, instruments, personnel, and services required for implementing the treatment program at the KMC site. The major equipment transported to the site is provided in Section 4.3.

The materials that were transported to the site included ISOTEC catalyst (pre-weighed at the ISOTEC warehouse) in ~20.5 lb bags (~2,163 lbs total) and 34% hydrogen peroxide in 250 gallon totes (~201,600 lbs total). ISOTEC procured concentrated 34% hydrogen peroxide from a nearby chemical distributor in the New England Area via truck delivery. The hydrogen peroxide totes were stored within secondary containment and covered with tarps for protection from direct sunlight to minimize chances of degradation. The dry powder catalyst chemicals were staged within sealed drums for the duration of the project. Traffic was self regulated during deliveries and no major issues were encountered. The equipment/chemical storage layout is provided as Figure 3.

6.3 Demobilization

Demobilization activities included removal of all staged equipment, materials, instruments, personnel, and services from the project area. Demobilization of majority of equipment took place on September 23, 2015. Six unused totes of hydrogen peroxide were returned to the chemical manufacturer (pre-ordered in case re-mixing was required). The portable toilet was left behind to be utilized by Active Environmental during site restoration activities. All non-regulated waste and debris generated during the treatment program was removed. Empty hydrogen peroxide containers were returned to the manufacturer.

Section 7 In-Situ Remediation

7.1 Site Preparation

Site preparation, and erosion and sediment control measures as specified in the RFP were completed prior to the ISCO soil mixing work, using Best Management Practices. Preparation work included recording a video/audio surveillance of the site to document current conditions prior to any intrusive work being conducted at the site (focus on the existing buildings and fence structures as the wooded area was going to be removed surrounding the treatment area). Control points were established with assistance from Weston and the LTC GPS system. Once defined work areas were outlined, land clearing/grubbing activities occurred across the site as needed to prepare for subsequent excavation and LTC DAB activities. Preparation work included ensuring that the electric and water lines that exist between EM-13B and the former groundwater treatment plant were not active; removal of monitoring wells within the treatment area (MWs-3006, 3008, 3009, 3010, 3011), installation of a silt fence around the perimeter of the site; protection of existing wells located within the work area that are to remain undisturbed using precast concrete tiles (MWs-3004, 203A, 205, 114, EW-13B and CB 7-8); protection of catch basin inlet boxes on the eastern portion of the site via installation of silt bags; removal and stockpiling of top soil (approximately 1-2 feet of surface soils) and vadose zone soils (clean overburden soils were excavated down to the depth of the current water table which was located slightly above the target treatment interval at approximately 6-7 ft bgs). Stockpiled topsoil was covered up with poly sheeting to prevent leaching. Installation of the temporary water line from the hydrant located on Hobbs Street into the chemical preparation area was completed to allow access to running water for chemical preparation, dust suppression and in case of any site emergencies that required dilution of the hydrogen peroxide and or showering of field personnel.

The area of disturbance was limited to an estimated 0.988 acres as shown on Figure 1. Materials originating at the site (i.e. soils, trees, brush), remained at the site and were either incorporated into the work or stockpiled. Cleared vegetative matter and grubbing waste was chipped/ ground and spread across the site. Excavated vadose zone soils were utilized to build a berm around the soil mixing area to contain any swelling that may have occurred during the soil mixing operations. No significant swelling was observed and any accumulated liquids remained well below the working grade elevation at the site.

Access to running water was available at all times during site operations to assist in prevention of dust accumulation. Periodically and as needed, water was sprayed on loose soil piles and site equipment to minimize dust accumulation.

The only pieces of equipment that came in contact with potentially impacted materials were the sampling tool and LTC DAB mixing head. These pieces of equipment were decontaminated (sprayed off) each day over the soil mixing area.

Weston procured temporary perimeter fencing that was installed around the perimeter of the work areas for an added measure of security at the site. Temporary fencing (orange safety fencing) and/ or a combination of cones and delineators was also placed around open excavation areas (as needed).

7.2 ISCO Soil Mixing

The ISCO remedial treatment program was implemented at the KMC site using the MFR reagent blended into the subsurface using the LTC dual axis blender (DAB). Utilizing the LTC DAB allows for significantly more contact time between impacted media and introduced MFR reagents as the oxidant is applied at the source (i.e. point of highest mixing energy) where active soil mixing/churning is being applied as the axis blender turns on a vertical axis while the mixing drums counter-rotate on a horizontal axis. Contact with impacted soil mass is greatly enhanced utilizing this approach as MFR reagent is introduced at specific depth intervals to minimize oxidant wastage and ensure contact is achieved where needed. MFR was applied to the impacted saturated soil zone as two separate liquid solutions consisting of ISOTEC's patented chelated iron catalyst and stabilized hydrogen peroxide. Calculated pounds of each reagent were prescribed for each treatment cell based on the dimensions of a given cell. Liquid volumes for each reagent were adjusted (i.e. catalyst liquid volume was increased slightly to 100 gallons per cell to ensure that enough reagent was available to plunge down to depth in each of the four quadrants so that the area was pre-treated with catalyst prior to introduction of the stabilized hydrogen peroxide; and hydrogen peroxide volume was decreased slightly to try and minimize any accumulated swelling and excess liquid in the excavated areas) over the initial day of treatment but the calculated ponds of each reagent designated for each cell was always applied into the batch preparation makeup.

Based on information collected from the bench-testing, a soil oxidant demand (SOD) design criterion of approximately 7 grams of hydrogen peroxide per kilogram (g/kg) of soil was utilized during field application. The soil in the treatment volume is approximately 79% solids by weight and has a unit weight of approximately 110 pounds per cubic feet (lbs/ft^3), or 2,970 pounds per cubic yard (lbs/yd^3). Since blending was performed in the saturated zone and MFR reagent was introduced as a liquid, adequate groundwater was naturally present to achieve MFR hydration in-situ without the addition of excess water which has been required at other sites to assist the DAB in making the initial plunges into each cell in progressing down to the required treatment depth intervals. The cell layout of the target treatment area is shown in Figure 2. The treatment program ISCO design summary is provided in Table 5.

Reagents were prepared on the Chemical Mixing Truck equipped with scales to accurately measure reagent dosages to ensure solutions were prepared based on project design calculations (ISOTEC catalyst bags were pre-weighed at the ISOTEC office prior to field mobilization). The mixing truck was equipped with multiple mixing/storage tanks that could be utilized to prepare separate reagents or bulk quantities of a single solution to minimize any

downtime during application delivery. The computerized delivery system accurately applies prescribed dosages and volumes into specific treatment areas/depths, and the onboard GPS system precisely locates the treatment cells and verifies the DAB is properly positioned to ensure the entire treatment area (both vertically and horizontally) is thoroughly mixed during field application. A series of valves and hoses are utilized to safely deliver prepared reagents and water supply from the mixing area to the treatment area. Detailed output and figures related to the GPS system tracking of treated cells is provided within Appendix II. Figure 4 illustrates that each cell location was mixed down to slightly below the terminal depth of approximately 15 ft bgs or 447 mean sea level (msl) set for the site (red coloring indicates that soil mixing within a given plunge/quadrant was completed to slightly below the terminal depth).

The following information and procedures were utilized during soil mixing field implementation to complete the scope of work as specified in the RFP at the KMC site:

1. The DAB is equipped with a GPS device to allow the operators to know where (which cell is being treated at a given time) the machine is currently sitting and when they have reached the required depths at each cell location. In addition to the GPS system, treatment depths can be tracked visually by the depth numbers installed on the stem of DAB, as well as by establishing control points from ground elevation utilizing surveying equipment. The GPS and control points could be verified at any time during mixing if needed. The rover can be placed on a control point to confirm that it is reading correctly. The rover can shoot a point anywhere on the project at any time that is within the reach of the DAB wherever it may be. The DAB mixing head can be placed on that point where it can record a point so the elevation and position can be compared with the point taken by the rover. This procedure is done at the start of the project and periodically during the course of the project.

2. The target area was partitioned into separate treatment cells as shown in Figure 2. Approximate dimensions of each cell were either 10 ft x 10 ft (92 cells), 10 ft x 5 ft (15 cells), or 5 ft x 5 ft (2 cells). As can be seen on Figure 2, majority of the cells were treated as 10 ft x 10 ft cells. Treatment depths for each cell were the same throughout the treatment area (i.e. within the 7-15 ft bgs interval). The MFR solution was applied to the impacted saturated soil zone as a liquid solution with the ISOTEC catalyst solution mixed into each cell first to pre-treat the area with catalyst, followed by introduction of the stabilized hydrogen peroxide (~17-21% concentration) via the DAB. Volumes of MFR introduced into each cell location are provided as Table 3.

3. The LTC Dual Axis Blender mixed the soil with the chemicals in a gradual vertical plunge using the on board GPS system to accurately deliver reagent based on design specifications. The reagents were introduced by four precise vertical plunges within each 10-foot by 10-foot cell (smaller sized cells received between 1-2 vertical plunges).

Each plunge treated approximately ¼ of the targeted treatment cell at a time with each of the four plunges supplying equivalent amount of reagents. The DAB began making a vertical plunge into a given cell from the top depth to bottom depth of the targeted vertical interval with the reagent slowly delivered at the point of mixing. Due to the lower than expected water table which appeared at approximately 6-7 ft bgs, there was not much remaining vadose zone soil (unimpacted soils) left so the mixing of reagent began as soon as the DAB made contact with remaining site soils and continued at each location until the terminal depth was reached (mixing was extended slightly past the terminal depth to ensure that the target depth was reached at each location as shown on Figure 4). Following introduction of the full volume of MFR reagent, the DAB was plunged up and down, and side to side multiple times to ensure adequate mixing of reagent and impacted soils was achieved. In order to account for some reagent interchange into any remaining clean unimpacted soils, ISOTEC figured in an additional quantity of MFR equivalent to meet approximately 10% of the associated reagent demand within the originally estimated ~3-7 ft bgs clean interval.

4. Soil mixing plunges in the E17 row were adjusted slightly in the vicinity of cells E17-S10 and E17-S11 which were located very near to CB 7-8. These select cells were adjusted to be 10 ft x 5 ft so that additional buffer was provided between the DAB mixing operations and the catch basin (a concrete tile was also placed around CB 7-8 for added protection) in order to maintain a minimum 5-8 feet buffer between mixed cells and existing structures (i.e. the catch basin and the existing storm drain that runs across the eastern edge of the site).

5. Initial excavation was performed on the cells in the E17 column and S1 and S2 rows. This soil was placed in a berm on the north and east sides of the treatment area. Soil Mixing commenced in the E17 column first followed by treatment in the S1 and S2 rows. Excavation of new soils followed within areas that were no longer needed for the DAB to access. The E16 column was then treated next followed by treatment in the S3 row. Remainder of rows/ columns were treated with excavation and soil mixing performed in conjunction in the manner described, until the remainder of the area was initially excavated and mixed. The reach of the DAB allowed the machine to be stationed approximately two rows away from the active treated cells. Access to treated cells was maintained a minimum of two days following mixing to allow enough time for collected sample data to be analyzed, and still allow for re-mixing if required. Approximately 15-20 cells were mixed each day.

6. ISOTEC originally estimated a reagent requirement of 192,000 lbs of 34% hydrogen peroxide and ~2,050 lbs of ISOTEC catalyst to be blended into the targeted 7-15 ft bgs treatment interval. This reagent quantity was calculated to meet 100% of the reagent demand within the impacted 7-15 ft bgs interval and ~10% of the reagent demand within the overlying clean zone from 3-7 ft bgs in case of any reagent interchange from

the targeted mixing interval of 7-15 ft bgs to the shallower unexcavated overlying soils from 3-7 ft bgs (as previously mentioned, much of the clean unimpacted vadose zone soils were able to be removed during excavation due to the lower than expected water table at the site). Due to several cell locations requiring re-mixing (cells E12-S1, E12-S2, E13-S1, E13-S2, E13-S4, E14-S1 and E14-S2), actual quantity of reagents utilized was ~2,162 lbs of ISOTEC catalyst and 201,600 lbs of 34% hydrogen peroxide.

7. Reagents were prepared within tanks fitted to the chemical preparation truck. ISOTEC catalyst was prepared in approximately 100 gallon batches (for 10 ft x 10 ft cells) as needed, and was mixed into the treatment cells prior to introduction of stabilized hydrogen peroxide. Pre-weighed bags of catalyst were shipped to the site based on making ~61 gallon batches. Because additional volume of catalyst was required during the initial plunge into each cell quadrant in order to assist the DAB in reaching the terminal depth, batch volumes were increased to 100 gallons (~25 gallons per plunge into each quadrant). Stabilized hydrogen peroxide batches were prepared in the two larger 700 gallon mixing tanks attached to the truck. Batch sizes were prepared based on the dimensions of the cell being targeted. For a standard 10 ft x 10 ft treatment cell, approximately 120 gallons of water was introduced into the mixing tanks along with a pre-determined volume of stabilizing agents (i.e. ~25 lbs per batch), followed by introduction of approximately 200 gallons of 34% concentrated hydrogen peroxide (~1,902-1,920 lbs). Final concentration of prepared hydrogen peroxide batches ranged from 17-21%. Total volume of hydrogen peroxide estimated for each cell was approximately 400 gallons. Due to several factors including less time required to reach terminal depth at each location than anticipated and swelling of liquids within the excavation area during soil mixing activities, the total volume of diluted hydrogen peroxide introduced into each cell was reduced down to 320 gallons per cell from the originally estimated 400 gallons.
8. Scales and flow meters/totalizers were utilized as part of the chemical mixing truck operations to accurately measure hydrogen peroxide batch preparations and dose the appropriate volume of reagent being sent out to each individual treatment cell.

7.3 Performance Monitoring (Soil Sample Collection)

Upon completion of mixing within given cells each day, the following morning, samples of soil were collected (at the discretion of Weston) from a select portion of cells treated the previous day and analyzed for both field parameters (field testing instruments, visual observations) and VOCs (laboratory analysis). Figure 5 illustrates the locations of cells that were sampled during the course of the treatment program. Samples were collected using the telescoping forklift mounted sampling tool (similar to the DAB in that vertical numbers are installed on the stem of the sampling tool) to gauge treatment application efficiency. ISOTEC collected enough sample

for all required analysis. Samples were collected at discrete specific depth intervals to ensure that adequate mixing was occurring across the entire vertical column. Attention was also made to collect samples from historical locations where 1,1,1-TCA and 1,1-DCE elevated concentrations have been detected in the past. The sample tool was attached to the telescoping fork lift and lowered into a designated cell for sample collection. The sample tool was operated hydraulically. Samples were collected at required depth and the sample tool was raised from the treated cell to allow field personnel to take a portion of the soil sample collected. A piston operated mechanism was utilized to push out the sample where it was stored in a dedicated jar/bucket for subsequent sample analysis. ISOTEC performed the field testing analysis (i.e. iron and hydrogen peroxide concentration as well as visual observations) of each sample while Weston prepared samples required for VOC analyses at Absolute Resource Associates (ARA) laboratory. Detailed summary of collected sampling data is provided within Table 4. Daily transport of the samples to the analytical laboratory was provided via courier by ARA. Samples were typically picked up before 11:00 AM each day so they could be transported to ARA early enough to allow testing and results to be received the following day by 12:00 noon (24 hour turnaround time [TAT]).

Samples were collected at multiple depths (typically from 9, 11 and 13 ft bgs) to ensure homogenization was occurring at different depths within the overall vertical column from 7-15 ft bgs. Treated soils showed consistency between individual samples indicating thorough mixing was occurring and no visible signs of untreated soil (i.e. dry soil clumps) were observed within the samples collected. A general description of soils collected at each of the three depth intervals is provided below.

- 9 ft bgs samples were very wet and showed little to no solid soils. Adequate sample of dry soil required for ARA laboratory analysis could not be collected at this depth interval.
- 11 ft bgs samples were similar but occasionally showed tiny pieces of clay globules within the samples collected which may have indicated a transition into the deeper geologic matrix consisting of more clay/silt components compared to the upper portion of the treated column; or may have just been the heavier sediments that were falling to the deeper portions of the treated areas during mixing operations. A few samples were able to be collected from this depth interval for submittal to ARA for laboratory analysis but not on a consistent basis.
- 13 ft bgs samples were also similar, consisting of very wet soils and slightly more tiny pieces of clay globules within the samples collected compared to the 11 ft bgs samples. Again, this may have been due to a transition into the deeper geologic matrix consisting of more clay/silt components compared to the upper portion of the treated column; or may have just been the heavier sediments that were falling to the deeper portions of the treated areas during mixing operations. Majority of samples submitted for VOC analysis were collected from this depth interval due to

historically deeper impacts reported from this depth compared to the overlying intervals, as well as this depth being the only depth of the three primary treatment intervals sampled that could supply enough dry soils required for submittal to ARA.

1. Soil Mixed Material – Field Testing: ISOTEC personnel tested each sample collected for residual reagent concentration (i.e. hydrogen peroxide and iron) using field test kits (Hach Kits in the range of 1-10 mg/L) or test strips for hydrogen peroxide (in the range of 1-100 mg/L). Samples of soil were mixed with small volumes of DI water in order to provide enough liquid to be available to run the tests (sample analysis needed to be run on liquid samples). A portion of the soil/DI water sample slurry was extracted from the mix via a syringe and run through a particle filter to allow a clear water sample to be generated for analysis. For hydrogen peroxide testing, test strips were utilized to measure the residual concentration of any oxidant left the day following treatment. Majority of samples collected showed no detectable concentrations of hydrogen peroxide remaining following treatment, with only a few samples indicating concentrations at 1.0 mg/L. Residual dissolved iron concentrations were also tested for and showed low detectable ranges of concentration between 1.0-63.0 mg/L from collected samples. Samples were also screened using a photo-ionization detector (PID) to check for any detectable concentrations emanating from the collected samples. Only low levels (highest peak was 0.2 parts per million [ppm]) of VOCs were detected using the PID on collected samples. The low level PID readings correlate to the low residual VOCs concentrations detected during analytical sampling.

2. Soil Mixed Material – Laboratory Performance Testing: The soil mixing remediation program was implemented with the objective to achieve reduction of VOCs in site soils to levels below Post-Treatment Criteria set for the site. Specifically, the following criteria for 1,1,1 TCA (≤150 µg/kg) and 1,1-DCE (≤60 µg/kg) were established for the site. A total of fifty-six (56) samples (Figure 5) were submitted to ARA for VOC analysis over the duration of the soil mixing program. Exceedance of VOCs was detected in three locations over the course of the treatment program. Cell locations E13-S2 (1,1,1-TCA of 200 µg/kg and 1,1-DCE of 110 µg/kg), E14-S1 (1,1-DCE of 110 µg/kg) and E13-S4 (1,1-DCE of 80 µg/kg) indicated VOC exceedance following the initial soil mixing application. Each cell location (along with some additional adjacent cells in the northern area) was subsequently re-mixed and re-sampled, with post-treatment data indicating VOC concentrations below criteria set for the site. All other samples indicated VOC concentrations either at levels below the criteria set for the site or at non-detect concentrations.

3. Cell Re-Mixing: Based on results of VOC sampling analysis, and at the request of Weston, select cells were re-mixed over the course of field activities when VOC exceedances were detected. Cells E13-S2 and E14-S1 were re-mixed due to elevated VOC concentrations detected in the samples following the initial mixing application. Because the cells were adjacent to each other as can be seen on Figure 6, it was decided to mix some of the neighboring cells under the assumption that there may have been a localized pocket of VOC mass in the area that could continue to act as a recurring source of groundwater contamination. In total, six cells in the same vicinity (E12-S1, E12-S2, E13-S1, E13-S2, E14-S1 and E14-S2) were re-mixed and re-sampled during field activities. Results indicated non-detect concentrations for 1,1,1,-TCA and 1,1-DCE for each of the six samples analyzed. One additional cell (E13-S4) initially mixed towards the end of the treatment program also came back with VOC concentrations above site criteria and required re-mixing. Similar to the other re-mixed cells, subsequent sampling data indicated non-detect concentrations for both 1,1,1-TCA and 1,1-DCE. No other cells treated at the site required re-mixing.

7.4 Report Preparation

ISOTEC recorded all field notes including names of all on-site personnel, hours worked, meetings attended, mixing cell ID, mixing start time, mixing stop time, application volumes, mixing application rate, any health and safety instances/meetings, deliveries that occurred, PID and groundwater sampling activities performed, field and VOC analysis results, and any other pertinent information during each day of injections. All details were presented in the Daily Construction Reports submitted electronically to Weston by 10:00 AM the following day. ISOTEC and Weston discussed results of the daily sampling/ sampling results on a continual basis and re-mixed select cells as needed.

Compiled soil mixing data summary is presented as Table 3; field/ VOC monitoring data summary is presented as Table 4; ISOTEC daily reports are presented as Appendix I; LTC daily reports are presented as Appendix II; and a photo log of field implementation activities is presented as Appendix III.

7.5 Health and Safety

A site-specific health and safety plan (HASP) for the KMC Site was included under separate cover along with the site work plan prior to mobilizing to the site. A copy of the health and safety plan along with additional copies of the job safety analysis (JSA), and MSDS sheets were maintained on-site at all times during field operations. All members of the injection team have completed health and safety training consistent with the Occupational Safety and Health Act (Title 29 of the Code of Federal Regulations 1910.120) with current certificates. In addition, all ISOTEC employees have also completed loss prevention system (LPS) training with current annual refresher and cardio pulmonary resuscitation (CPR) and basic first aid awareness

training. Documentation was provided to Weston to ensure that field personnel were competent in the tasks being performed at the site including chemical management, excavation safety and fork-lift operation. Daily health and safety tailgate meetings were held each day between all site field personnel prior to start of field activities. A site safety audit was completed by Weston on September 14, 2015. Any items identified during the site safety audit as potential concerns were subsequently addressed by ISOTEC/LTC/Weston personnel during the next day(s) field activities.

Personal protective equipment (PPE) level for field activities were set as Modified Level D which included hi-visibility safety vests, steel toe work boots, chemical apron/tyvek (during chemical preparation), hardhat with safety glasses, gloves associated with the specific task being performed (primarily disposable nitrile gloves) and hearing protection when required. ISOTEC personnel were equipped to upgrade to Level C protection if necessary. Full face shields were worn during oxidant transfer and preparation. Weston performed daily air monitoring around the perimeter of the site to monitor for any VOC breathing zone exceedances.

The entire site was surrounded by an 8 ft high chain link perimeter fence to keep pedestrians outside of the treatment area exclusion zone. A combination of cones, delineators and rope/ caution tape were utilized to identify the area leading into the excavation area. Field personnel performing soil mixing/ excavation/ and sampling tasks needed to temporarily enter within the excavation exclusion zone to perform said tasks. The area was blocked off each night from the main entrance to the site and the excavation pit was surrounded with orange safety fencing upon our demobilization from the site.

Multiple fire extinguishers were present around the site and near each vehicle (vehicles that did not have their own fire extinguishers were subsequently equipped with one following the safety audit completed at the site by Weston) along with an eye wash station, first aid kit and access to running water in case of an emergency.

Two safety incidents were noted and reported at the site. The first incident involved the bull dozer accidentally colliding with a site monitoring well that was proposed for protection during field activities. The well was not clearly marked with a safety cone/ caution tape and was accidentally struck during initial land clearing activities (i.e. removing portions of the grass/ weeds which were as high as 4-5 ft tall in some areas of the site). Each other monitoring well was subsequently marked (identified within the high brush that existed at the site) prior to commencing land clearing work to minimize occurrence of the incident from happening again. The second incident involved a broken rear-windshield to the bull dozer which was stationed on the edge of the disturbance area during land clearing work. It is presumed that debris from the mulching activities struck the window and caused the crack. No field personnel were in the vicinity of the bulldozer when the incident happened to confirm the actual cause. Because it was presumed that the incident occurred during the mulching activities, subsequent moving of the mulching machine was directed in the north-south directions so that any debris would not be directed towards the construction entrance and nearby existing building properties.

7.6 Emergency Spill and Fire Control Measures

Concentrated hydrogen peroxide was stored within DOT approved totes provided by the distributor, and also within secondary containment pads (capable of 110% containment capacity) for added measure to prevent accidental release if one of the containers were punctured. Fire extinguishers were available at the site along with access to running water to help extinguish any accidental fires or provide dilution to concentrated hydrogen peroxide in an emergency. ISOTEC/ Weston notified the Conway Fire and Police Departments about the chemicals that were stored on site and provided contact information for field personnel in case of an emergency.

Additional concerns associated with spills, release or surfacing was addressed within the HASP.

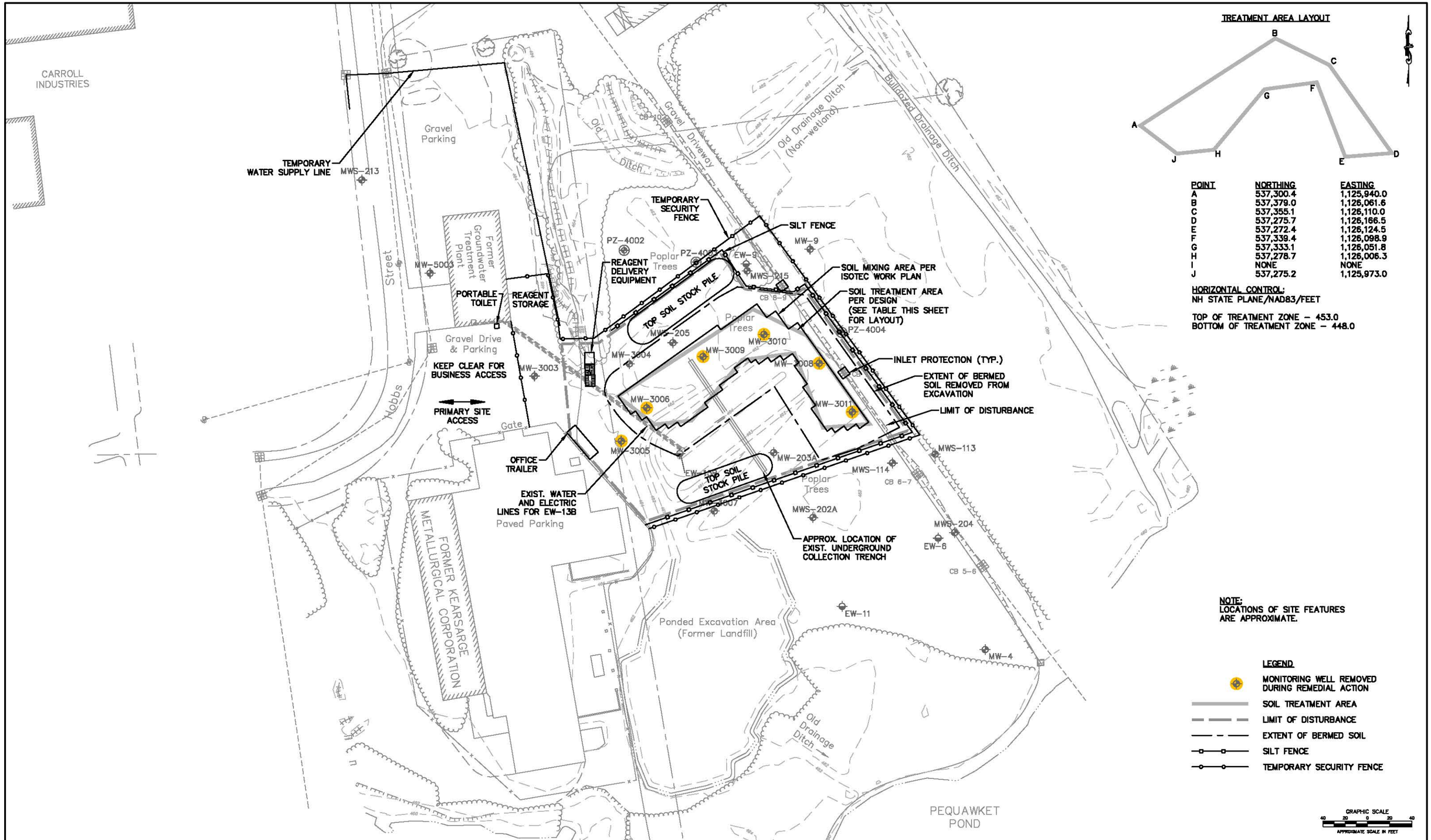
- ISOTEC trailer/box truck was equipped with multiple emergency fire extinguishers of not less than a 20-B rating. At least one fire extinguisher was located within the vicinity of the chemical storage area, and on each vehicle utilized at the site.
- The mixing area was contained within a temporary berm/dike created by utilizing the upper 6-7 feet of dry soils that existed at the site. All liquids collected within the bermed area were eventually mixed in as part of the soil mixing activities and were allowed to infiltrate back into the subsurface without the need for pumping liquids into temporary holding tanks. Accumulation of swelling liquids never came close to exceeding the berm limits constructed at the site.
- If a spill occurred outside of the mixing area, the spilled liquids were to be contained with a combination of soil and dri-zorb materials to temporarily berm up the liquid to prevent further spreading. Once contained, liquids would either be pumped or collected with a shop-vac and placed into the soil mixing area to be blended in with the other MFR reagents and mixed soils/groundwater.
- A spill kit (dri-zorb, sorbent socks and pads) was available to contain any hydraulic spills or liquid spills that may have occurred outside of the excavation footprint.
- Secondary containment (capable of 110% containment capacity) was placed around concentrated hydrogen peroxide chemical storage area with a water dilution source located nearby. Concentrated totes were also protected from direct sunlight (to minimize chances of degradation to oxygen) by covering them up with tarps. Dilution of oxidants to very low concentrations using water hoses would be applied in an emergency.
- Protection of catch basin inlet boxes on the eastern portion of the site was provided by installing a silt sack in the boxes prior to intrusive activities during site preparation.

Section 8 Treatment Program Results

The soil mixing remediation program was implemented with the objective to achieve reduction of VOCs in site soils to levels below Post-Treatment Criteria set for the site. Specifically, the following criteria for 1,1,1 TCA (≤150 µg/kg) and 1,1-DCE (≤60 µg/kg) were established for the site. A total of fifty-six (56) samples (Figure 5) were submitted to ARA for VOC analysis over the duration of the soil mixing program. Exceedance of VOCs was detected in three locations over the course of the treatment program during the initial mixing attempt at each location. Cell locations E13-S2 (1,1,1-TCA of 200 µg/kg and 1,1-DCE of 110 µg/kg), E14-S1 (1,1-DCE of 110 µg/kg) and E13-S4 (1,1-DCE of 80 µg/kg) indicated VOC exceedance following the initial soil mixing application. Each cell location (along with some additional adjacent cells in the northern area) was subsequently re-mixed and re-sampled, with post-treatment data indicating VOC concentrations below criteria set for the site. All other samples indicated VOC concentrations either at levels below the criteria set for the site or at non-detect concentrations.

Based on the soil analytical data collected at the site during the course of soil mixing activities, which indicated final concentration of site COCs below criteria set for the site; it is assumed that a substantial portion of the residual mass that existed at the site was removed during the ISCO soil mixing treatment program. Long term groundwater monitoring will be completed under the direction of NHDES/USEPA.

FIGURES



TREATMENT AREA LAYOUT

POINT	NORTHING	EASTING
A	537,300.4	1,125,940.0
B	537,379.0	1,126,061.6
C	537,355.1	1,126,110.0
D	537,275.7	1,126,166.5
E	537,272.4	1,126,124.5
F	537,339.4	1,126,098.9
G	537,333.1	1,126,051.8
H	537,278.7	1,126,006.3
I	NONE	NONE
J	537,275.2	1,125,973.0

HORIZONTAL CONTROL:
NH STATE PLANE/NAD83/FEET

TOP OF TREATMENT ZONE – 453.0
BOTTOM OF TREATMENT ZONE – 448.0

NOTE:
LOCATIONS OF SITE FEATURES ARE APPROXIMATE.

LEGEND

- MONITORING WELL REMOVED DURING REMEDIAL ACTION
- SOIL TREATMENT AREA
- LIMIT OF DISTURBANCE
- EXTENT OF BERMED SOIL
- SILT FENCE
- TEMPORARY SECURITY FENCE

GRAPHIC SCALE
40 20 0 20 40
APPROXIMATE SCALE IN FEET

NO.	DATE	APPR.	REVISION

REMEDIAL ACTION COMPLETION REPORT, IN-SITU CHEMICAL OXIDATION VIA SOIL MIXING, KEARSARGE METALLURGICAL CORP. SUPERFUND SITE, CONWAY, NH

WESTON SOLUTIONS CONCORD NEW HAMPSHIRE

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

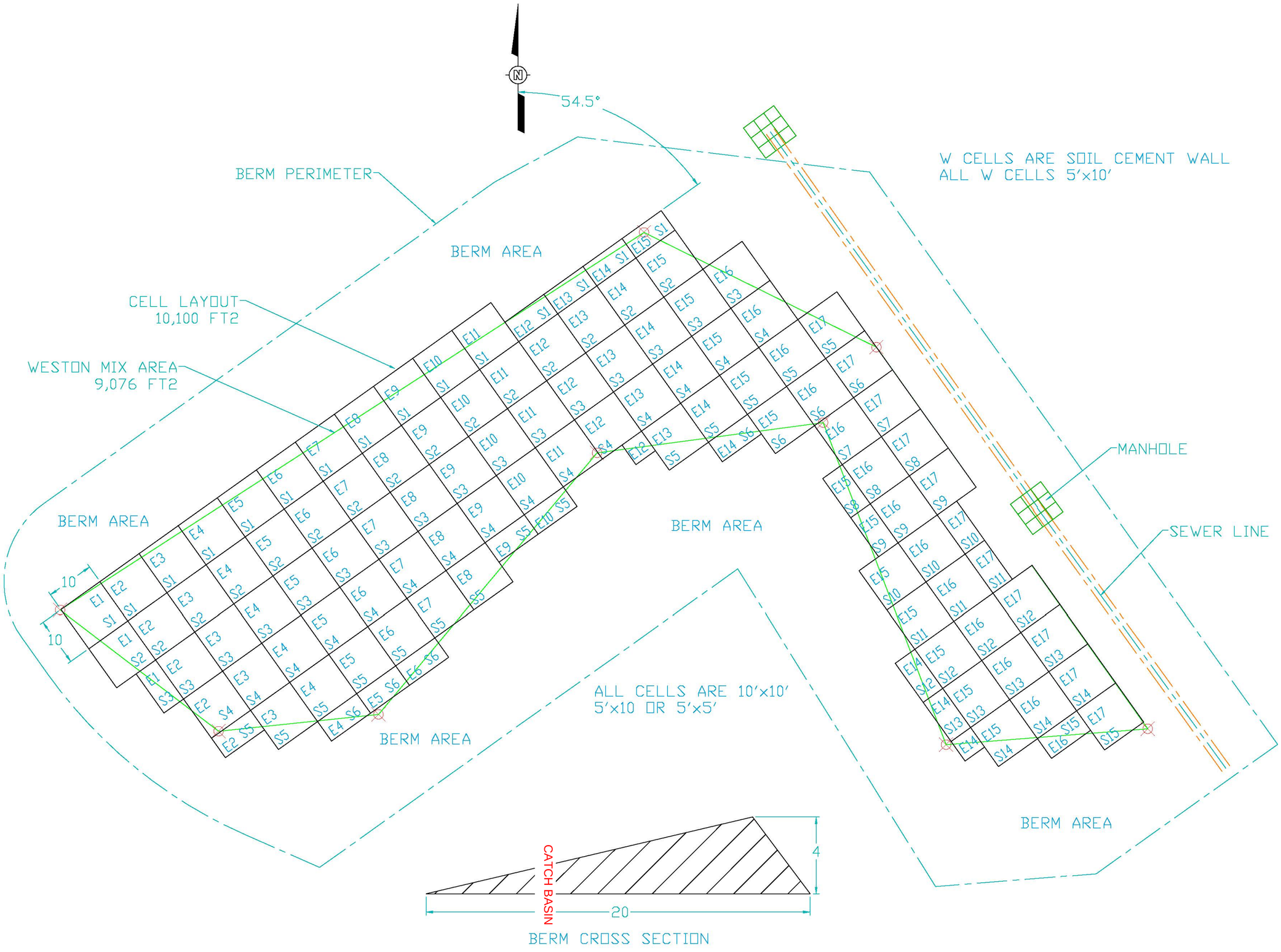
	CHECKED	DATE	CLIENT APPROVALS	DATE
DES. ENG.				
PROJ. ENG.				
PROJ. MGR.				
APPROVED				
APPROVED			ISSUED FOR	DATE

SOIL TREATMENT SITE PLAN

DRAWN	DATE	FIGURE NO.	REV. NO.
BEG	DEC 2015	2	
SCALE: AS SHOWN	W.O. NO.: 20133.001.001	SHT. ____ OF ____	

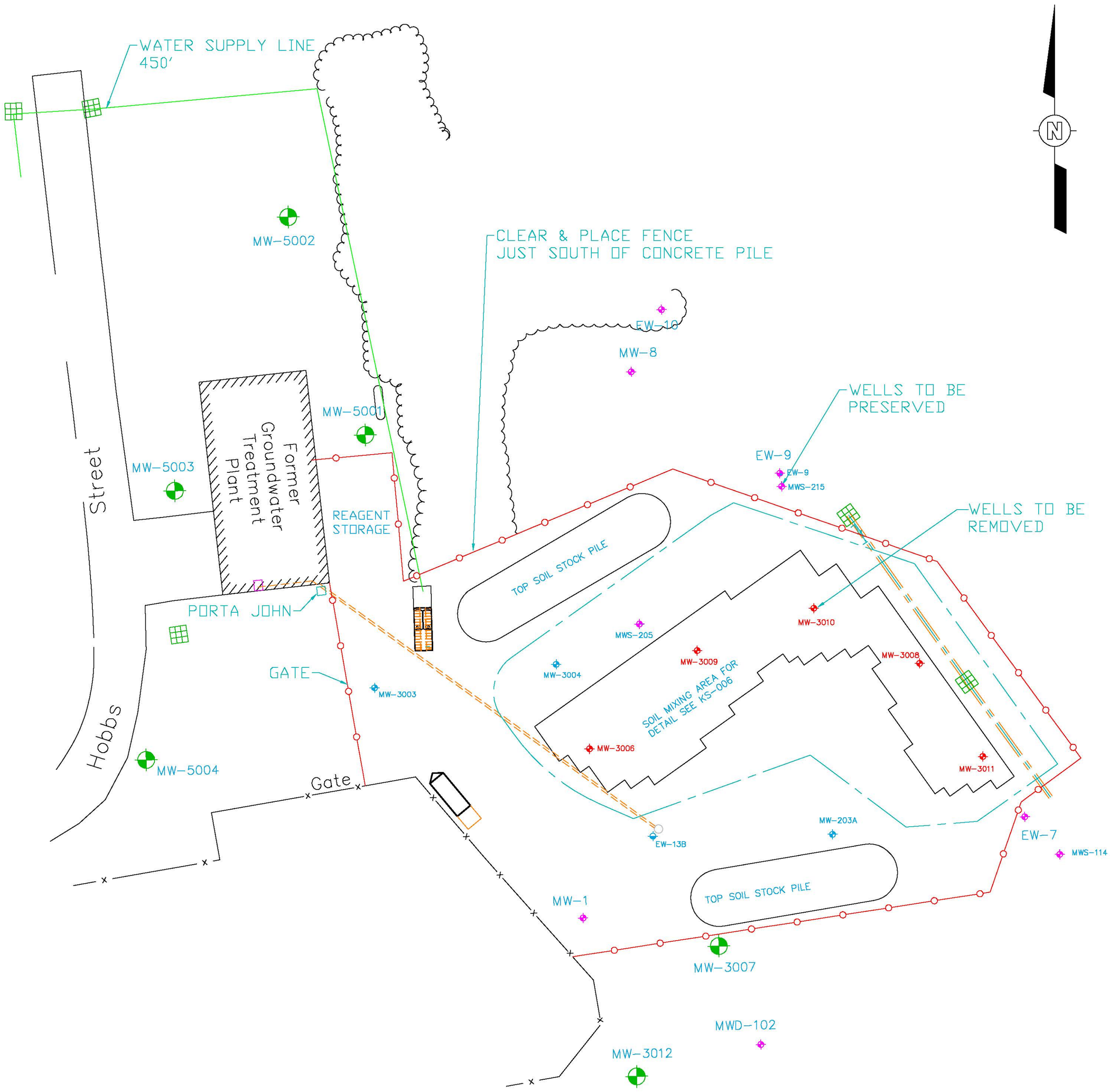
Figure 1

M:\2015\Completion Report\FIG 2.dwg, Layout1, 12/9/2015 10:37:52 AM, girardeb, 1:2



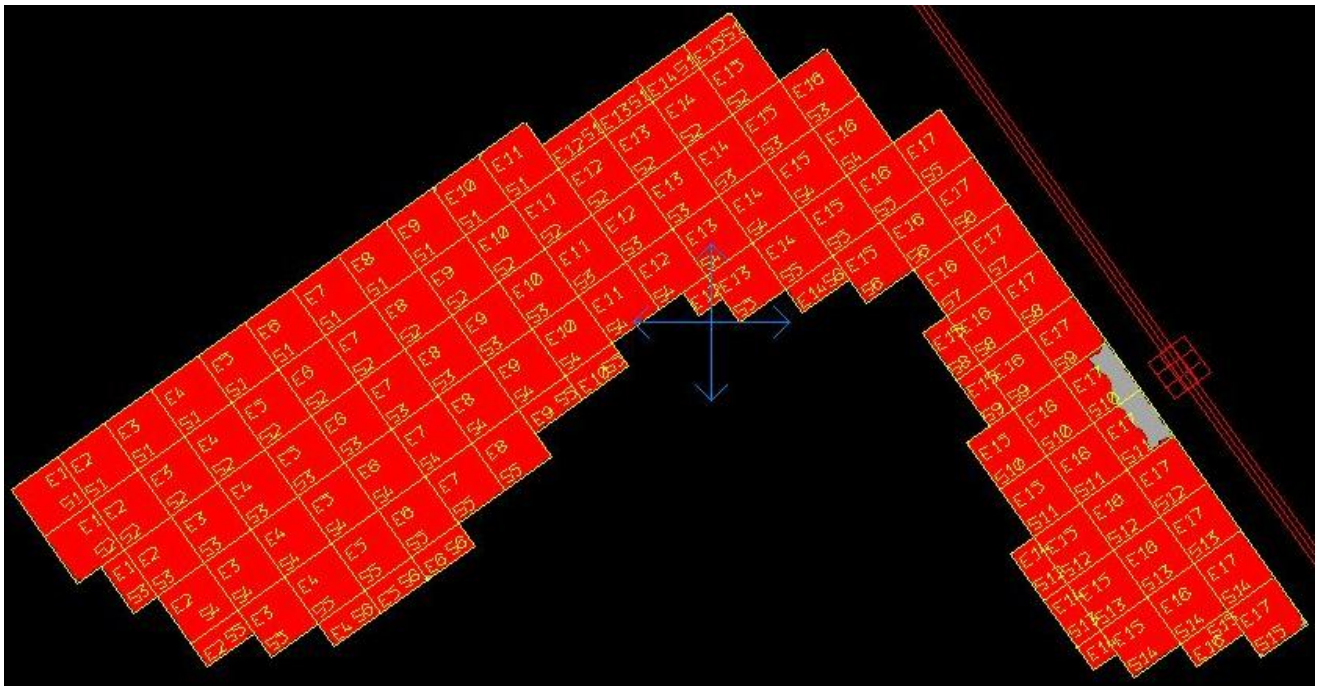
3' EXCAVATION OF MIXING AREA IS 1,122 YD3
BERM CAPACITY IS APROXIMATELY THE SAME

LANG TOOL CO.		DRAWN BY: BILL LANG
		DATE: 9/12/2015
USED ON: WESTON KERSARGE SITE	DRAWING NAME: CELL & BERM LAYOUT CONCEPT	SCALE: ***
		FIGURE: 2



LANG TOOL CO.		DRAWN BY: BILL LANG
		DATE: 10/1/2015
USED ON: WESTON KEARSARGE SITE	DRAWING NAME: SITE LAYOUT WITH CP WELLS	SCALE: ***
		FIGURE: 3

Areas mixed to 447 MSL area colored green by the Dual Axis Blender on board computer.
Areas mixed below 447 are colored red.



Metering Plunge Point Coordinates

Easting	Northing	Elevation
,1125996.784053	,537276.647099	,446.506226
,1126000.271217	,537279.758424	,446.727051
,1126000.271163	,537279.627843	,446.677521
,1126005.516511	,537282.464107	,446.728577
,1126009.143693	,537285.824884	,446.848602
,1126007.590364	,537296.639462	,446.855743
,1126011.838324	,537299.470743	,446.766022
,1126011.137288	,537292.491990	,446.810364
,1126014.377355	,537295.561201	,446.684052
,1126013.546075	,537290.174972	,446.449371
,1126013.673764	,537290.401372	,446.317932
,1126014.259656	,537288.913101	,449.773102
,1126018.183072	,537292.147833	,446.863678
,1126016.861383	,537303.182891	,446.812744
,1126019.731824	,537304.788985	,446.562531
,1126019.058740	,537298.531272	,446.562500
,1126021.646978	,537300.826827	,446.603394
,1126023.774266	,537308.412347	,446.694977
,1126028.185373	,537310.844653	,446.842743
,1126026.705964	,537304.604489	,446.866760
,1126030.904227	,537307.066911	,447.012207
,1126059.946342	,537334.376760	,446.584778
,1126064.684007	,537337.291963	,446.680573
,1126068.906216	,537339.798362	,446.604614
,1126071.040929	,537336.368585	,446.673645

Easting	Northing	Elevation
,1126068.354427	,537333.686048	,446.621521
,1126079.169557	,537342.035405	,446.258209
,1126079.204969	,537342.060599	,446.365356
,1126082.568687	,537337.281898	,446.807922
,1126078.813087	,537334.640186	,446.668152
,1126078.856038	,537334.627105	,446.677368
,1126078.874231	,537334.614286	,446.664673
,1126078.882787	,537334.607757	,446.660767
,1126078.701917	,537334.702548	,446.716400
,1126076.222173	,537338.537021	,446.654114
,1126076.086177	,537338.610713	,446.638184
,1126072.558662	,537343.019710	,446.648773
,1126085.411600	,537351.086702	,446.723633
,1126081.533502	,537348.131652	,446.926697
,1126084.336967	,537344.388499	,446.646301
,1126087.225291	,537346.568939	,446.621582
,1126087.275174	,537346.563084	,446.632721
,1126093.179122	,537339.406774	,446.601013
,1126090.384534	,537343.621839	,446.498596
,1126089.557180	,537336.884198	,446.714355
,1126086.643387	,537340.402255	,446.928314

Figure 5

Cells E12S1, E12S2, E13S1, E13S2, E14S1, E14S2 were retreated on 9/17/15 and re-sampled on 9/18/15.Results for 6 cells were 40 U ug/kg for 11DCE and 100 U ug/kg for 111TCA.

Cells E13S04 was retreated on 9/21/15 at 12:38 and was re-sampled at 14:38. Results for the retreated sample are 40 U ug/kg for 11DCE and 100 U ug/kg for 111TCA.

Kearsarge Metallurgical Superfund Site
Soil mixing with ISCO
Project Status - 9/22/2015

Poplar Trees

TOP SOIL STOCK PILE

REAGENT DELIVERY EQUIPMENT

TEMPORARY SECURITY FENCE

MW-3004
MW-3009
MW-3010
MW-3005
MW-3008
MW-3007
MW-4004
MW-207A
MWS-114
EW-13B

SOIL TREATMENT AREA (9,076 SQFT)

CELL LAYOUT (10,100 SQFT)

E14 S14

STORM DRAIN

EXTENT OF BERMED SOIL REMOVED FROM EXCAVATION

NOTE:
ALL CELLS ARE 10'x10', 10'x5', OR 5'x5'.

GRAPHIC SCALE
10 5 0 5 10
APPROXIMATE SCALE IN FEET

Legend

- Analytical passed
- Cell exceeded the project action limit
- Cell was mixed; awaiting analytical
- Cell was mixed >24 hrs ago
- Cell was mixed <24 hrs ago
- TOP SOIL STOCK PILE
- Cell selected for pre-treatment sampling due to historical soil data
- Area was retreated

IN SITU SOIL TREATMENT
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NEW HAMPSHIRE

CHECKED	DATE	CLIENT APPROVALS	DATE
DES. ENG.			
PROJ. ENG.			
PROJ. MGR.			
APPROVED			
APPROVED		ISSUED FOR	DATE

WESTON SOLUTIONS CONCORD NEW HAMPSHIRE

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

SOIL TREATMENT CELL LAYOUT

DRAWN	DATE	FIGURE NO.	REV. NO.
BEG	AUG 2015	5	
SCALE	W.O. NO.	SHT.	OF
AS SHOWN	20118.015.003		

NO.	DATE	APPR.	REVISION

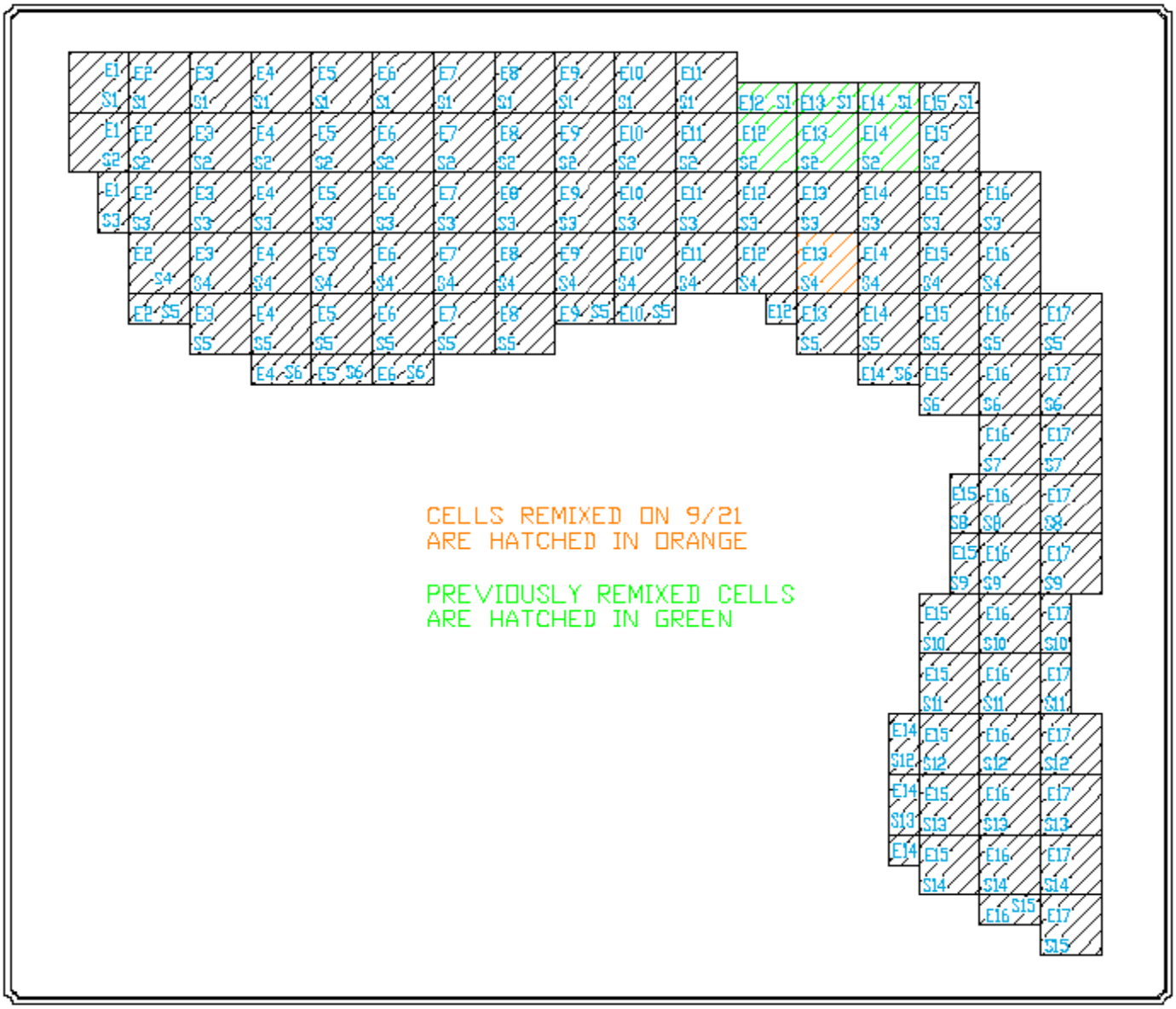
M:\GIS\E\2015\Work Plan\FIG 5.dwg, Layout1, 9/4/2015 11:42:33 AM, girardeb, 1:2

Figure 4

Lang Tool Co.

2520 Glidden Rd.
Beaverton, MI 48612
www.langtool.com
bill@langtool.com
Phone (989) 435-9864
Fax (989) 435-4311

September 21, 2015



Total remixed soil volume as of 9/21 is 163 cubic yards.

Figure 6

TABLES

Table 3
Weston/ NHDES
Soil Mixing Summary Table
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Mixing Date	Mixing Cell ID	Start Time	Stop Time	Mixing Time	Catalyst Volume	Hydrogen Peroxide Volume	Reagent Mixing Rate	Total Volume	Catalyst (pounds)	Hydrogen Peroxide (34% pounds)	Cell Dimensions
9/14/2015	E17-S15	10:24	10:44	20	100	600	35.0	700	20.5	1920	10' x 10'
9/14/2015	E17-S14	10:45	11:04	19	100	400	26.3	500	20.5	1920	10' x 10'
9/14/2015	E17-S13	11:05	11:20	15	100	400	33.3	500	20.5	1920	10' x 10'
9/14/2015	E17-S12	11:21	11:35	14	100	400	35.7	500	20.5	1920	10' x 10'
9/14/2015	E17-S11	11:36	11:42	6	50	200	41.7	250	10.25	960	5' x 10'
9/14/2015	E17-S10	11:43	11:51	8	50	200	31.3	250	10.25	960	5' x 10'
9/14/2015	E17-S9	11:52	12:17	25	80	320	16.0	400	20.5	1920	10' x 10'
9/14/2015	E17-S8	12:53	13:06	13	80	320	30.8	400	20.5	1920	10' x 10'
9/14/2015	E17-S7	13:07	13:22	15	80	320	26.7	400	20.5	1920	10' x 10'
9/14/2015	E17-S6	13:23	13:38	15	80	320	26.7	400	20.5	1920	10' x 10'
9/14/2015	E17-S5	13:39	14:08	29	80	320	13.8	400	20.5	1920	10' x 10'
9/14/2015	E15-S1	14:10	14:20	10	40	160	20.0	200	10.25	960	5' x 10'
9/14/2015	E14-S1	15:05	15:19	14	40	160	14.3	200	10.25	960	5' x 10'
9/14/2015	E15-S2	15:20	15:35	15	80	320	26.7	400	20.5	1920	10' x 10'
9/14/2015	E14-S2	15:35	15:56	21	80	320	19.0	400	20.5	1920	10' x 10'
9/14/2015	E13-S1	15:57	16:06	9	40	160	22.2	200	10.25	960	5' x 10'
9/14/2015	E12-S1	16:06	16:16	10	40	160	20.0	200	10.25	960	5' x 10'
9/14/2015	E13-S2	16:16	16:33	17	80	320	23.5	400	20.5	1920	10' x 10'
9/15/2015	E12-S2	7:46	8:03	17	100	320	24.7	420	20.5	1920	10' x 10'
9/15/2015	E11-S1	8:03	8:20	17	100	320	24.7	420	20.5	1920	10' x 10'
9/15/2015	E10-S1	8:38	8:59	21	100	320	20.0	420	20.5	1920	10' x 10'
9/15/2015	E11-S2	9:00	9:18	18	100	320	23.3	420	20.5	1920	10' x 10'
9/15/2015	E10-S2	9:19	9:39	20	100	320	21.0	420	20.5	1920	10' x 10'
9/15/2015	E9-S1	10:25	10:45	20	100	320	21.0	420	20.5	1920	10' x 10'
9/15/2015	E9-S2	10:46	11:08	22	100	320	19.1	420	20.5	1920	10' x 10'
9/15/2015	E8-S1	11:09	11:31	22	100	320	19.1	420	20.5	1920	10' x 10'
9/15/2015	E8-S2	11:43	12:04	21	100	320	20.0	420	20.5	1920	10' x 10'
9/15/2015	E7-S1	12:05	12:22	17	100	320	24.7	420	20.5	1920	10' x 10'
9/15/2015	E7-S2	12:22	12:49	27	100	320	15.6	420	20.5	1920	10' x 10'

Table 3
Weston/ NHDES
Soil Mixing Summary Table
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Mixing Date	Mixing Cell ID	Start Time	Stop Time	Mixing Time	Catalyst Volume	Hydrogen Peroxide Volume	Reagent Mixing Rate	Total Volume	Catalyst (pounds)	Hydrogen Peroxide (34% pounds)	Cell Dimensions
9/15/2015	E6-S1	13:17	13:36	19	100	320	22.1	420	20.5	1920	10' x 10'
9/15/2015	E6-S2	13:37	13:57	20	100	320	21.0	420	20.5	1920	10' x 10'
9/15/2015	E5-S1	13:58	14:18	20	100	320	21.0	420	20.5	1920	10' x 10'
9/15/2015	E5-S2	14:19	14:39	20	100	320	21.0	420	20.5	1920	10' x 10'
9/15/2015	E4-S1	14:40	14:57	17	100	320	24.7	420	20.5	1920	10' x 10'
9/15/2015	E4-S2	14:58	15:16	18	100	320	23.3	420	20.5	1920	10' x 10'
9/15/2015	E3-S1	15:20	15:40	20	100	320	21.0	420	20.5	1920	10' x 10'
9/15/2015	E3-S2	15:41	16:03	22	100	320	19.1	420	20.5	1920	10' x 10'
9/15/2015	E2-S1	16:05	16:25	20	100	320	21.0	420	20.5	1920	10' x 10'
9/16/2015	E1-S1	7:40	8:10	30	100	320	14.0	420	20.5	1920	10' x 10'
9/16/2015	E2-S2	8:10	8:36	26	100	320	16.2	420	20.5	1920	10' x 10'
9/16/2015	E1-S2	8:38	9:03	25	100	320	16.8	420	20.5	1920	10' x 10'
9/16/2015	E16-S15	9:06	9:21	15	50	160	14.0	210	10.25	960	5' x 10'
9/16/2015	E16-S14	9:22	9:46	24	100	320	17.5	420	20.5	1920	10' x 10'
9/16/2015	E16-S13	9:46	10:07	21	100	320	20.0	420	20.5	1920	10' x 10'
9/16/2015	E16-S12	10:07	10:28	21	100	320	20.0	420	20.5	1920	10' x 10'
9/16/2015	E16-S11	10:28	10:28	20	100	320	21.0	420	20.5	1920	10' x 10'
9/16/2015	E16-S10	10:48	11:08	20	100	320	21.0	420	20.5	1920	10' x 10'
9/16/2015	E16-S9	11:09	11:28	19	100	320	22.1	420	20.5	1920	10' x 10'
9/16/2015	E16-S8	11:28	11:48	20	100	320	21.0	420	20.5	1920	10' x 10'
9/16/2015	E16-S7	11:48	12:08	20	100	320	21.0	420	20.5	1920	10' x 10'
9/16/2015	E16-S6	12:33	12:54	21	100	320	20.0	420	20.5	1920	10' x 10'
9/16/2015	E16-S5	12:54	13:18	24	100	320	17.5	420	20.5	1920	10' x 10'
9/16/2015	E16-S4	13:18	13:43	25	100	320	16.8	420	20.5	1920	10' x 10'
9/16/2015	E16-S3	13:43	14:08	25	100	320	16.8	420	20.5	1920	10' x 10'
9/16/2015	E1-S3	14:15	14:30	15	50	160	14.0	210	10.25	960	5' x 10'
9/16/2015	E2-S3	14:30	14:54	24	100	320	17.5	420	20.5	1920	10' x 10'
9/16/2015	E3-S3	14:54	15:19	25	100	320	16.8	420	20.5	1920	10' x 10'
9/16/2015	E4-S3	15:20	15:50	30	100	320	14.0	420	20.5	1920	10' x 10'
9/16/2015	E5-S3	15:50	16:20	30	100	320	14.0	420	20.5	1920	10' x 10'

Table 3
Weston/ NHDES
Soil Mixing Summary Table
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Mixing Date	Mixing Cell ID	Start Time	Stop Time	Mixing Time	Catalyst Volume	Hydrogen Peroxide Volume	Reagent Mixing Rate	Total Volume	Catalyst (pounds)	Hydrogen Peroxide (34% pounds)	Cell Dimensions
9/17/2015	E6-S3	7:58	8:22	24	100	320	17.5	420	20.5	1920	10' x 10'
9/17/2015	E7-S3	8:22	8:48	26	100	320	16.2	420	20.5	1920	10' x 10'
9/17/2015	E8-S3	8:51	9:20	29	100	320	14.5	420	20.5	1920	10' x 10'
9/17/2015	E9-S3	9:21	9:47	26	100	320	16.2	420	20.5	1920	10' x 10'
9/17/2015	E10-S3	9:48	10:17	29	100	320	14.5	420	20.5	1920	10' x 10'
9/17/2015	E11-S3	10:18	10:42	24	100	320	17.5	420	20.5	1920	10' x 10'
9/17/2015	E12-S3	10:43	11:06	23	100	320	18.3	420	20.5	1920	10' x 10'
9/17/2015	E13-S3	11:07	11:37	30	100	320	14.0	420	20.5	1920	10' x 10'
9/17/2015	E14-S3	11:37	12:06	29	100	320	14.5	420	20.5	1920	10' x 10'
9/17/2015	E15-S3	12:33	12:59	26	100	320	16.2	420	20.5	1920	10' x 10'
9/17/2015	E15-S8	13:02	13:14	12	50	160	17.5	210	10.25	960	5' x 10'
9/17/2015	E15-S9	13:14	13:26	12	50	160	17.5	210	10.25	960	5' x 10'
9/17/2015	E15-S10	13:27	13:50	23	100	320	18.3	420	20.5	1920	10' x 10'
9/17/2015	E15-S11	13:50	14:11	21	100	320	20.0	420	20.5	1920	10' x 10'
9/17/2015	E15-S12	14:11	14:37	26	100	320	16.2	420	20.5	1920	10' x 10'
9/17/2015	E15-S13	14:37	14:59	22	100	320	19.1	420	20.5	1920	10' x 10'
9/17/2015	E14-S12	14:59	15:11	12	50	160	17.5	210	10.25	960	5' x 10'
9/17/2015	E14-S13	15:11	15:23	12	50	160	17.5	210	10.25	960	5' x 10'
9/17/2015	E15-S14	15:23	15:50	27	100	320	15.6	420	20.5	1920	10' x 10'
9/17/2015	E14-S14	15:50	15:58	8	25	80	13.1	105	5.125	480	5' x 5'
9/17/2015	E12-S1 (Re-mix)	17:47	17:59	12	50	160	17.5	210	10.25	960	5' x 10'
9/17/2015	E12-S2 (Re-mix)	17:24	17:47	23	100	320	18.3	420	20.5	1920	10' x 10'
9/17/2015	E13-S1 (Re-mix)	17:14	17:24	10	50	160	21.0	210	10.25	960	5' x 10'
9/17/2015	E13-S2 (Re-mix)	16:50	17:14	24	100	320	17.5	420	20.5	1920	10' x 10'
9/17/2015	E14-S1 (Re-mix)	16:37	16:50	13	50	160	16.2	210	10.25	960	5' x 10'
9/17/2015	E14-S2 (Re-mix)	16:06	16:37	31	100	320	13.5	420	20.5	1920	10' x 10'
9/18/2015	E2-S5	7:56	8:06	10	50	160	21.0	210	10.25	960	5' x 10'
9/18/2015	E2-S4	8:06	8:37	31	100	320	13.5	420	20.5	1920	10' x 10'
9/18/2015	E3-S4	8:50	9:15	25	100	320	16.8	420	20.5	1920	10' x 10'
9/18/2015	E4-S4	9:15	9:46	31	100	320	13.5	420	20.5	1920	10' x 10'

Table 3
Weston/ NHDES
Soil Mixing Summary Table
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Mixing Date	Mixing Cell ID	Start Time	Stop Time	Mixing Time	Catalyst Volume	Hydrogen Peroxide Volume	Reagent Mixing Rate	Total Volume	Catalyst (pounds)	Hydrogen Peroxide (34% pounds)	Cell Dimensions
9/18/2015	E5-S4	9:47	10:16	29	100	320	14.5	420	20.5	1920	10' x 10'
9/18/2015	E6-S4	10:16	10:37	21	100	320	20.0	420	20.5	1920	10' x 10'
9/18/2015	E7-S4	10:37	11:02	25	100	320	16.8	420	20.5	1920	10' x 10'
9/18/2015	E8-S4	11:02	11:26	24	100	320	17.5	420	20.5	1920	10' x 10'
9/18/2015	E9-S4	11:26	11:47	21	100	320	20.0	420	20.5	1920	10' x 10'
9/18/2015	E10-S4	11:47	12:13	26	100	320	16.2	420	20.5	1920	10' x 10'
9/18/2015	E9-S5	12:40	12:50	10	50	160	21.0	210	10.25	960	5' x 10'
9/18/2015	E10-S5	12:50	13:01	11	50	160	19.1	210	10.25	960	5' x 10'
9/18/2015	E11-S4	13:01	13:32	31	100	320	13.5	420	20.5	1920	10' x 10'
9/18/2015	E12-S4	13:34	13:57	23	100	320	18.3	420	20.5	1920	10' x 10'
9/18/2015	E13-S4	13:57	14:26	29	100	320	14.5	420	20.5	1920	10' x 10'
9/18/2015	E14-S4	14:26	14:56	30	100	320	14.0	420	20.5	1920	10' x 10'
9/18/2015	E15-S4	14:56	15:18	22	100	320	19.1	420	20.5	1920	10' x 10'
9/18/2015	E3-S5	15:19	15:49	30	100	320	14.0	420	20.5	1920	10' x 10'
9/18/2015	E4-S5	15:50	16:18	28	100	320	15.0	420	20.5	1920	10' x 10'
9/18/2015	E5-S5	16:18	16:47	29	100	320	14.5	420	20.5	1920	10' x 10'
9/19/2015	E6-S5	8:45	9:15	30	100	320	14.0	420	20.5	1920	10' x 10'
9/19/2015	E7-S5	9:25	9:45	20	100	320	21.0	420	20.5	1920	10' x 10'
9/19/2015	E8-S5	9:45	10:15	30	100	320	14.0	420	20.5	1920	10' x 10'
9/19/2015	E4-S6	8:19	8:32	13	50	160	16.2	210	10.25	960	5' x 10'
9/19/2015	E5-S6	8:32	8:45	13	50	160	16.2	210	10.25	960	5' x 10'
9/19/2015	E6-S6	9:15	9:25	10	50	160	21.0	210	10.25	960	5' x 10'
9/19/2015	E13-S5	10:25	10:47	22	100	320	19.1	420	20.5	1920	10' x 10'
9/19/2015	E12-S5	10:15	10:25	10	25	80	10.5	105	5.125	480	5' x 5'
9/19/2015	E14-S5	10:47	11:10	23	100	320	18.3	420	20.5	1920	10' x 10'
9/19/2015	E14-S6	11:10	11:20	10	50	160	21.0	210	10.25	960	5' x 10'
9/19/2015	E15-S5	11:20	11:40	20	100	320	21.0	420	20.5	1920	10' x 10'
9/19/2015	E15-S6	11:40	12:05	25	100	320	16.8	420	20.5	1920	10' x 10'
9/21/2015	E13-S4 (Re-mix)	12:38	13:12	34	100	320	12.4	420	20.5	960	10' x 10'
Totals					**10350**	**34360**		**44710**	**2162.75**	**201600**	

Table 4
Treatment Performance Monitoring Data
In-Situ Chemical Oxidation Via Soil Mixing
Kearsarge Superfund Site
Conway, New Hampshire

Date of Blending	Cell Location	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (µg/kg)	Post-Treatment 1,1-DCE Concentration (µg/kg)	Notes
14-Sep	E17-S14	10:45	11:04	19	15-Sep	9	Next Day	0.0	0	20	NA	NA	
						11		0.0	0	14	NA	NA	
						13		0.0	0	28	100 U	40 U	Sample sent to lab on 9/15. Results received on 9/16.
14-Sep	E17-S13	11:05	11:20	15	15-Sep	9	Next Day	0.0	0	12	NA	NA	
						11		0.0	0	63	NA	NA	
						13		0.0	0	32	50 U	20 U	Sample sent to lab on 9/15. Results received on 9/16.
14-Sep	E17-S11	11:36	11:42	7	15-Sep	9	Next Day	0.0	0	10	NA	NA	
						11		0.0	0	12	NA	NA	
						13		0.0	0	18	100 U	40 U	Sample sent to lab on 9/15. Results received on 9/16.
14-Sep	E17-S9	11:52	12:17	25	15-Sep	9	Next Day	0.0	0	14	NA	NA	
						11		0.0	0	9	NA	NA	
						13		0.0	0	15	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.
14-Sep	E17-S7	13:07	13:22	15	15-Sep	9	Next Day	0.0	0	14	NA	NA	
						11		0.0	0	8	NA	NA	
						13		0.0	0	5	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
14-Sep	E17-S6	13:23	13:38	15	15-Sep	9	Next Day	0.0	0	11	NA	NA	
						11		0.0	0	6	NA	NA	
						13		0.0	0	12	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
14-Sep	E17-S5	13:39	14:08	29	15-Sep	9	Next Day	0.0	0	6	NA	NA	
						11		0.0	0	4	NA	NA	
						13		0.0	0	6	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.

Table 4
Treatment Performance Monitoring Data
In-Situ Chemical Oxidation Via Soil Mixing
Kearsarge Superfund Site
Conway, New Hampshire

Date of Blending	Cell Location	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (µg/kg)	Post-Treatment 1,1-DCE Concentration (µg/kg)	Notes
14-Sep	E13-S2	16:16	16:33	17	15-Sep	9	Next Day	0.0	0	12	NA	NA	
						11		0.0	0	8	NA	NA	
						13		0.0	0	8	200	110	Sample sent to lab on on 9/16. Results received on 9/17. Exceedance detected. Cell retreated on 9/17. Analytical data received on 9/19/15 with results below project goals.
											60	40	Duplicate sample sent to lab on 9/16. Results received on 9/17.
14-Sep	E14-S1	15:05	15:19	14	15-Sep	9	Next Day	0.0	0	6	NA	NA	
						11		0.0	0	12	NA	NA	
						13		0.0	0	8	100 U	160	Sample sent to lab on on 9/16. Results received on 9/17. Exceedance detected. Cell retreated on 9/17. Analytical data received on 9/19/15 with results below project goals.
14-Sep	E15-S2	15:20	15:35	15	15-Sep	9	Next Day	0.0	0	14	NA	NA	
						11		0.0	0	10	NA	NA	
						13		0.0	0	8	100 U	50	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E11-S2	9:00	9:18	18	16-Sep	11	Next Day	0.0	0	5	NA	NA	
						13		0.0	0	10	100	60	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E7-S1	12:05	12:22	17	16-Sep	13	Next Day	0.0	1	12	100	30	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E9-S2	10:46	11:08	22	16-Sep	9	Next Day	0.0	0.0	4	NA	NA	
						11		0.0	0.0	9	100	50	
						13		0.0	0.8	6	NA	NA	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E10-S1	8:38	8:59	21	16-Sep	13	Next Day	0.0	0.0	6	100	30	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E8-S1	11:09	11:31	22	16-Sep	13	Next Day	0.0	0.0	7	100	60	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E6-S2	13:37	13:57	20	16-Sep	13	Next Day	0.1	0.0	4	100	30 J	Sample sent to lab on 9/16. Results received on 9/17.

Table 4
Treatment Performance Monitoring Data
In-Situ Chemical Oxidation Via Soil Mixing
Kearsarge Superfund Site
Conway, New Hampshire

Date of Blending	Cell Location	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (µg/kg)	Post-Treatment 1,1-DCE Concentration (µg/kg)	Notes
15-Sep	E5-S2	14:19	14:39	20	16-Sep	13	Next Day	0.1	0.0	10	50 J	20 J	Sample sent to lab on 9/16. Results received on 9/17.
											50 J	30 J	Duplicate Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E5-S1	13:58	14:18	20	16-Sep	13	Next Day	0.0	0.0	5	100	30	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E3-S2	15:41	16:03	22	16-Sep	13	Next Day	0.1	0.0	4	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
15-Sep	E3-S1	15:20	15:40	20	16-Sep	13	Next Day	0.1	0.0	8	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
16-Sep	E4-S3	15:20	15:50	30	17-Sep	11	Next Day	0.0	1.0	5	100	40	Sample sent to lab on 9/17. Results received on 9/18.
						13		0.0	0.0	10	NA	NA	
16-Sep	E5-S3	15:50	16:20	30	17-Sep	11	Next Day	0.0	1.0	3	NA	NA	
						13		0.0	0.0	6	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
16-Sep	E16-S14	9:22	9:46	24	17-Sep	11	Next Day	0.1	0.0	9	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
						13		0.1	0.0	5	NA	NA	
16-Sep	E16-S11	10:28	10:48	20	17-Sep	13	Next Day	0.0	0.0	8	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
16-Sep	E1-S2	8:10	8:36	26	17-Sep	13	Next Day	0.0	0.0	7	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
16-Sep	E16-S6	12:33	12:54	21	17-Sep	13	Next Day	0.1	0.0	2	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
16-Sep	E16-S9	11:09	11:28	19	17-Sep	13	Next Day	0.1	0.0	9	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
16-Sep	E16-S3	13:43	14:08	25	17-Sep	13	Next Day	0.1	0.0	7	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
17-Sep	E10-S3	9:48	10:17	29	18-Sep	13	Next Day	0.1	0.0	7	100	30 J	Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E13-S3	11:07	11:37	20	18-Sep	13	Next Day	0.1	0.0	4	100 U	40 J	Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E14-S12	14:59	15:11	12	18-Sep	13	Next Day	0.0	0.0	10	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E14-S3	11:37	12:00	23	18-Sep	13	Next Day	0.2	0.0	2	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E15-S8	13:02	13:14	12	18-Sep	13	Next Day	0.0	0.0	5	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E15-S10	13:27	13:50	23	18-Sep	13	Next Day	0.0	0.0	3	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E15-S14	15:23	15:50	27	18-Sep	13	Next Day	0.0	0.0	8	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
											100 U	30 U	Duplicate sample sent to lab on 9/18. Results received on 9/19.

Table 4
Treatment Performance Monitoring Data
In-Situ Chemical Oxidation Via Soil Mixing
Kearsarge Superfund Site
Conway, New Hampshire

Date of Blending	Cell Location	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (µg/kg)	Post-Treatment 1,1-DCE Concentration (µg/kg)	Notes
17-Sep	E15-S3	12:33	12:59	26	18-Sep	13	Next Day	0.0	0.0	7	100 U	50 U	Sample sent to lab on 9/18. Results received on 9/19.
17-Sep	E12-S1	17:42	17:59	17	18-Sep	11	Next Day	0.0	0.0	3	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
						13		0.0	0.0	5	NA	NA	Retreated cell on 9/17.
17-Sep	E12-S2	17:24	17:42	18	18-Sep	11	Next Day	0.0	0.0	5	NA	NA	Retreated cell on 9/17.
						13		0.1	0.0	5	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
17-Sep	E13-S1	17:14	17:24	10	18-Sep	11	Next Day	0.0	0.0	3	NA	NA	Retreated cell on 9/17.
						13		0.0	0.0	6	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
17-Sep	E13-S2	16:50	17:14	24	18-Sep	11	Next Day	0.0	0.0	4	NA	NA	Retreated cell on 9/17.
						13		0.1	0.0	5	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
17-Sep	E14-S1	16:37	16:50	13	18-Sep	11	Next Day	0.1	0.0	6	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
						13		0.0	0.0	8	NA	NA	Retreated cell on 9/17.
17-Sep	E14-S2	16:06	16:37	31	18-Sep	11	Next Day	0.0	0.0	7	NA	NA	Retreated cell on 9/17.
						13		0.0	0.0	3	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
18-Sep	E2-S4	7:56	8:06	10	19-Sep	13	Next Day	0.1	0.0	5	100 U	20 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
18-Sep	E4-S4	9:15	9:46	31	19-Sep	13	Next Day	0.1	0.0	12	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
18-Sep	E3-S5	13:19	13:49	30	19-Sep	13	Next Day	0.1	0.0	13	100 U	20 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
											100 U	30 J	Duplicate Sample Sent to Lab 9/19. Analytical data received on 9/21.
18-Sep	E5-S4	9:47	10:16	29	19-Sep	13	Next Day	0.1	0.0	3	100 U	20 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
18-Sep	E14-S4	14:26	14:56	30	19-Sep	13	Next Day	0.0	0.0	8	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
18-Sep	E4-S5	13:50	14:18	28	19-Sep	13	Next Day	0.1	0.0	4	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
18-Sep	E15-S4	14:56	15:18	22	19-Sep	13	Next Day	0.0	0.0	6	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
18-Sep	E5-S5	16:18	16:47	29	19-Sep	13	Next Day	0.1	0.0	7	100 U	30 J	Sample Sent to Lab 9/19. Analytical data received on 9/21.
18-Sep	E7-S4	10:37	11:02	25	19-Sep	13	Next Day	0.1	0.0	5	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.

Table 4
Treatment Performance Monitoring Data
In-Situ Chemical Oxidation Via Soil Mixing
Kearsarge Superfund Site
Conway, New Hampshire

Date of Blending	Cell Location	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (µg/kg)	Post-Treatment 1,1-DCE Concentration (µg/kg)	Notes
18-Sep	E10-S4	11:42	12:13	31	19-Sep	13	Next Day	0.0	0.0	24	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
18-Sep	E11-S4	13:11	13:32	21	19-Sep	13	Next Day	0.0	0.0	12	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
18-Sep	E13-S4	13:52	14:26	34	19-Sep	13	Next Day	0.1	0.0	13	100 U	80	Sample sent to lab on on 9/19. Results received on 9/21. Exceedance detected. Cell retreated on 9/21. Analytical data received on 9/22 with results below project goals.
19-Sep	E5-S6	8:32	8:45	13	21-Sep	13	Approx. 47 hrs	0.0	0.0	4	100 U	30 U	Sample Sent to Lab 9/21. Analytical data received on 9/22.
19-Sep	E8-S5	9:45	10:15	30	21-Sep	13	Approx. 46 hrs	0.1	0.0	10	Lab broke sample bottle. Cell was resampled at 14:30 on 9/21.		Sample Sent to Lab 9/21.
19-Sep	E13-S5	10:25	10:47	22	21-Sep	13	Approx. 45 hrs	0.0	0.0	10	100 U	40 U	Sample Sent to Lab 9/21. Analytical data received on 9/22.
19-Sep	E15-S6	11:40	12:05	25	21-Sep	13	Approx. 44 hrs	0.0	0.0	6	100 U	30 U	Sample Sent to Lab 9/21. Analytical data received on 9/22.
21-Sep	E13-S4	12:38	13:12	33	21-Sep	13	Approx. 4 hrs	0.0	2.5	13	100 U	40 U	Sample Sent to Lab 9/19. Cell was retreated on 9/21 at 12:38. Cell was resampled at 14:38 on 9/21. Analytical data received on 9/22.
21-Sep	E8-S5	9:45	10:15	30	21-Sep	13	Approx. 2 days	0.0	10.0	10	70 J	20 J	Sample Sent to Lab 9/21. Lab broke sample bottle. Cell will be resampled at approx. 14:30 on 9/21. Analytical data received on 9/22.

Note:
Cell Locations = ID locations of the treatment cells that were sampled after the cell was mixed/blended.
ft bgs = Feet below ground surface.
ppm = Parts per million
NA = Not Analyzed
µg/kg = Micrograms per kilogram
Sample Collection Time = Samples collected the morning after day of mixing.
1,1-DCE = 1,1-Dichloroethene (criteria of≤60 µg/kg)
1,1,1-TCA = 1,1,1-Trichloroethane (criteria of≤150 µg/kg)
U=Compound was not detected and the reporting limit is shown.
Green shading indicates results were non-detect for the compounds indicated.
Yellow highlighting indicates detection at or below the criteria for the compound indicated.
Red highlighting indicates detection above the crietria for the compound indicated.
Orange highlighting indicates cell was re-mixed, re-sampled and analyzed due an exceedance of the project goal in the original sample. Results met the project action goals.
Blue highlighting indicates cell was re-mixed, re-sampled, and analyzed due an exceedance of the project goal on in adjacent cell(s). Results met the project action goals.
Field testing for hydrogen peroxide was conducted using Quantofix Peroxide 100 test strips.
Field testing for Total Iron was conducted using Hach Iron Color Disc Test Kit, Model IR-18A .

TABLE 5
Weston/ NHDES
ISCO SOIL MIXING DOSAGE DETAILS (MFR)
KEARSARGE SUPERFUND SITE
CONWAY, NH
ISOTEC #801991

Cell I-D	AOC	Length	Width	Depth	Volume	Soil Density	Soil Mass	Porosity	Pore Volume	Peroxide SOD	Safety Factor	Catalyst Demand	Peroxide Demand (100%)	Catalyst Volume	Peroxide Volume (34%)	Mix Water Volume	Total Solution Volume
		ft	ft	ft	CY	lb/CY	lb		gallon	g/kg		gal/CY	lb	Gallons	Gallons	Gallons	Gallons
E1-S1	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E2-S1	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E3-S1	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E4-S1	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E5-S1	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E6-S1	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E7-S1	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E8-S1	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E9-S1	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E10-S1	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E11-S1	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E12-S1	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E13-S1	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E14-S1	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E15-S1	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E1-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E2-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E3-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E4-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E5-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E6-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E7-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E8-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E9-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E10-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E11-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E12-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E13-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E14-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E15-S2	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E1-S3	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E2-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E3-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E4-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E5-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E6-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E7-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E8-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E9-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E10-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E11-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E12-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457

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KEARSARGE SUPERFUND SITE
CONWAY, NH
ISOTEC #801991

Cell I-D	AOC	Length	Width	Depth	Volume	Soil Density	Soil Mass	Porosity	Pore Volume	Peroxide SOD	Safety Factor	Catalyst Demand	Peroxide Demand (100%)	Catalyst Volume	Peroxide Volume (34%)	Mix Water Volume	Total Solution Volume
		ft	ft	ft	CY	lb/CY	lb		gallon	g/kg		gal/CY	lb	Gallons	Gallons	Gallons	Gallons
E13-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E14-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E15-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E16-S3	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E2-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E3-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E4-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E5-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E6-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E7-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E8-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E9-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E10-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E11-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E12-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E13-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E14-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E15-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E16-S4	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E2-S5	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E3-S5	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E4-S5	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E5-S5	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E6-S5	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E7-S5	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E8-S5	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E9-S5	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E10-S5	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E12-S5	Treatment Area	5	5	8	7.4	2970	22000	0.3	449	7	1.05	2.05	162	15	50	50	114
E13-S5	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E14-S5	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E15-S5	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E16-S5	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E17-S5	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E4-S6	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E5-S6	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E6-S6	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E14-S6	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E15-S6	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E16-S6	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E17-S6	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E16-S7	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457

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KEARSARGE SUPERFUND SITE
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Cell I-D	AOC	Length	Width	Depth	Volume	Soil Density	Soil Mass	Porosity	Pore Volume	Peroxide SOD	Safety Factor	Catalyst Demand	Peroxide Demand (100%)	Catalyst Volume	Peroxide Volume (34%)	Mix Water Volume	Total Solution Volume
		ft	ft	ft	CY	lb/CY	lb		gallon	g/kg		gal/CY	lb	Gallons	Gallons	Gallons	Gallons
E17-S7	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E15-S8	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E16-S8	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E17-S8	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E15-S9	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E16-S9	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E17-S9	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E15-S10	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E16-S10	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E17-S10	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E15-S11	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E16-S11	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E17-S11	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E14-S12	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E15-S12	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E16-S12	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E17-S12	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E14-S13	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E15-S13	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E16-S13	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E17-S13	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E14-S14	Treatment Area	5	5	8	7.4	2970	22000	0.3	449	7	1.05	2.05	162	15	50	50	114
E15-S14	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E16-S14	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E17-S14	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
E16-S15	Treatment Area	5	10	8	14.8	2970	44000	0.3	898	7	1.05	2.05	323	30	99	99	229
E17-S15	Treatment Area	10	10	8	29.6	2970	88000	0.3	1795	7	1.05	2.05	647	61	198	198	457
TOTALS					2,993		8,888,000		181,315				65,327	6,135	20,014	20,014	46,163

Notes:
(1) A 5% safety factor was added to the reagent dosage of the 7-15 ft bgs interval in order to account for any reagent interchange from the target treatment interval of 7-15 ft bgs to the unexcavated portion of the overlying soils from ~3-7 ft bgs. The additional dosage is calculated as equivalent to ~10% of the reagent demand associated with the unexcavated portion of the overlying soils (i.e. ~3-7 ft bgs).
(2) ft = feet; CY = cubic yards; g/kg = grams per kilogram; lb = pounds

APPENDICES

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**10-Sep-15**	Client:	**Weston**	Personnel:	**Mike, Mark, Bill L, Bill O, Cody, Dave, Faun**
Project:	**KMC Site, Conway, NH**	Job Number:	**801991**	Weather:	**Cloudy, 60-70**

Personnel Names	Time		Mobilization To & From Job Site	Safety Meeting	Equipment Preparation	Sampling Wells & Analysis	Mixing Time	De-Con. Equipment	Data Entry Time	Other (Lunch)
	Start	Stop								
Mike Temple	7:00 AM	5:00 PM		1.0						0.5
Mark Ratner	7:00 AM	5:00 PM		1.0						0.5
Bill Lang	7:00 AM	5:00 PM		1.0						0.5
Bill Oberloier	7:00 AM	5:00 PM		1.0						0.5
Dave Roe	1:00 PM	4:00 PM		0.5						0.5
Cody Shell	1:00 PM	4:00 PM		0.5						0.5
Faun Koplovsky	11:00 AM	5:00 PM		0.5						0.5
TOTAL HOURS =	9.50		TOTAL MIXING HOURS =			0.00				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**17% H2O2 Volume**		**Catalyst Volume**		**17% H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			0	0	0	0	0	0	0	0
Generator			0	0	0	0	0	0	0	0
Mixers			0	0	0	0	0	0	0	0
Equipment Set			0	0	0	0	0	0	0	0
Vehicle(s) utilized			0	0	0	0	0	0	0	0
Raw Materials Used			0	0	0	0	0	0	0	0
Powder Catalyst	0	lbs.	0	0	0	0	0	0	0	0
Liquid Catalyst	0	Gallons	0	0	0	0	0	0	0	0
34% H2O2	0	Gallons	0	0	0	0	0	0	0	0
17% H2O2	0	Gallons	0	0	0	0	0	0	0	0
			TOTAL INJECTION VOLUME =		0					

Major Work Activities Performed:

Set up GPS coordinates, kickoff meeting, cleared majority of the work area (mulching, tree removal), inserted silt sacks in storm drain inlets (CB 7-8 and CB 8-9), removed monitoring wells (MWs-3006, 3008, 3009, 3010 and 3011), placed precast concrete well tiles around select wells (MW-3004, MW-203A, MWS-205, MWS-114, MWS-215 and EW-13B), video documentation of existing conditions of buildings/fence/access road, fire hydrant adapter hooked up by the township and checked the access inside of the culvert beneath Hobbs Street where the water line will be run. Spoke to dig safe representative who had marked out behind the building (left flags near the propane tank) and said there were no known utilities in the wooded area that they would need to mark out.

Health and Safety Items Covered:

General site safety topics covered during the kickoff meeting between ISOTEC (Mike Temple, Mark Ratner), LTC (Bill L, Bill O), Weston (Erik Hall, Vinnie DelloRusso, Fred Symmes), NHDES (Drew Hoffman), property owner, town manager and DPW manager. Faun Koplovsky (Land and Mowing Solutions LLC) on site around 11:00 AM.

Unforeseen Site Conditions:

Bulldozer struck MW-3005 during clearing operations. Window in the bulldozer was struck (and cracked) by a rock during the mulching operation. Nobody was in the machine at the time.

List of Deliveries:

Bull dozer and bathroom (9/9), forklift, concrete well tiles, LTC equipment.

Other Comments (Work delays, inspections results, etc.):

During the kickoff meeting it was decided to delay the first hydrogen peroxide delivery until Monday so that chemical was not sitting on site over the weekend without having the perimeter fence installed.

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**11-Sep-15**		Client:	**Weston**		Personnel:	**Mike, Mark, Bill L, Bill O, Cody, Dave, Faun**			
Project:	**KMC Site, Conway, NH**		Job Number:	**801991**		Weather:	**Sunny, 60-75**			
Personnel Names	Time		Mobilization To & From Job Site	Safety Meeting	Equipment Preparation	Sampling Wells & Analysis	Mixing Time	De-Con. Equipment	Data Entry Time	Other (Lunch)
	Start	Stop								
Mike Temple	7:00 AM	5:00 PM		0.25						0.5
Mark Ratner	7:00 AM	5:00 PM		0.25						0.5
Bill Lang	7:00 AM	5:00 PM		0.25						0.5
Bill Oberloier	7:00 AM	5:00 PM		0.25						0.5
Dave Roe	7:00 AM	5:00 PM		0.25						0.5
Cody Shell	7:00 AM	5:00 PM		0.25						0.5
Faun Koplovsky	7:00 AM	9:00 AM		0.25						
TOTAL HOURS =	9.50		TOTAL MIXING HOURS =			0.00				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**17% H2O2 Volume**		**Catalyst Volume**		**17% H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			0	0	0	0	0	0	0	0
Generator			0	0	0	0	0	0	0	0
Mixers			0	0	0	0	0	0	0	0
Equipment Set			0	0	0	0	0	0	0	0
Vehicle(s) utilized			0	0	0	0	0	0	0	0
Raw Materials Used			0	0	0	0	0	0	0	0
Powder Catalyst	0	lbs.	0	0	0	0	0	0	0	0
Liquid Catalyst	0	Gallons	0	0	0	0	0	0	0	0
34% H2O2	0	Gallons	0	0	0	0	0	0	0	0
17% H2O2	0	Gallons	0	0	0	0	0	0	0	0
			TOTAL INJECTION VOLUME =		0					

Major Work Activities Performed:

Daily safety meeting, cleared remainder of the work area (mulching, tree removal), moved precast concrete well tile from MWS-215 to CB 7-8, provided additional coverage of the culverts beneath Hobbs Street where the water line is run through, tested the water line and ran water out to the chemical preparation truck, installed the silt fence, scraped off top soil across the site and placed into stockpiles, prepared equipment and excavated portions of the site in preparation of soil mixing on Monday.

Health and Safety Items Covered:

General site safety topics and attention to remaining clear of the mulching machine during land clearing covered during the daily safety meeting between ISOTEC (Mike Temple, Mark Ratner), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall), L&M Solutions (Faun Koplovsky).

Unforeseen Site Conditions:

List of Deliveries:

Excavator.

Other Comments (Work delays, inspections results, etc.):

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**12-Sep-15**		Client:	**Weston**		Personnel:	**Mike, Mark, Bill L, Bill O, Cody, Dave**			
Project:	**KMC Site, Conway, NH**		Job Number:	**801991**		Weather:	**Sunny, 65-78**			
Personnel Names	Time		Mobilization To & From	Safety Meeting	Equipment Preparation	Sampling Wells & Analysis	Mixing Time	De-Con. Equipment	Data Entry Time	Other (Lunch)
	Start	Stop	Job Site							
Mike Temple	7:00 AM	2:00 PM		0.25						0.25
Mark Ratner	7:00 AM	2:00 PM		0.25						0.25
Bill Lang	7:00 AM	2:00 PM		0.25						0.25
Bill Oberloier	7:00 AM	2:00 PM		0.25						0.25
Dave Roe	7:00 AM	2:00 PM		0.25						0.25
Cody Shell	7:00 AM	2:00 PM		0.25						0.25
TOTAL HOURS =	6.75		TOTAL MIXING HOURS =			0.00				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**17% H2O2 Volume**		**Catalyst Volume**		**17% H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			0	0	0	0	0	0	0	0
Generator			0	0	0	0	0	0	0	0
Mixers			0	0	0	0	0	0	0	0
Equipment Set			0	0	0	0	0	0	0	0
Vehicle(s) utilized			0	0	0	0	0	0	0	0
Raw Materials Used			0	0	0	0	0	0	0	0
Powder Catalyst	0	lbs.	0	0	0	0	0	0	0	0
Liquid Catalyst	0	Gallons	0	0	0	0	0	0	0	0
34% H2O2	0	Gallons	0	0	0	0	0	0	0	0
17% H2O2	0	Gallons	0	0	0	0	0	0	0	0
			TOTAL INJECTION VOLUME =		0					

Major Work Activities Performed:

Daily safety meeting, fence installed by contractors, prepared equipment and excavated portions of the site in preparation of soil mixing on Monday. We are excavating to between 455.5 and 456.25, which is just above the contaminated zone that begins at 455 (between 455.5 and 456.25 appears to be the depth of the current water table as the bottom of the excavation area had some water in it after sitting over night). This ability to excavate additional dry (clean unimpacted) soils allows for an increased berm around the perimeter of the site which will help mitigate the chance of needing to dewater; minimizes the overall vertical interval that needs to be mixed (when including clean overburden materials); and also minimizes any potential reagent wastage within the upper clean soils that need to be mixed (passed through) in order to access the underlying impacted areas. Excavated soils have been fairly dry and easy to manage. The 2 cells near CB 7-8 will be treated as 5' x 10' cells instead of 10' x 10' cells due to their proximity to the catch basin.

Health and Safety Items Covered:

General site safety topics and attention to trips and falls as the fence installers were working outside of the silt fence where trees, rocks and other potential trip hazards existed, during the daily safety meeting between ISOTEC (Mike Temple, Mark Ratner), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Lee Baronas), fence installation contractors.

Unforeseen Site Conditions:

List of Deliveries:

Other Comments (Work delays, inspections results, etc.):

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**14-Sep-15**		Client:	**Weston**		Personnel:	**Mike, Mark, Kevin, Bill L, Bill O, Cody, Dave**			
Project:	**KMC Site, Conway, NH**		Job Number:	**801991**		Weather:	**Mostly sunny, some showers, 55-75**			
Personnel Names	Time		Mobilization To & From Job Site	Safety Meeting	Equipment Preparation	Sampling Wells & Analysis	Mixing Time	De-Con. Equipment	Data Entry Time	Other (Lunch)
	Start	Stop								
Mike Temple	7:00 AM	6:00 PM	0.25	0.5	3.0		5.5	1.0	0.5	0.5
Mark Ratner	7:00 AM	5:30 PM	0.25	0.5	3.0		5.5	1.0		0.5
Kevin O'Neal	7:00 AM	5:30 PM	0.25	0.5	3.0		5.5	1.0		0.5
Bill Lang	7:00 AM	5:30 PM	0.25	0.5	3.0		5.5	1.0		0.5
Bill Oberloier	7:00 AM	5:30 PM	0.25	0.5	3.0		5.5	1.0		0.5
Dave Roe	7:00 AM	5:30 PM	0.25	0.5	3.0		5.5	1.0		0.5
Cody Shell	7:00 AM	5:30 PM	0.25	0.5	3.0		5.5	1.0		0.5
TOTAL HOURS =	10.00		TOTAL MIXING HOURS =			5.50				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**H2O2 Volume**		**Catalyst Volume**		**H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			E17-S15	100	E17-S15	600	E17-S5	80	E17-S5	320
Generator			E17-S14	100	E17-S14	400	E15-S1	40	E15-S1	160
Mixers			E17-S13	100	E17-S13	400	E14-S1	40	E14-S1	160
Equipment Set			E17-S12	100	E17-S12	400	E15-S2	80	E15-S2	320
Vehicle(s) utilized			E17-S11	50	E17-S11	200	E14-S2	80	E14-S2	320
Raw Materials Used			E17-S10	50	E17-S10	200	E13-S1	40	E13-S1	160
Powder Catalyst	307.5	lbs.	E17-S9	80	E17-S9	320	E12-S1	40	E12-S1	160
Liquid Catalyst	1300	Gallons	E17-S8	80	E17-S8	320	E13-S2	80	E13-S2	320
34% H2O2	3000	Gallons	E17-S7	80	E17-S7	320	0	0	0	0
Diluted H2O2	5400	Gallons	E17-S6	80	E17-S6	320	0	0	0	0
34% H2O2	28800	lbs.								
			TOTAL INJECTION VOLUME =		6700					

Major Work Activities Performed:

Daily safety meeting and review of major JSA topics (Weston Construction Superintendent Steve O'Brien was on-site to conduct a safety audit and mentioned that each construction vehicle needed their own fire extinguisher, wanted to verify fork-lift operator permits, cautioned about watching the sides of the construction area with heavy machinery on-site, asked about the bull dozer broken window incident, as well as a few other site topics relating to overall project safety). Equipment preparation, received 16 totes of hydrogen peroxide, soil mixing into 18 cells, sampling of the down-gradient catch basin for iron and hydrogen peroxide levels, and excavated portions of Row E16 in preparation of subsequent soil mixing. Initial day of mixing proceeded very well with the DAB being able to push down through the saturated soil matrix with little to no resistance. Each quadrant of a given cell was mixed down to target depth in a matter of minutes. Visual observation of the MFR reactions (i.e. bubbling near the DAB during plunges as well as after plunges were completed from previously treated areas) could be seen across the entire treated area. Approximately 2 feet of swelling was observed within the E17 row during soil mixing in those cells.

Health and Safety Items Covered:

General site safety topics and review of the major JSA topics. Special attention to material handling and using a spotter while loading/ unloading totes with the fork lift during the daily safety meeting between ISOTEC (Mike Temple, Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall). Delivery truck driver on-site for chemical delivery and equipment salesperson from Caterpillar stopped by to check on the equipment.

Unforeseen Site Conditions:

List of Deliveries:

Received 16 totes of 34% hydrogen peroxide (~4,000 gallons or 38,400 lbs) and 2,000 lbs of stabilizing agents.

Other Comments (Work delays, inspections results, etc.):

Safety audit by Weston.

TREATMENT PROGRAM - MIXING VOLUME SUMMARY
KMC Site, Conway, New Hampshire
ISOTEC PROJECT #801991

DATE:	14-Sep-15

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Catalyst (lbs)	34% H2O2 (lbs)	Cell Dimensions
E17-S15	10:24	10:44	20	100	600	35.0	700	20.5	1920	10' x 10'
E17-S14	10:45	11:04	19	100	400	26.3	500	20.5	1920	10' x 10'
E17-S13	11:05	11:20	15	100	400	33.3	500	20.5	1920	10' x 10'
E17-S12	11:21	11:35	14	100	400	35.7	500	20.5	1920	10' x 10'
E17-S11	11:36	11:42	6	50	200	41.7	250	10.25	960	5' x 10'
E17-S10	11:43	11:51	8	50	200	31.3	250	10.25	960	5' x 10'
E17-S9	11:52	12:17	25	80	320	16.0	400	20.5	1920	10' x 10'
E17-S8	12:53	13:06	13	80	320	30.8	400	20.5	1920	10' x 10'
E17-S7	13:07	13:22	15	80	320	26.7	400	20.5	1920	10' x 10'
E17-S6	13:23	13:38	15	80	320	26.7	400	20.5	1920	10' x 10'
E17-S5	13:39	14:08	29	80	320	13.8	400	20.5	1920	10' x 10'
E15-S1	14:10	14:20	10	40	160	20.0	200	10.25	960	5' x 10'
E14-S1	15:05	15:19	14	40	160	14.3	200	10.25	960	5' x 10'
E15-S2	15:20	15:35	15	80	320	26.7	400	20.5	1920	10' x 10'
E14-S2	15:35	15:56	21	80	320	19.0	400	20.5	1920	10' x 10'
E13-S1	15:57	16:06	9	40	160	22.2	200	10.25	960	5' x 10'
E12-S1	16:06	16:16	10	40	160	20.0	200	10.25	960	5' x 10'
E13-S2	16:16	16:33	17	80	320	23.5	400	20.5	1920	10' x 10'
DAY TOTAL/ AVERAGE				1300	5400		6700	307.5	28800	

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**15-Sep-15**		Client:	**Weston**		Personnel:	**Mike, Mark, Kevin, Bill L, Bill O, Cody, Dave**			
Project:	**KMC Site, Conway, NH**		Job Number:	**801991**		Weather:	**Sunny, 59-83**			
Personnel Names	Time		Mobilization To & From Job Site	Safety Meeting	Equipment Preparation	Sampling Wells & Analysis	Mixing Time	De-Con. Equipment	Data Entry Time	Other (Lunch)
	Start	Stop								
Mike Temple	7:00 AM	5:45 PM	0.25	0.25	0.5		7.5	0.75	0.5	0.25
Mark Ratner	7:00 AM	5:15 PM	0.25	0.25	0.5	3.0	4.5	0.75		0.25
Kevin O'Neal	7:00 AM	5:45 PM	0.25	0.25	0.5	4.0	3.5	0.75	0.5	0.25
Bill Lang	7:00 AM	5:30 PM	0.25	0.25	0.5		7.5	1.0		0.25
Bill Oberloier	7:00 AM	5:30 PM	0.25	0.25	0.5		7.5	1.0		0.25
Dave Roe	7:00 AM	5:30 PM	0.25	0.25	0.5		7.5	1.0		0.25
Cody Shell	7:00 AM	5:30 PM	0.25	0.25	0.5		7.5	1.0		0.25
TOTAL HOURS =	10.00		TOTAL MIXING HOURS =			7.50				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**H2O2 Volume**		**Catalyst Volume**		**H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			E12-S2	100	E12-S2	320	E7-S2	100	E7-S2	320
Generator			E11-S1	100	E11-S1	320	E6-S1	100	E6-S1	320
Mixers			E10-S1	100	E10-S1	320	E6-S2	100	E6-S2	320
Equipment Set			E11-S2	100	E11-S2	320	E5-S1	100	E5-S1	320
Vehicle(s) utilized			E10-S2	100	E10-S2	320	E5-S2	100	E5-S2	320
Raw Materials Used			E9-S1	100	E9-S1	320	E4-S1	100	E4-S1	320
Powder Catalyst	410.0	lbs.	E9-S2	100	E9-S2	320	E4-S2	100	E4-S2	320
Liquid Catalyst	2000	Gallons	E8-S1	100	E8-S1	320	E3-S1	100	E3-S1	320
34% H2O2	4000	Gallons	E8-S2	100	E8-S2	320	E3-S2	100	E3-S2	320
Diluted H2O2	6400	Gallons	E7-S1	100	E7-S1	320	E2-S1	100	E2-S1	320
34% H2O2	38400	lbs.								
			TOTAL INJECTION VOLUME =		8400					

Major Work Activities Performed:

Daily safety meeting and review of safety audit topics mentioned by Steve O'Brien from the day before (Steve spoke with Tom Andrews (ISOTEC DHS) about updating the AHA for excavation protection. We submitted an updated version to Steve via email). Equipment preparation, received 16 totes of hydrogen peroxide, soil mixing into 20 cells, sampling of the down-gradient catch basin for iron and hydrogen peroxide levels. Collected soil samples from 10 cells treated the previous day (E13-S2, E14-S1, E15-S2, E17-S5, E17-S6, E17-S7, E17-S9, E17-S11, E17-S13 and E17-S14). Samples were collected from 3 depth intervals at approximatelly 9, 11 and 13 ft bgs. Samples from each depth showed similar charteristics from samples collected across the treated areas (9' samples were very wet and showed little to no solid soils; 11' samples were similar but occasionally showed a piece of clay within the samples; 13' samples were also very wet and showed some clay sediments mixed in which can be part of the deeper geologic matrix or just the heavier sediments that fell to the bottom of the cell during mixing operations). Pictures of select soil samples were taken by Erik during sample analysis and packaging. Similar to Day 1 mixing, Day 2 mixing proceeded very well with the DAB being able to push down through the saturated soil matrix with little to no resistance and bubbling within the treated areas could be seen throughout the day. Approximately 1-2 feet of swelling was observed within the S1 and S2 rows during soil mixing in those cells.

Health and Safety Items Covered:

General site safety topics and review of safety audit topics. Added fire extinguishers to each of the rental machines that didn't come equipped with one. Mark and Kevin completed an online sfaty class on fork-lift operation and received a permit for operation. Special attention to watching the sides of the excavation areas for cracks/ sliding of materials during the daily safety meeting between ISOTEC (Mike Temple, Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall, Allie Balter). Delivery truck driver on-site for chemical delivery.

Unforeseen Site Conditions:

List of Deliveries:

Received 16 totes of 34% hydrogen peroxide (~4,000 gallons or 38,400 lbs) and 2,000 lbs of stabilizing agents.

Other Comments (Work delays, inspections results, etc.):

Drew Hoffman (NHDES) on-site to speak with local reporters about treatment program activities. Reporters snapped photos that were approved by Weston.

TREATMENT PROGRAM - MIXING VOLUME SUMMARY
KMC Site, Conway, New Hampshire
ISOTEC PROJECT #801991

DATE:	15-Sep-15

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Catalyst (lbs)	34% H2O2 (lbs)	Cell Dimensions
E12-S2	7:46	8:03	17	100	320	24.7	420	20.5	1920	10' x 10'
E11-S1	8:03	8:20	17	100	320	24.7	420	20.5	1920	10' x 10'
E10-S1	8:38	8:59	21	100	320	20.0	420	20.5	1920	10' x 10'
E11-S2	9:00	9:18	18	100	320	23.3	420	20.5	1920	10' x 10'
E10-S2	9:19	9:39	20	100	320	21.0	420	20.5	1920	10' x 10'
E9-S1	10:25	10:45	20	100	320	21.0	420	20.5	1920	10' x 10'
E9-S2	10:46	11:08	22	100	320	19.1	420	20.5	1920	10' x 10'
E8-S1	11:09	11:31	22	100	320	19.1	420	20.5	1920	10' x 10'
E8-S2	11:43	12:04	21	100	320	20.0	420	20.5	1920	10' x 10'
E7-S1	12:05	12:22	17	100	320	24.7	420	20.5	1920	10' x 10'
E7-S2	12:22	12:49	27	100	320	15.6	420	20.5	1920	10' x 10'
E6-S1	13:17	13:36	19	100	320	22.1	420	20.5	1920	10' x 10'
E6-S2	13:37	13:57	20	100	320	21.0	420	20.5	1920	10' x 10'
E5-S1	13:58	14:18	20	100	320	21.0	420	20.5	1920	10' x 10'
E5-S2	14:19	14:39	20	100	320	21.0	420	20.5	1920	10' x 10'
E4-S1	14:40	14:57	17	100	320	24.7	420	20.5	1920	10' x 10'
E4-S2	14:58	15:16	18	100	320	23.3	420	20.5	1920	10' x 10'
E3-S1	15:20	15:40	20	100	320	21.0	420	20.5	1920	10' x 10'
E3-S2	15:41	16:03	22	100	320	19.1	420	20.5	1920	10' x 10'
E2-S1	16:05	16:25	20	100	320	21.0	420	20.5	1920	10' x 10'
DAY TOTAL/ AVERAGE				2000	6400		8400	410	38400	

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**16-Sep-15**		Client:	**Weston**		Personnel:	**Mike, Mark, Kevin, Bill L, Bill O, Cody, Dave**			
Project:	**KMC Site, Conway, NH**		Job Number:	**801991**		Weather:	**Sunny, 58-86**			
Personnel Names	Time		Mobilization To & From	Safety Meeting	Equipment Preparation	Sampling Wells &	Mixing Time	De-Con. Equipment	Data Entry	Other (Lunch)
	Start	Stop	Job Site			Analysis			Time	
Mike Temple	7:00 AM	5:45 PM	0.25	0.25	0.5		8.0	1.00	0.5	0.5
Mark Ratner	7:00 AM	5:15 PM	0.25	0.25	0.5	2.0	6.0	1.00		0.5
Kevin O'Neal	7:00 AM	5:45 PM	0.25	0.25	0.5	3.0	5.0	1.00	0.5	0.5
Bill Lang	7:00 AM	5:15 PM	0.25	0.25	0.5		8.0	1.0		0.5
Bill Oberloier	7:00 AM	5:15 PM	0.25	0.25	0.5		8.0	1.0		0.5
Dave Roe	7:00 AM	5:15 PM	0.25	0.25	0.5		8.0	1.0		0.5
Cody Shell	7:00 AM	5:15 PM	0.25	0.25	0.5		8.0	1.0		0.5
TOTAL HOURS =	9.75		TOTAL MIXING HOURS =			8.00				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**H2O2 Volume**		**Catalyst Volume**		**H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			E1-S1	100	E1-S1	320	E16-S8	100	E16-S8	320
Generator			E2-S2	100	E2-S2	320	E16-S7	100	E16-S7	320
Mixers			E1-S2	100	E1-S2	320	E16-S6	100	E16-S6	320
Equipment Set			E16-S15	50	E16-S15	160	E16-S5	100	E16-S5	320
Vehicle(s) utilized			E16-S14	100	E16-S14	320	E16-S4	100	E16-S4	320
Raw Materials Used			E16-S13	100	E16-S13	320	E16-S3	100	E16-S3	320
Powder Catalyst	410.0	lbs.	E16-S12	100	E16-S12	320	E1-S3	50	E1-S3	160
Liquid Catalyst	2000	Gallons	E16-S11	100	E16-S11	320	E2-S3	100	E2-S3	320
34% H2O2	4000	Gallons	E16-S10	100	E16-S10	320	E3-S3	100	E3-S3	320
Diluted H2O2	6400	Gallons	E16-S9	100	E16-S9	320	E4-S3	100	E4-S3	320
34% H2O2	38400	lbs.	E5-S3	100	E5-S3	320				
			TOTAL INJECTION VOLUME =		8400					

Major Work Activities Performed:

Daily safety meeting and discussed safety while working around the excavation areas. Bill Oberloier from LTC has the required competent person training for working around excavations (certificate emailed to steve O'Brien on Wednesday night). Equipment preparation, received 16 totes of hydrogen peroxide (returned 35 totes), soil mixing into 21 cells, sampling of the down-gradient catch basin for iron and hydrogen peroxide levels. Samples collected from cells E17-S11, E17-S13 and E17-S14 came back below site sampling criteria levels. Collected soil samples from 10 cells treated the previous day (E11-S2, E10-S1, E9-S2, E8-S1, E7-S1, E6-S2, E5-S1, E5-S2, E3-S1 and E3-S2). Samples were collected from 2 depth intervals (at approximatelly 9, 11 and 13 ft bgs) at select cells to confirm adequate mixing occurred. Samples apperaed to be failrly consistent with one another and looked visually well mixed. Similar to Day 1 and Day 2, mixing proceeded very well with the DAB being able to push down through the saturated soil matrix with little to no resistance and bubbling within the treated areas could be seen throughout the day. Approximately 1-2 feet of swelling was observed within treated rows during soil mixing. Cells identified by Weston as having historical soil impacts (E4-S3 and E5-S3) were mixed longer than other treated cells. Cell E9-S2 was remixed (withouth extra reagent) in the morning at the request of Weston.

Health and Safety Items Covered:

General site safety topics and review of working around the excavation areas during the daily safety meeting between ISOTEC (Mike Temple, Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall, Allie Balter). Delivery truck driver on-site for chemical delivery.

Unforeseen Site Conditions:

List of Deliveries:

Received 16 totes of 34% hydrogen peroxide (~4,000 gallons or 38,400 lbs).

Other Comments (Work delays, inspections results, etc.):

Article in the Conway Daily Sun newspaper about the project.

TREATMENT PROGRAM - MIXING VOLUME SUMMARY
KMC Site, Conway, New Hampshire
ISOTEC PROJECT #801991

DATE:	16-Sep-15

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Catalyst (lbs)	34% H2O2 (lbs)	Cell Dimensions
E1-S1	7:40	8:10	30	100	320	14.0	420	20.5	1920	10' x 10'
E2-S2	8:10	8:36	26	100	320	16.2	420	20.5	1920	10' x 10'
E1-S2	8:38	9:03	25	100	320	16.8	420	20.5	1920	10' x 10'
E16-S15	9:06	9:21	15	50	160	14.0	210	10.25	960	5' x 10'
E16-S14	9:22	9:46	24	100	320	17.5	420	20.5	1920	10' x 10'
E16-S13	9:46	10:07	21	100	320	20.0	420	20.5	1920	10' x 10'
E16-S12	10:07	10:28	21	100	320	20.0	420	20.5	1920	10' x 10'
E16-S11	10:28	10:28	20	100	320	21.0	420	20.5	1920	10' x 10'
E16-S10	10:48	11:08	20	100	320	21.0	420	20.5	1920	10' x 10'
E16-S9	11:09	11:28	19	100	320	22.1	420	20.5	1920	10' x 10'
E16-S8	11:28	11:48	20	100	320	21.0	420	20.5	1920	10' x 10'
E16-S7	11:48	12:08	20	100	320	21.0	420	20.5	1920	10' x 10'
E16-S6	12:33	12:54	21	100	320	20.0	420	20.5	1920	10' x 10'
E16-S5	12:54	13:18	24	100	320	17.5	420	20.5	1920	10' x 10'
E16-S4	13:18	13:43	25	100	320	16.8	420	20.5	1920	10' x 10'
E16-S3	13:43	14:08	25	100	320	16.8	420	20.5	1920	10' x 10'
E1-S3	14:15	14:30	15	50	160	14.0	210	10.25	960	5' x 10'
E2-S3	14:30	14:54	24	100	320	17.5	420	20.5	1920	10' x 10'
E3-S3	14:54	15:19	25	100	320	16.8	420	20.5	1920	10' x 10'
E4-S3	15:20	15:50	30	100	320	14.0	420	20.5	1920	10' x 10'
E5-S3	15:50	16:20	30	100	320	14.0	420	20.5	1920	10' x 10'
DAY TOTAL/ AVERAGE				2000	6400		8400	410	38400	

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**17-Sep-15**		Client:	**Weston**		Personnel:	**Mike, Mark, Kevin, Bill L, Bill O, Cody, Dave**			
Project:	**KMC Site, Conway, NH**		Job Number:	**801991**		Weather:	**Sunny, 58-86**			
Personnel Names	Time		Mobilization To & From	Safety Meeting	Equipment Preparation	Sampling Wells &	Mixing Time	De-Con. Equipment	Data Entry	Other (Lunch)
	Start	Stop	Job Site			Analysis			Time	
Mike Temple	7:00 AM	7:45 PM	0.25	0.25	0.75		9.5	1.00	1.0	0.5
Mark Ratner	7:00 AM	6:45 PM	0.25	0.25	0.75	2.0	7.5	1.00		0.5
Kevin O'Neal	7:00 AM	7:45 PM	0.25	0.25	0.75	4.0	5.5	1.00	1.0	0.5
Bill Lang	7:00 AM	6:45 PM	0.25	0.25	0.75		9.5	1.0		0.5
Bill Oberloier	7:00 AM	6:45 PM	0.25	0.25	0.75		9.5	1.0		0.5
Dave Roe	7:00 AM	6:45 PM	0.25	0.25	0.75		9.5	1.0		0.5
Cody Shell	7:00 AM	6:45 PM	0.25	0.25	0.75		9.5	1.0		0.5
TOTAL HOURS =	11.25		TOTAL MIXING HOURS =			9.50				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**H2O2 Volume**		**Catalyst Volume**		**H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			E6-S3	100	E6-S3	320	E15-S8	50	E15-S8	160
Generator			E7-S3	100	E7-S3	320	E15-S9	50	E15-S9	160
Mixers			E8-S3	100	E8-S3	320	E15-S10	100	E15-S10	320
Equipment Set			E9-S3	100	E9-S3	320	E15-S11	100	E15-S11	320
Vehicle(s) utilized			E10-S3	100	E10-S3	320	E15-S12	100	E15-S12	320
Raw Materials Used			E11-S3	100	E11-S3	320	E15-S13	100	E15-S13	320
Powder Catalyst	445.9	lbs.	E12-S3	100	E12-S3	320	E14-S12	50	E14-S12	160
Liquid Catalyst	2175	Gallons	E13-S3	100	E13-S3	320	E14-S13	50	E14-S13	160
34% H2O2	4350	Gallons	E14-S3	100	E14-S3	320	E15-S14	100	E15-S14	320
Diluted H2O2	6960	Gallons	E15-S3	100	E15-S3	320	E14-S14	25	E14-S14	80
34% H2O2	41760	lbs.	E12-S1 (R)	50	E12-S1 (R)	160	E13-S2 (R)	100	E13-S2 (R)	320
			E12-S2 (R)	100	E12-S2 (R)	320	E14-S1 (R)	50	E14-S1 (R)	160
			E13-S1 (R)	50	E13-S1 (R)	160	E14-S2 (R)	100	E14-S2 (R)	320
			TOTAL INJECTION VOLUME =		9135					

Major Work Activities Performed:

Daily safety meeting. Equipment preparation, received 16 totes of hydrogen peroxide, soil mixing into 20 cells and re-mixing into 6 cells. Sampling of the down-gradient catch basin for iron and hydrogen peroxide levels. Samples collected from cells E13-S2 and E14-S1 came back above site criteria and were subsequently re-mixed. All other samples collected during previous days came back below site sampling criteria levels. Collected soil samples from 8 cells treated the previous day (E4-S3, E5-S3, E16-S14, E16-S11, E1-S2, E16-S6, E16-S9 and E16-S3). Samples were collected from 2 depth intervals (at approximately 11 and 13 ft bgs) at select cells to confirm adequate mixing occurred. Samples appeared to be fairly consistent with one another and looked visually well mixed. Similar to previous days, mixing proceeded very well with the DAB being able to push down through the saturated soil matrix with little to no resistance and bubbling within the treated areas could be seen throughout the day. Approximately 1-2 feet of swelling was observed within treated rows during soil mixing. Cells identified by Weston as having historical soil impacts (E13-S3 and E14-S3) were mixed longer than other treated cells.

Health and Safety Items Covered:

General site safety topics during the daily safety meeting between ISOTEC (Mike Temple, Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall, Allie Balter). Delivery truck driver on-site for chemical delivery.

Unforeseen Site Conditions:

List of Deliveries:

Received 16 totes of 34% hydrogen peroxide (~4,000 gallons or 38,400 lbs).

Other Comments (Work delays, inspections results, etc.):

Re-mixed cells E12-S1, E12-S2, E13-S1, E13-S2, E14-S1 and E14-S2.

TREATMENT PROGRAM - MIXING VOLUME SUMMARY
KMC Site, Conway, New Hampshire
ISOTEC PROJECT #801991

DATE:	17-Sep-15

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Catalyst (lbs)	34% H2O2 (lbs)	Cell Dimensions
E6-S3	7:58	8:22	24	100	320	17.5	420	20.5	1920	10' x 10'
E7-S3	8:22	8:48	26	100	320	16.2	420	20.5	1920	10' x 10'
E8-S3	8:51	9:20	29	100	320	14.5	420	20.5	1920	10' x 10'
E9-S3	9:21	9:47	26	100	320	16.2	420	20.5	1920	10' x 10'
E10-S3	9:48	10:17	29	100	320	14.5	420	20.5	1920	10' x 10'
E11-S3	10:18	10:42	24	100	320	17.5	420	20.5	1920	10' x 10'
E12-S3	10:43	11:06	23	100	320	18.3	420	20.5	1920	10' x 10'
E13-S3	11:07	11:37	30	100	320	14.0	420	20.5	1920	10' x 10'
E14-S3	11:37	12:06	29	100	320	14.5	420	20.5	1920	10' x 10'
E15-S3	12:33	12:59	26	100	320	16.2	420	20.5	1920	10' x 10'
E15-S8	13:02	13:14	12	50	160	17.5	210	10.25	960	5' x 10'
E15-S9	13:14	13:26	12	50	160	17.5	210	10.25	960	5' x 10'
E15-S10	13:27	13:50	23	100	320	18.3	420	20.5	1920	10' x 10'
E15-S11	13:50	14:11	21	100	320	20.0	420	20.5	1920	10' x 10'
E15-S12	14:11	14:37	26	100	320	16.2	420	20.5	1920	10' x 10'
E15-S13	14:37	14:59	22	100	320	19.1	420	20.5	1920	10' x 10'
E14-S12	14:59	15:11	12	50	160	17.5	210	10.25	960	5' x 10'
E14-S13	15:11	15:23	12	50	160	17.5	210	10.25	960	5' x 10'
E15-S14	15:23	15:50	27	100	320	15.6	420	20.5	1920	10' x 10'
E14-S14	15:50	15:58	8	25	80	13.1	105	5.125	480	5' x 5'
E12-S1 (Re-mix)	17:47	17:59	12	50	160	17.5	210	10.25	960	5' x 10'
E12-S2 (Re-mix)	17:24	17:47	23	100	320	18.3	420	20.5	1920	10' x 10'
E13-S1 (Re-mix)	17:14	17:24	10	50	160	21.0	210	10.25	960	5' x 10'
E13-S2 (Re-mix)	16:50	17:14	24	100	320	17.5	420	20.5	1920	10' x 10'
E14-S1 (Re-mix)	16:37	16:50	13	50	160	16.2	210	10.25	960	5' x 10'
E14-S2 (Re-mix)	16:06	16:37	31	100	320	13.5	420	20.5	1920	10' x 10'
DAY TOTAL/ AVERAGE				2175	6960		9135	445.9	41760	

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**18-Sep-15**		Client:	**Weston**		Personnel:	**Mike, Mark, Kevin, Bill L, Bill O, Cody, Dave**			
Project:	**KMC Site, Conway, NH**		Job Number:	**801991**		Weather:	**Sunny, 52-85**			
Personnel Names	Time		Mobilization To & From	Safety Meeting	Equipment Preparation	Sampling Wells &	Mixing Time	De-Con. Equipment	Data Entry	Other (Lunch)
	Start	Stop	Job Site			Analysis			Time	
Mike Temple	7:00 AM	6:00 PM	0.25	0.25	0.75		8.5	0.5	0.5	0.5
Mark Ratner	7:00 AM	5:30 PM	0.25	0.25	0.75	2.0	6.5	0.5		0.5
Kevin O'Neal	7:00 AM	6:00 PM	0.25	0.25	0.75	4.0	4.5	0.5	0.5	0.5
Bill Lang	7:00 AM	5:30 PM	0.25	0.25	0.75		8.5	0.5		0.5
Bill Oberloier	7:00 AM	5:30 PM	0.25	0.25	0.75		8.5	0.5		0.5
Dave Roe	7:00 AM	5:30 PM	0.25	0.25	0.75		8.5	0.5		0.5
Cody Shell	7:00 AM	5:30 PM	0.25	0.25	0.75		8.5	0.5		0.5
TOTAL HOURS =	10.00		TOTAL MIXING HOURS =			8.50				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**H2O2 Volume**		**Catalyst Volume**		**H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			E2-S5	50	E2-S5	160	E9-S5	50	E9-S5	160
Generator			E2-S4	100	E2-S4	320	E10-S5	50	E10-S5	160
Mixers			E3-S4	100	E3-S4	320	E11-S4	100	E11-S4	320
Equipment Set			E4-S4	100	E4-S4	320	E12-S4	100	E12-S4	320
Vehicle(s) utilized			E5-S4	100	E5-S4	320	E13-S4	100	E13-S4	320
Raw Materials Used			E6-S4	100	E6-S4	320	E14-S4	100	E14-S4	320
Powder Catalyst	379.3	lbs.	E7-S4	100	E7-S4	320	E15-S4	100	E15-S4	320
Liquid Catalyst	1850	Gallons	E8-S4	100	E8-S4	320	E3-S5	100	E3-S5	320
34% H2O2	3700	Gallons	E9-S4	100	E9-S4	320	E4-S5	100	E4-S5	320
Diluted H2O2	5920	Gallons	E10-S4	100	E10-S4	320	E5-S5	100	E5-S5	320
34% H2O2	35520	lbs.		0		0		0		0
				0		0		0		0
				0		0		0		0
			TOTAL INJECTION VOLUME =		7770					

Major Work Activities Performed:

Daily safety meeting. Equipment preparation, received 26 totes of hydrogen peroxide (returned 32 empty totes), soil mixing into 20 cells. Sampling of the down-gradient catch basin for iron and hydrogen peroxide levels. Each sample collected the previous day came back below site criteria. Collected soil samples from 10 cells treated the previous day (E14-S1, E14-S2, E10-S3, E13-S3, E14-S12, E14-S3, E15-S8, E15-S10, E15-S14 and E15-S3). Samples were collected from 2 depth intervals (at approximately 11 and 13 ft bgs) at select cells to confirm adequate mixing occurred. Samples appeared to be fairly consistent with one another and looked visually well mixed. Similar to previous days, mixing proceeded very well with the DAB being able to push down through the saturated soil matrix with little to no resistance and bubbling within the treated areas could be seen throughout the day. Approximately 1-2 feet of swelling was observed within treated rows during soil mixing. Cells identified by Weston as having historical soil impacts (E4-S4, E5-S4, E3-S5, E4-S5, E5-S5, E10-S4, E11-S4, E13-S4, E14-S4) were mixed longer than other treated cells.

Health and Safety Items Covered:

General site safety topics during the daily safety meeting between ISOTEC (Mike Temple, Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall, Allie Balter, Vinnie DelloRusso) and EPA (Darryl Luce). Delivery truck drivers on-site for chemical delivery.

Unforeseen Site Conditions:

List of Deliveries:

Received 26 totes of 34% hydrogen peroxide (~4,000 gallons or 62,400 lbs). Bathroom was serviced.

Other Comments (Work delays, inspections results, etc.):

TREATMENT PROGRAM - MIXING VOLUME SUMMARY
KMC Site, Conway, New Hampshire
ISOTEC PROJECT #801991

DATE:	18-Sep-15

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Catalyst (lbs)	34% H2O2 (lbs)	Cell Dimensions
E2-S5	7:56	8:06	10	50	160	21.0	210	10.25	960	5' x 10'
E2-S4	8:06	8:37	31	100	320	13.5	420	20.5	1920	10' x 10'
E3-S4	8:50	9:15	25	100	320	16.8	420	20.5	1920	10' x 10'
E4-S4	9:15	9:46	31	100	320	13.5	420	20.5	1920	10' x 10'
E5-S4	9:47	10:16	29	100	320	14.5	420	20.5	1920	10' x 10'
E6-S4	10:16	10:37	21	100	320	20.0	420	20.5	1920	10' x 10'
E7-S4	10:37	11:02	25	100	320	16.8	420	20.5	1920	10' x 10'
E8-S4	11:02	11:26	24	100	320	17.5	420	20.5	1920	10' x 10'
E9-S4	11:26	11:47	21	100	320	20.0	420	20.5	1920	10' x 10'
E10-S4	11:47	12:13	26	100	320	16.2	420	20.5	1920	10' x 10'
E9-S5	12:40	12:50	10	50	160	21.0	210	10.25	960	5' x 10'
E10-S5	12:50	13:01	11	50	160	19.1	210	10.25	960	5' x 10'
E11-S4	13:01	13:32	31	100	320	13.5	420	20.5	1920	10' x 10'
E12-S4	13:34	13:57	23	100	320	18.3	420	20.5	1920	10' x 10'
E13-S4	13:57	14:26	29	100	320	14.5	420	20.5	1920	10' x 10'
E14-S4	14:26	14:56	30	100	320	14.0	420	20.5	1920	10' x 10'
E15-S4	14:56	15:18	22	100	320	19.1	420	20.5	1920	10' x 10'
E3-S5	15:19	15:49	30	100	320	14.0	420	20.5	1920	10' x 10'
E4-S5	15:50	16:18	28	100	320	15.0	420	20.5	1920	10' x 10'
E5-S5	16:18	16:47	29	100	320	14.5	420	20.5	1920	10' x 10'
DAY TOTAL/ AVERAGE				1850	5920		7770	379.3	35520	

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**19-Sep-15**		Client:	**Weston**		Personnel:	**Mike, Mark, Kevin, Bill L, Bill O, Cody, Dave**			
Project:	**KMC Site, Conway, NH**		Job Number:	**801991**		Weather:	**Sunny, 55-85**			
Personnel Names	Time		Mobilization To & From Job Site	Safety Meeting	Equipment Preparation	Sampling Wells & Analysis	Mixing Time	De-Con. Equipment	Data Entry Time	Other (Lunch)
	Start	Stop								
Mike Temple	7:30 AM	1:00 PM	0.25	0.25	0.75	1.0	2.5	0.5	0.5	0.5
Mark Ratner	7:30 AM	1:00 PM	0.25	0.25	0.75	1.0	2.5	0.5		
Kevin O'Neal	7:30 AM	1:00 PM	0.25	0.25	0.75	1.0	2.5	0.5		
Bill Lang	7:30 AM	1:00 PM	0.25	0.25	0.75		4.25	0.5		0.5
Bill Oberloier	7:30 AM	1:00 PM	0.25	0.25	0.75		4.25	0.5		0.5
Dave Roe	7:30 AM	1:00 PM	0.25	0.25	0.75		4.25	0.5		0.5
Cody Shell	7:30 AM	1:00 PM	0.25	0.25	0.75		4.25	0.5		0.5
TOTAL HOURS =	5.50		TOTAL MIXING HOURS =			4.25				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**H2O2 Volume**		**Catalyst Volume**		**H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			E6-S5	100	E6-S5	320		0		0
Generator			E7-S5	100	E7-S5	320		0		0
Mixers			E8-S5	100	E8-S5	320		0		0
Equipment Set			E4-S6	50	E4-S6	160		0		0
Vehicle(s) utilized			E5-S6	50	E5-S6	160		0		0
Raw Materials Used			E6-S6	50	E6-S6	160		0		0
Powder Catalyst	189.6	lbs.	E13-S5	100	E13-S5	320		0		0
Liquid Catalyst	925	Gallons	E12-S5	25	E12-S5	80		0		0
34% H2O2	1850	Gallons	E14-S5	100	E14-S5	320		0		0
Diluted H2O2	2960	Gallons	E14-S6	50	E14-S6	160		0		0
34% H2O2	17760	lbs.	E15-S5	100	E15-S5	320		0		0
			E15-S6	100	E15-S6	320		0		0
				0		0		0		0
			TOTAL INJECTION VOLUME =			3885				

Major Work Activities Performed:

Daily safety meeting. Equipment preparation, soil mixing into 12 cells. Sampling of the down-gradient catch basin for iron and hydrogen peroxide levels. Each sample collected the previous day came back below site criteria. Collected soil samples from 12 cells treated the previous day (E2-S4, E3-S5, E5-S4, E14-S4, E4-S5, E15-S4, E5-S5, E7-S4, E10-S4, E11-S4, E13-S4, and E4-S4). Samples were collected from 1 depth interval (at approximately 13 ft bgs) at select cells to confirm adequate mixing occurred.

Health and Safety Items Covered:

General site safety topics during the daily safety meeting between ISOTEC (Mike Temple, Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall, Allie Balter).

Unforeseen Site Conditions:

List of Deliveries:

Other Comments (Work delays, inspections results, etc.):

TREATMENT PROGRAM - MIXING VOLUME SUMMARY
KMC Site, Conway, New Hampshire
ISOTEC PROJECT #801991

DATE:	19-Sep-15

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Catalyst (lbs)	34% H2O2 (lbs)	Cell Dimensions
E6-S5	8:45	9:15	30	100	320	14.0	420	20.5	1920	10' x 10'
E7-S5	9:25	9:45	20	100	320	21.0	420	20.5	1920	10' x 10'
E8-S5	9:45	10:15	30	100	320	14.0	420	20.5	1920	10' x 10'
E4-S6	8:19	8:32	13	50	160	16.2	210	10.25	960	5' x 10'
E5-S6	8:32	8:45	13	50	160	16.2	210	10.25	960	5' x 10'
E6-S6	9:15	9:25	10	50	160	21.0	210	10.25	960	5' x 10'
E13-S5	10:25	10:47	22	100	320	19.1	420	20.5	1920	10' x 10'
E12-S5	10:15	10:25	10	25	80	10.5	105	5.125	480	5' x 5'
E14-S5	10:47	11:10	23	100	320	18.3	420	20.5	1920	10' x 10'
E14-S6	11:10	11:20	10	50	160	21.0	210	10.25	960	5' x 10'
E15-S5	11:20	11:40	20	100	320	21.0	420	20.5	1920	10' x 10'
E15-S6	11:40	12:05	25	100	320	16.8	420	20.5	1920	10' x 10'
DAY TOTAL/ AVERAGE				925	2960		3885	189.6	17760	

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**21-Sep-15**		Client:	**Weston**		Personnel:	**Kevin, Mark, Bill L, Bill O, Cody, Dave**			
Project:	**KMC Site, Conway, NH**		Job Number:	**801991**		Weather:	**Overcast, 45-71**			
Personnel Names	Time		Mobilization To & From Job Site	Safety Meeting	Equipment Preparation	Sampling Wells & Analysis	Mixing Time	De-Con. Equipment	Data Entry Time	Other (Lunch)
	Start	Stop								
Kevin O'Neal	7:00 AM	6:00 PM		0.25	8.25	1.00	0.50	0.50	0.50	0.50
Mark Ratner	7:00 AM	6:00 PM		0.25	8.25	1.00	0.50	0.50		0.50
Bill Lang	7:00 AM	2:00 PM		0.25	4.75	1.00	0.50	0.50		0.50
Bill Oberloier	7:00 AM	6:00 PM		0.25	8.25	1.00	0.50	0.50		0.50
Dave Roe	7:00 AM	2:00 PM		0.25	4.75	1.00	0.50	0.50		0.50
Cody Shell	7:00 AM	2:00 PM		0.25	4.75	1.00	0.50	0.50		0.50
TOTAL HOURS =	11.00		TOTAL MIXING HOURS =			0.50				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**17% H2O2 Volume**		**Catalyst Volume**		**17% H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			E13-S4	100	E13-S4	320	0	0	0	0
Generator			0	0	0	0	0	0	0	0
Mixers			0	0	0	0	0	0	0	0
Equipment Set			0	0	0	0	0	0	0	0
Vehicle(s) utilized			0	0	0	0	0	0	0	0
Raw Materials Used			0	0	0	0	0	0	0	0
Powder Catalyst	20.5	lbs.	0	0	0	0	0	0	0	0
Liquid Catalyst	100	Gallons	0	0	0	0	0	0	0	0
34% H2O2	200	Gallons	0	0	0	0	0	0	0	0
Diluted H2O2	320	Gallons	0	0	0	0	0	0	0	0
34% H2O2	1902	lbs.								
			TOTAL INJECTION VOLUME =			420				

Major Work Activities Performed:

Daily safety meeting. Equipment preparation, re-mixing into 1 cell (E13-S4). Sampling of the down-gradient catch basin for iron and hydrogen peroxide levels. Collected a total of 6 soil samples from 4 cells treated on Saturday (E5-S6, E8-S5, E13-S5 and E15-S6), 1 cell treated today 9/21 (E13-S4) and a second sample of E8-S5 collected at ~17:00 to replace the damaged sample sent to the lab earlier in the day. Samples were collected from 1 depth interval (at approximately 13 ft bgs) at select cells to confirm adequate mixing occurred. Removed portions of the perimeter fence and silt fence to allow the bulldozer to push in bermed (clean/ dry overburden soils) soils back into the excavation area so that the eastern road was opened up again. Re-installed silt fence and preimeter fence.

Health and Safety Items Covered:

General site safety topics during the daily safety meeting between ISOTEC (Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall).

Unforeseen Site Conditions:

List of Deliveries:

Bathroom serviced.

Other Comments (Work delays, inspections results, etc.):

TREATMENT PROGRAM - MIXING VOLUME SUMMARY
KMC Site, Conway, New Hampshire
ISOTEC PROJECT #801991

DATE:	21-Sep-15

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 (17%) Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Comments
E13-S4	12:38	13:12	34	100	320	12.35	420	
DAY TOTAL/ AVERAGE				100	320		420	

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**22-Sep-15**		Client:	**Weston**		Personnel:	**Kevin, Mark, Bill L, Bill O, Cody, Dave**			
Project:	**KMC Site, Conway, NH**		Job Number:	**801991**		Weather:	**Overcast, 45-70**			
Personnel Names	Time		Mobilization To & From Job Site	Safety Meeting	Equipment Preparation	Sampling Wells & Analysis	Mixing Time	De-Con. Equipment	Data Entry Time	Other (Lunch)
	Start	Stop								
Kevin O'Neal	7:00 AM	6:15 PM		0.25	9.75			0.50	0.25	0.50
Mark Ratner	7:00 AM	6:15 PM		0.25	9.75			0.50		0.50
Bill Lang	7:00 AM	6:15 PM		0.25	9.75			0.50		0.50
Bill Oberloier	7:00 AM	6:15 PM		0.25	9.75			0.50		0.50
Dave Roe	7:00 AM	6:15 PM		0.25	9.75			0.50		0.50
Cody Shell	7:00 AM	6:15 PM		0.25	9.75			0.50		0.50
TOTAL HOURS =	11.00		TOTAL MIXING HOURS =			0.00				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**17% H2O2 Volume**		**Catalyst Volume**		**17% H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			0	0	0	0	0	0	0	0
Generator			0	0	0	0	0	0	0	0
Mixers			0	0	0	0	0	0	0	0
Equipment Set			0	0	0	0	0	0	0	0
Vehicle(s) utilized			0	0	0	0	0	0	0	0
Raw Materials Used			0	0	0	0	0	0	0	0
Powder Catalyst		lbs.	0	0	0	0	0	0	0	0
Liquid Catalyst		Gallons	0	0	0	0	0	0	0	0
34% H2O2		Gallons	0	0	0	0	0	0	0	0
Diluted H2O2		Gallons	0	0	0	0	0	0	0	0
34% H2O2		lbs.								
			TOTAL INJECTION VOLUME =		0					

Major Work Activities Performed:

Daily safety meeting. Decon equipment, installed the rest of the snow fence, cleaned up trash around the site, loaded all of Lang's equipment and machinery for demobilization tomorrow morning (9/23).

Health and Safety Items Covered:

General site safety topics during the daily safety meeting between ISOTEC (Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall).

Unforeseen Site Conditions:

List of Deliveries:

None

Other Comments (Work delays, inspections results, etc.):

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**23-Sep-15**		Client:	**Weston**		Personnel:	**Kevin, Mark, Bill L, Bill O, Cody, Dave**			
Project:	**KMC Site, Conway, NH**		Job Number:	**801991**		Weather:	**Overcast, 45-70**			
Personnel Names	Time		Mobilization To & From Job Site	Safety Meeting	Equipment Preparation	Sampling Wells & Analysis	Mixing Time	De-Con. Equipment	Data Entry Time	Other (Lunch)
	Start	Stop								
Kevin O'Neal	7:00 AM	1:30 PM		0.25	5.25			0.50		0.50
Mark Ratner	7:00 AM	1:30 PM		0.25	5.25			0.50		0.50
Bill Lang	7:00 AM	9:00 AM		0.25	1.25			0.50		
Bill Oberloier	7:00 AM	9:00 AM		0.25	1.25			0.50		
Dave Roe	7:00 AM	9:00 AM		0.25	1.25			0.50		
Cody Shell	7:00 AM	9:00 AM		0.25	1.25			0.50		
TOTAL HOURS =	6.50		TOTAL MIXING HOURS =			0.00				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**17% H2O2 Volume**		**Catalyst Volume**		**17% H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			0	0	0	0	0	0	0	0
Generator			0	0	0	0	0	0	0	0
Mixers			0	0	0	0	0	0	0	0
Equipment Set			0	0	0	0	0	0	0	0
Vehicle(s) utilized			0	0	0	0	0	0	0	0
Raw Materials Used			0	0	0	0	0	0	0	0
Powder Catalyst		lbs.	0	0	0	0	0	0	0	0
Liquid Catalyst		Gallons	0	0	0	0	0	0	0	0
34% H2O2		Gallons	0	0	0	0	0	0	0	0
Diluted H2O2		Gallons	0	0	0	0	0	0	0	0
34% H2O2		lbs.								
			TOTAL INJECTION VOLUME =		0					

Major Work Activities Performed:

Daily safety meeting. Decon equipment, installed the rest of the snow fence, cleaned up trash around the site, loaded all of Lang's equipment and machinery for demobilization. Packed remaining equipment in Box truck. Loaded empty totes and 6 remaining totes of peroxide on truck.

Health and Safety Items Covered:

General site safety topics during the daily safety meeting between ISOTEC (Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall).

Unforeseen Site Conditions:

List of Deliveries:

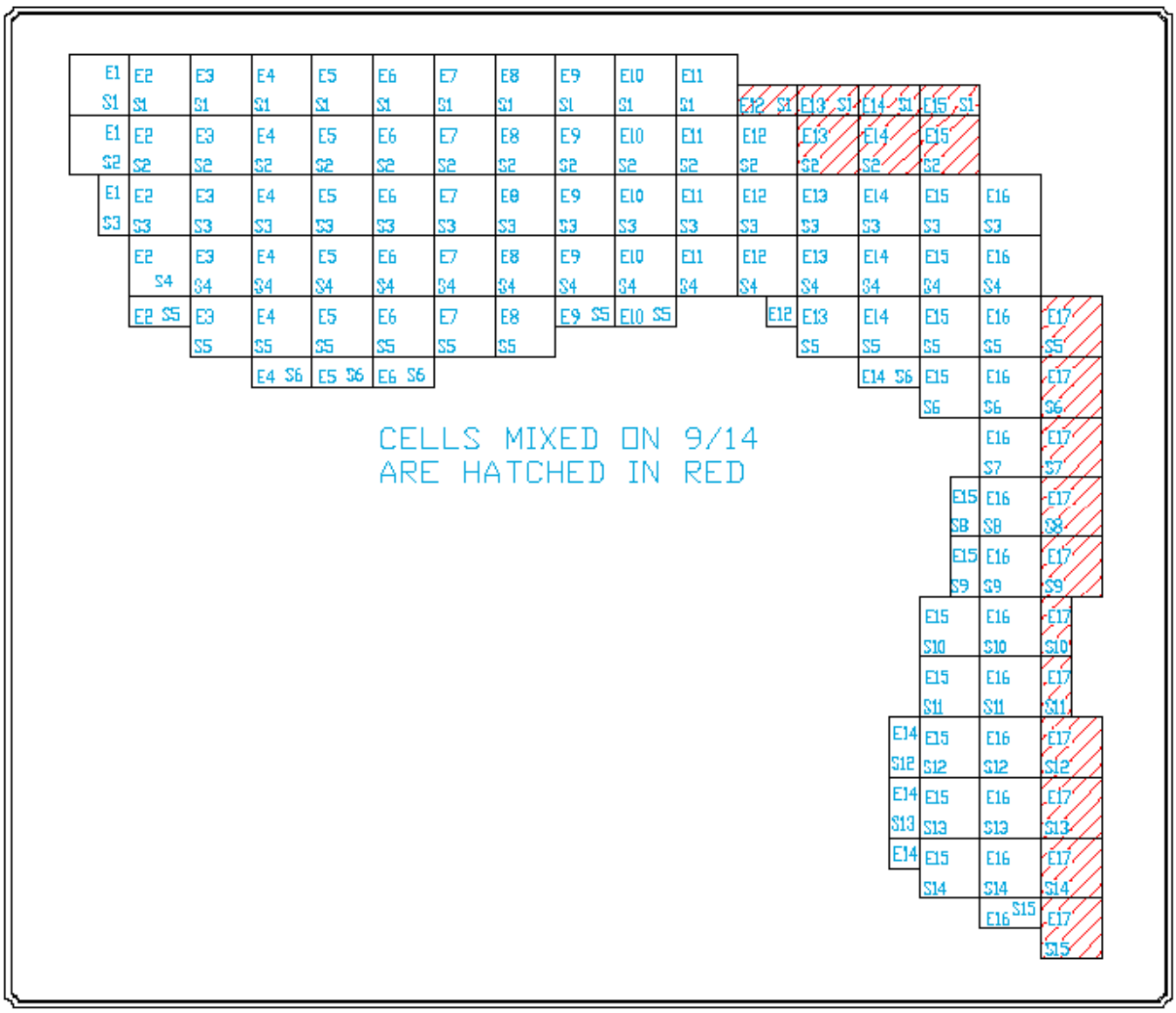
Empty tote and extra peroxide pickup.

Other Comments (Work delays, inspections results, etc.):

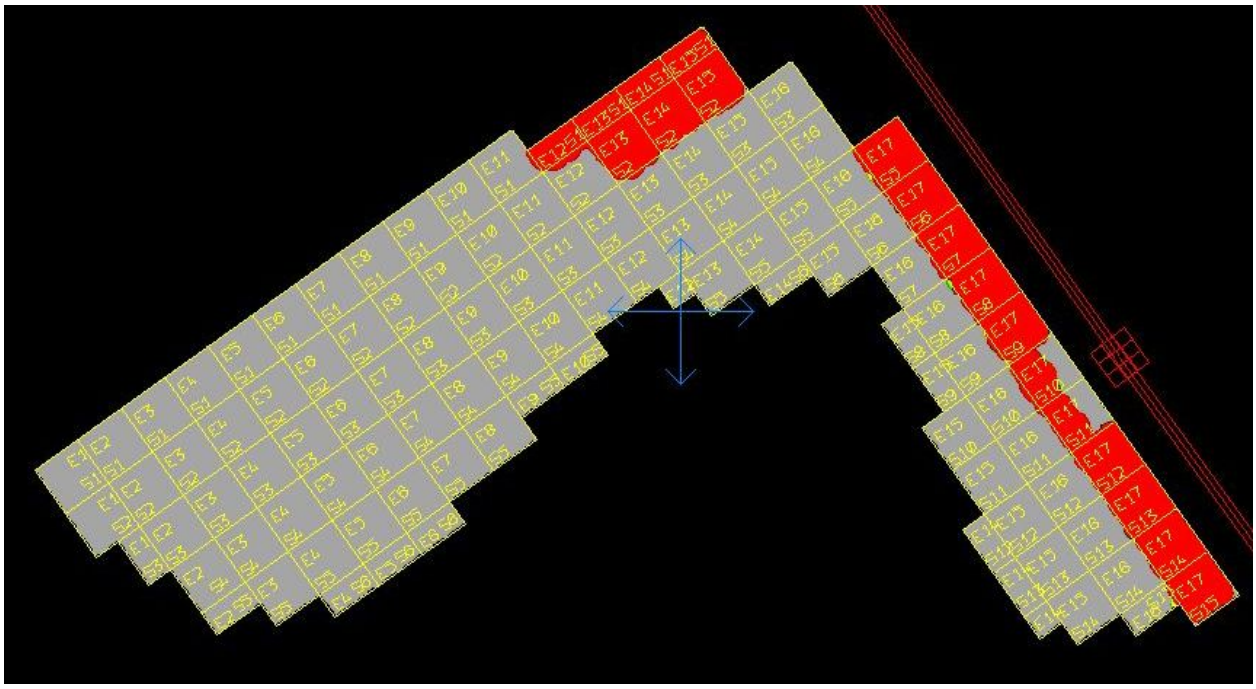
Lang Tool Co.

2520 Glidden Rd.
Beaverton, MI 48612
www.langtool.com
bill@langtool.com
Phone (989) 435-9864
Fax (989) 435-4311

September 14, 2015



Areas mixed to 447 MSL area colored green by the Dual Axis Blender on board computer.
Areas mixed below 447 are colored red.



Metering Plunge Point Coordinates

Easting	Northing	Elevation
,1126162.134898	,537277.287358	,446.898010
,1126159.545314	,537281.615606	,446.858002
,1126157.968069	,537274.354449	,446.641083
,1126154.704453	,537278.718240	,446.833954
,1126156.505243	,537285.795285	,446.842529
,1126152.843938	,537289.709883	,446.611755
,1126152.191434	,537283.365100	,446.935455
,1126149.124242	,537287.292540	,446.671844
,1126150.026321	,537294.087929	,446.742798
,1126146.732078	,537291.153762	,446.753998
,1126147.477845	,537297.859040	,446.776306
,1126143.604348	,537295.030919	,446.864258
,1126140.661822	,537299.773595	,446.901459
,1126144.985707	,537302.610048	,446.436523
,1126137.751252	,537303.890592	,446.919189
,1126141.817278	,537306.263669	,446.488464
,1126134.900115	,537307.558927	,446.808807
,1126131.911773	,537311.807611	,446.723541
,1126128.949903	,537315.874084	,446.859802
,1126126.273698	,537319.546096	,446.928223
,1126123.612128	,537323.419553	,446.910583
,1126127.299855	,537326.160409	,446.436951
,1126120.234609	,537328.111493	,446.699524
,1126124.372028	,537330.368276	,446.747986
,1126117.692199	,537332.203008	,446.690247

Easting	Northing	Elevation
,1126114.648772	,537336.248685	,446.806885
,1126121.574710	,537334.337911	,446.884399
,1126118.342515	,537338.552076	,446.720398
,1126111.798995	,537340.063987	,446.636902
,1126116.026349	,537342.180837	,446.535126
,1126108.820560	,537344.216661	,446.795471
,1126112.932518	,537346.720163	,446.751251
,1126105.935026	,537347.955152	,447.425629
,1126106.226817	,537347.329684	,446.544556
,1126109.842525	,537350.994385	,446.571014
,1126102.928404	,537352.040450	,446.834381
,1126106.576251	,537355.196580	,446.863708
,1126100.326705	,537355.806579	,446.730164
,1126104.737243	,537358.517858	,446.767670
,1126096.786195	,537360.377118	,446.878021
,1126101.127601	,537363.430043	,446.541992
,1126064.488410	,537379.919719	,446.639496
,1126060.562640	,537377.286796	,446.674072
,1126056.730030	,537374.168391	,446.732910
,1126051.916047	,537371.327846	,447.028076
,1126053.015170	,537371.606342	,446.799500
,1126067.781642	,537375.717887	,446.623535
,1126063.756478	,537372.562217	,446.421143
,1126070.056260	,537372.515956	,446.809082
,1126066.010679	,537368.841033	,446.586456

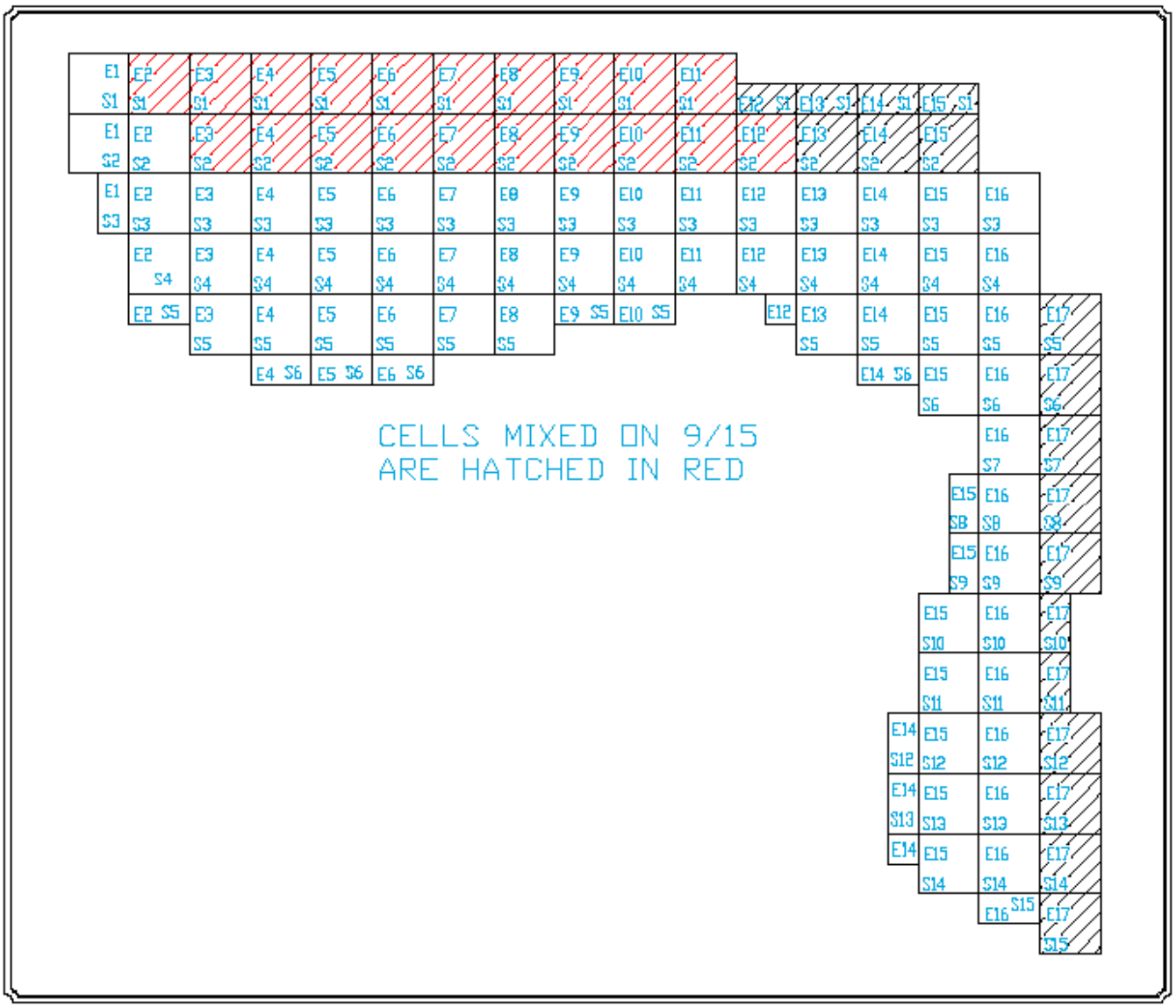
Easting	Northing	Elevation
,1126059.321531	537370.082641	446.883911
,1126054.977889	537367.587081	446.794006
,1126062.239631	537365.760360	446.634705
,1126058.531968	537363.113280	446.596161
,1126048.019169	537368.469951	447.138000
,1126043.617692	537365.518491	447.105988
,1126043.557357	537365.219608	446.688446
,1126039.936085	537362.765374	446.695435
,1126036.074702	537359.595636	446.778839
,1126050.736428	537364.275428	446.420746
,1126047.497759	537361.193349	446.605652
,1126054.142539	537360.079404	446.896606
,1126049.908060	537357.443822	446.768311

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17
H2O S1	122	122	122	122	122	122	122	122	122	122	122	61	61	61	61	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	951	951	951	951	0	0
Catalyst S1	80	80	80	80	80	80	80	80	80	80	80	40	40	40	40	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	160	160	160	160	0	0
H2O S2	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0	0
Catalyst S1	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0	0
H2O S3	61	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	951	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	40	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	0
Solution Gal	160	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S4	0	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	0	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	0	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	0
Solution Gal	0	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S5	0	61	122	122	122	122	122	122	61	61	0	31	122	122	122	122	122
PerOX S1	0	951	1,902	1,902	1,902	1,902	1,902	1,902	951	951	0	476	1,902	1,902	1,902	1,902	1,902
Catalyst S1	0	40	80	80	80	80	80	80	40	40	0	20	80	80	80	80	80
Solution Gal	0	160	320	320	320	320	320	320	160	160	0	80	320	320	320	320	320
H2O S6	0	0	0	61	61	61	0	0	0	0	0	0	0	61	122	122	122
PerOX S1	0	0	0	951	951	951	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	40	40	40	0	0	0	0	0	0	0	40	80	80	80
Solution Gal	0	0	0	160	160	160	0	0	0	0	0	0	0	160	320	320	320
H2O S7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	80
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320
H2O S8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	80	80
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	80	80
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	61
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	80	40
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	160
H2O S11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	161
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	80	40
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	160
H2O S12	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	161
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	40	80	80	160
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	160
H2O S13	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	161
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	40	80	80	160
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	160
H2O S14	0	0	0	0	0	0	0	0	0	0	0	0	0	31	122	122	161
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	476	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	20	80	80	160
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	80	320	320	160
H2O S15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	161
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	160
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	160

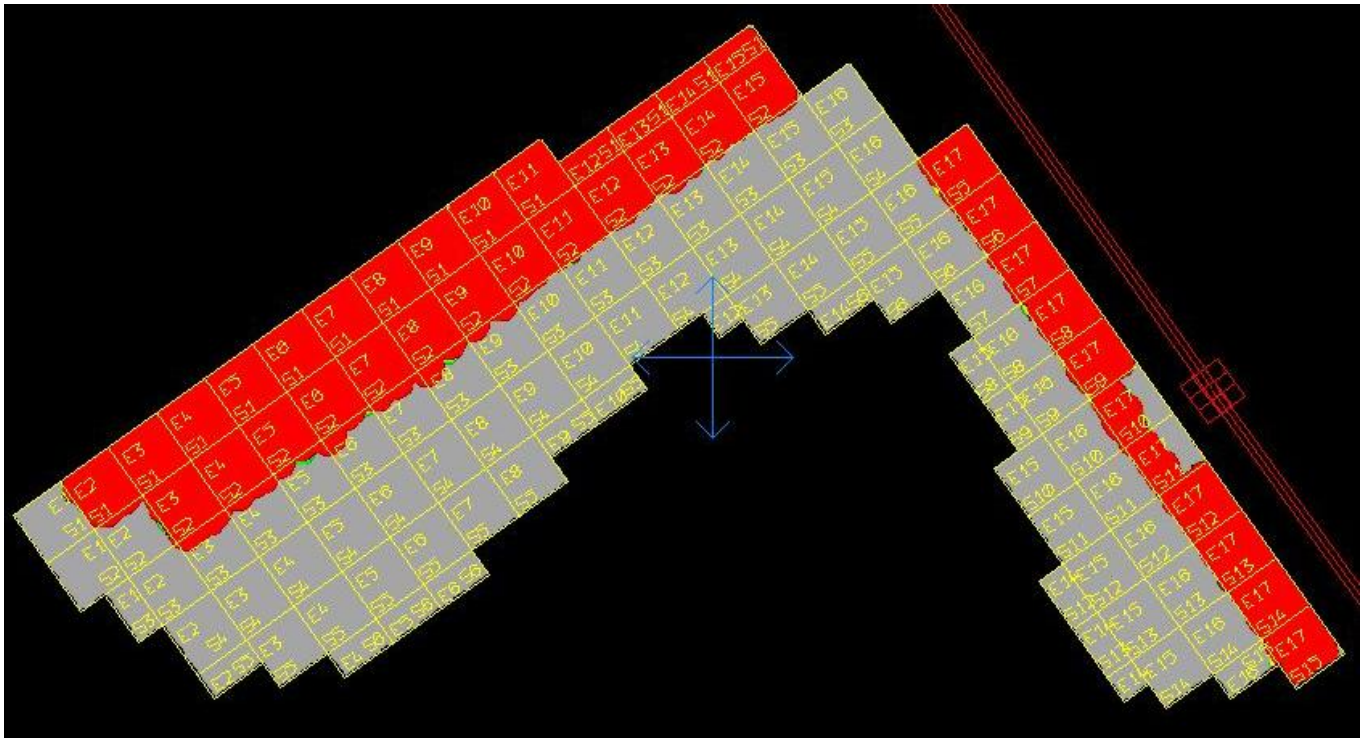
Lang Tool Co.

2520 Glidden Rd.
Beaverton, MI 48612
www.langtool.com
bill@langtool.com
Phone (989) 435-9864
Fax (989) 435-4311

September 14, 2015



Areas mixed to 447 MSL area colored green by the Dual Axis Blender on board computer.
Areas mixed below 447 are colored red.



Metering Plunge Point Coordinates

Easting	Northing	Elevation
1126043.250890	537346.311765	461.286591
1126043.389012	537358.278842	446.754944
1126039.222311	537355.097293	446.721771
1126045.548803	537354.564544	446.823944
1126041.739738	537351.615182	446.769196
1126029.091333	537360.903556	446.764404
1126024.642492	537357.591424	446.850861
1126032.128951	537357.027089	446.460388
1126027.338115	537353.387456	446.748718
1126021.510724	537354.802680	446.277100
1126016.576745	537352.037043	446.867920
1126023.893361	537350.925840	446.677490
1126019.923680	537348.210967	446.721283
1126034.703235	537352.778020	446.854614
1126030.996995	537349.511021	446.758942
1126037.375158	537348.664149	446.807159
1126034.221872	537345.707502	446.958038
1126026.626031	537347.281237	446.855957
1126022.188884	537343.885219	446.796051
1126029.886146	537343.016704	446.796173
1126025.824594	537340.084376	446.643433
1126013.449643	537349.807322	446.533966
1126013.392785	537349.693029	446.517059

Easting	Northing	Elevation
1126008.899213	537346.016748	446.913208
1126015.870389	537345.548484	446.549866
1126012.090055	537341.224875	446.520477
1126019.514509	537340.862107	446.315094
1126017.825430	537340.488948	446.518311
1126014.058767	537337.742540	446.380157
1126014.089530	537337.725566	446.337219
1126022.065301	537336.631440	446.529144
1126022.150224	537336.664849	446.537811
1126017.420561	537333.638515	446.721191
1126004.549705	537342.672944	446.764618
1125999.459460	537339.432311	446.974243
1125999.560476	537339.429561	446.828217
1126004.507510	537335.271758	446.807159
1126007.825858	537338.344327	446.644043
1126011.787391	537335.042340	446.660339
1126006.013815	537331.234479	445.944763
1126009.813491	537326.319245	446.704285
1126008.877824	537327.459840	446.813171
1126014.806735	537330.729444	446.740540
1125995.773250	537336.815889	446.838043
1125995.793850	537336.792188	446.761475
1125991.021234	537333.292768	446.772614

Easting	Northing	Elevation
,1125995.985487	537329.448629	446.733826
,1125997.871528	537333.057641	446.755371
,1125998.300047	537333.028882	446.702271
,1126002.547380	537327.787172	446.914612
,1125998.751970	537325.020444	446.746674
,1126005.099736	537324.061959	446.840637
,1126000.809607	537320.682561	446.716248
,1125989.209850	537331.101171	446.845245
,1125989.177356	537331.046746	446.794708
,1125983.944743	537327.589219	446.880646
,1125988.143521	537323.512597	446.860931
,1125991.303540	537327.246579	446.196838
,1125993.542344	537322.015287	446.337372
,1125990.060233	537319.592767	446.393890
,1125992.584316	537316.583909	446.762512
,1125996.192106	537318.743062	446.425507
,1125979.878312	537324.279195	446.758789
,1125976.222097	537322.004308	446.782959
,1125984.105041	537322.137267	446.484009
,1125978.960891	537317.618423	446.772888
,1125986.385003	537316.528476	446.699219
,1125981.164540	537313.978450	446.751007
,1125988.799207	537312.631677	446.620697
,1125983.539357	537311.822665	446.738922
,1125970.870427	537318.451974	446.837494
,1125968.302335	537316.764249	446.797455
,1125974.995397	537315.008149	446.869690
,1125974.956319	537314.982307	446.876251
,1125971.721234	537312.827853	446.479248
,1125978.560556	537310.846746	446.625092
,1125981.166433	537306.233590	446.679596
,1125977.188951	537304.463718	446.687103
,1125974.747728	537307.773671	446.603668
,1125966.139536	537313.950441	446.729370
,1125960.975841	537310.528455	446.706665
,1125963.197609	537306.987849	446.915253
,1125967.157520	537308.949063	446.614014
,1125970.523973	537305.496608	446.888641
,1125966.329964	537301.104564	446.767395
,1125973.389704	537300.320838	446.606110
,1125969.671035	537297.085120	446.868195
,1125958.371279	537309.207120	446.634460
,1125953.203267	537305.294505	446.878387
,1125959.086132	537303.326339	446.840454
,1125959.087921	537303.293272	446.841217
,1125955.656343	537301.339065	446.762756

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17
H2O S1	122	122	122	122	122	122	122	122	122	122	122	61	61	61	61	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	951	951	951	951	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	50	50	50	50	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	160	160	160	160	0	0
H2O S2	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	100	50	50	50	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0	0
H2O S3	61	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	951	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	160	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S4	0	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	0	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	0	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S5	0	61	122	122	122	122	122	122	61	61	0	31	122	122	122	122	122
PerOX S1	0	951	1,902	1,902	1,902	1,902	1,902	1,902	951	951	0	476	1,902	1,902	1,902	1,902	1,902
Catalyst S1	0	50	100	100	100	100	100	100	50	50	0	25	100	100	100	100	100
Solution Gal	0	160	320	320	320	320	320	320	160	160	0	80	320	320	320	320	320
H2O S6	0	0	0	61	61	61	0	0	0	0	0	0	0	61	122	122	122
PerOX S1	0	0	0	951	951	951	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	50	50	50	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	160	160	160	0	0	0	0	0	0	0	160	320	320	320
H2O S7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320
H2O S8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	61
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	160
H2O S11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	320
H2O S12	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	320
H2O S13	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	320
H2O S14	0	0	0	0	0	0	0	0	0	0	0	0	0	31	122	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	476	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	25	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	80	320	320	320
H2O S15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320

Lang Tool Co.

2520 Glidden Rd.
Beaverton, MI 48612
www.langtool.com
bill@langtool.com
Phone (989) 435-9864
Fax (989) 435-4311

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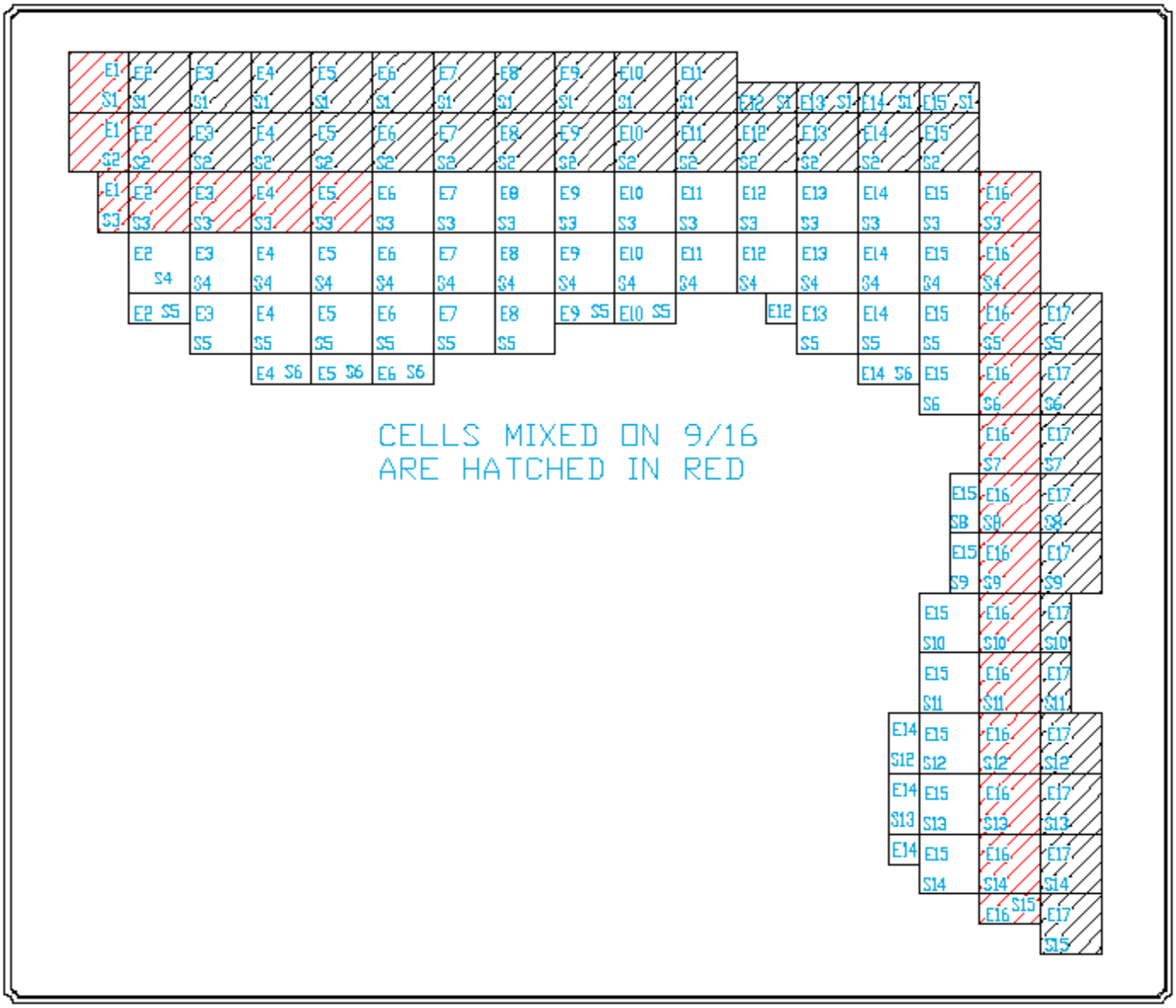
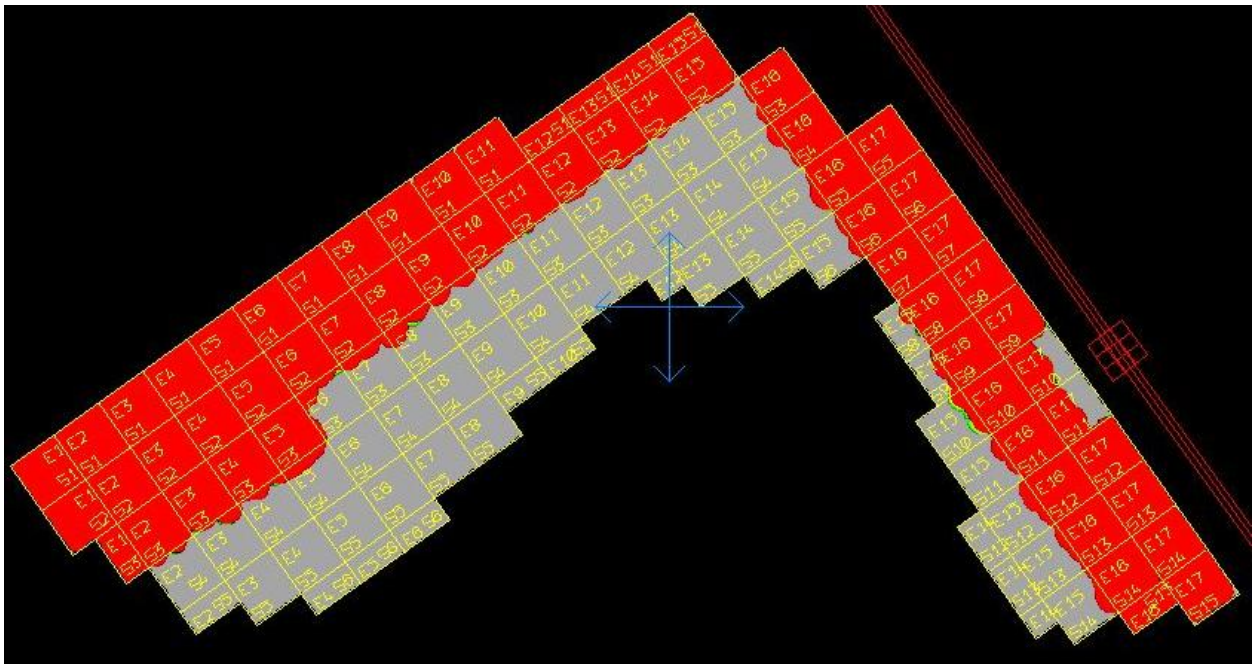


Areas mixed to 447 MSL area colored green by the Dual Axis Blender on board computer.
Areas mixed below 447 are colored red.



Metering Plunge Point Coordinates

Easting	Northing	Elevation
,1125947.925972	,537301.711670	,446.840698
,1125944.214240	,537299.277020	,446.730560
,1125947.070352	,537294.900431	,446.694885
,1125950.480647	,537297.975043	,446.831970
,1125961.586507	,537299.335799	,446.610016
,1125958.596284	,537296.627694	,446.757996
,1125964.493183	,537295.625432	,446.596954
,1125960.660005	,537293.411929	,446.829163
,1125949.783607	,537291.732772	,446.614929
,1125954.662099	,537294.061311	,446.878113
,1125956.151915	,537290.691020	,446.681702
,1125952.701023	,537287.384375	,446.697571
,1126151.259711	,537276.114547	,446.736511
,1126146.577512	,537272.903703	,446.667694
,1126148.026876	,537280.376673	,446.808960
,1126145.169667	,537283.473888	,446.793884
,1126143.803519	,537277.380387	,446.744812
,1126141.392410	,537281.088514	,446.606506
,1126141.443616	,537288.642828	,446.689270
,1126139.260820	,537291.354856	,446.745239
,1126134.709050	,537289.188242	,446.907867
,1126137.751180	,537285.828235	,446.429932
,1126135.945264	,537297.223984	,446.618225
,1126133.440076	,537300.348807	,446.612976
,1126129.754453	,537297.125644	,446.831451

Easting	Northing	Elevation
,1126132.397588	,537293.985722	,446.270660
,1126132.171434	,537294.009320	,446.196075
,1126131.001744	,537305.152752	,446.623047
,1126128.382154	,537306.954606	,446.180237
,1126127.162080	,537308.556152	,446.749054
,1126123.836499	,537305.144890	,446.364990
,1126127.056848	,537301.386581	,446.045898
,1126124.666274	,537313.231607	,446.149323
,1126121.604488	,537316.336497	,446.667419
,1126118.450748	,537313.782224	,446.739716
,1126120.414396	,537309.966304	,446.505280
,1126118.398864	,537320.539434	,446.485565
,1126115.271728	,537325.025945	,446.861481
,1126115.631368	,537316.466897	,446.277283
,1126111.533260	,537321.326680	,446.699646
,1126113.192124	,537329.621987	,446.724457
,1126110.557360	,537333.413316	,446.825104
,1126106.265173	,537329.212709	,446.959290
,1126109.170812	,537326.406163	,445.277222
,1126108.259677	,537337.482698	,446.678741
,1126105.021173	,537340.868411	,446.772552
,1126100.686392	,537337.789311	,446.529785
,1126103.875829	,537334.573896	,446.627228
,1126101.322055	,537344.828012	,446.348267
,1126098.820283	,537348.396174	,446.770172

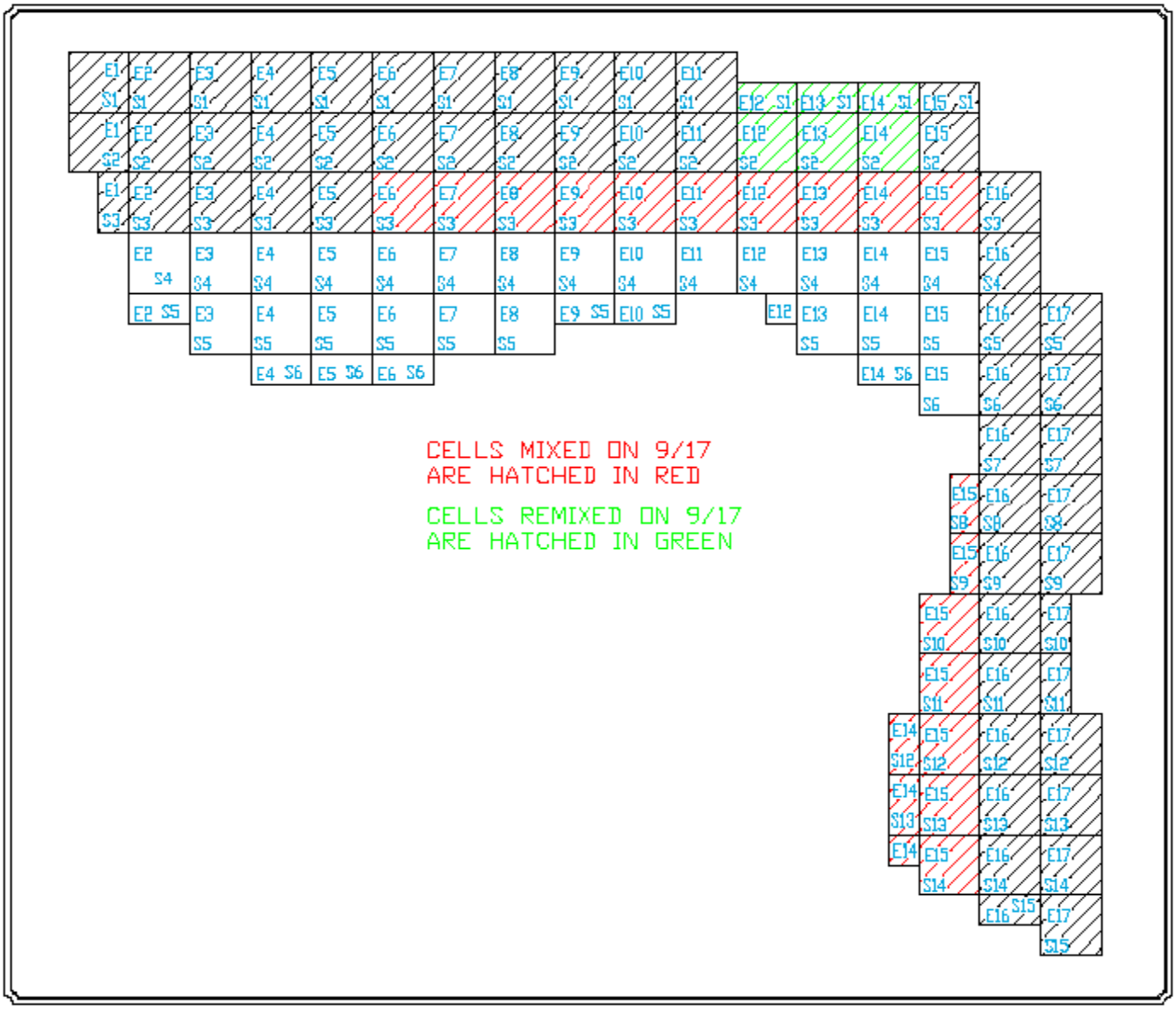
Easting	Northing	Elevation
,1126095.131422	537345.542253	446.850342
,1126097.671560	537342.825259	446.000580
,1126095.279996	537352.705962	446.581665
,1126092.246862	537356.472196	446.459869
,1126089.267278	537353.614669	446.352448
,1126091.537534	537350.585673	446.631165
,1126089.700055	537361.433456	446.488068
,1126087.122632	537365.618266	446.824371
,1126083.306737	537362.136785	446.629395
,1126086.041455	537358.757434	446.575195
,1126081.529836	537373.224044	446.774963
,1126083.818246	537369.008826	446.551025
,1126077.884751	537370.002078	446.689758
,1126079.994952	537365.332328	446.707489
,1125959.782376	537287.140108	446.847229
,1125962.321273	537282.046743	446.810791
,1125964.225766	537290.492781	446.438843
,1125967.541021	537291.737822	446.718201
,1125967.561818	537291.688661	446.686218
,1125966.414113	537285.886470	446.487305
,1125970.764615	537288.914023	446.533234
,1125972.159703	537296.384765	446.748199
,1125975.809777	537298.495183	446.709106

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17
H2O S1	122	122	122	122	122	122	122	122	122	122	122	61	61	61	61	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	951	951	951	951	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	50	50	50	50	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	160	160	160	160	0	0
H2O S2	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0	0
H2O S3	61	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	951	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	160	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S4	0	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	0	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	0	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S5	0	61	122	122	122	122	122	122	61	61	0	31	122	122	122	122	122
PerOX S1	0	951	1,902	1,902	1,902	1,902	1,902	1,902	951	951	0	476	1,902	1,902	1,902	1,902	1,902
Catalyst S1	0	50	100	100	100	100	100	100	50	50	0	25	100	100	100	100	80
Solution Gal	0	160	320	320	320	320	320	320	160	160	0	80	320	320	320	320	320
H2O S6	0	0	0	61	61	61	0	0	0	0	0	0	0	61	122	122	122
PerOX S1	0	0	0	951	951	951	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	50	50	50	0	0	0	0	0	0	0	50	100	100	80
Solution Gal	0	0	0	160	160	160	0	0	0	0	0	0	0	160	320	320	320
H2O S7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	80
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320
H2O S8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	80
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	80
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	61
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	160
H2O S11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	161
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	200
H2O S12	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	400
H2O S13	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	400
H2O S14	0	0	0	0	0	0	0	0	0	0	0	0	0	31	122	122	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	476	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	25	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	80	320	320	400
H2O S15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	400

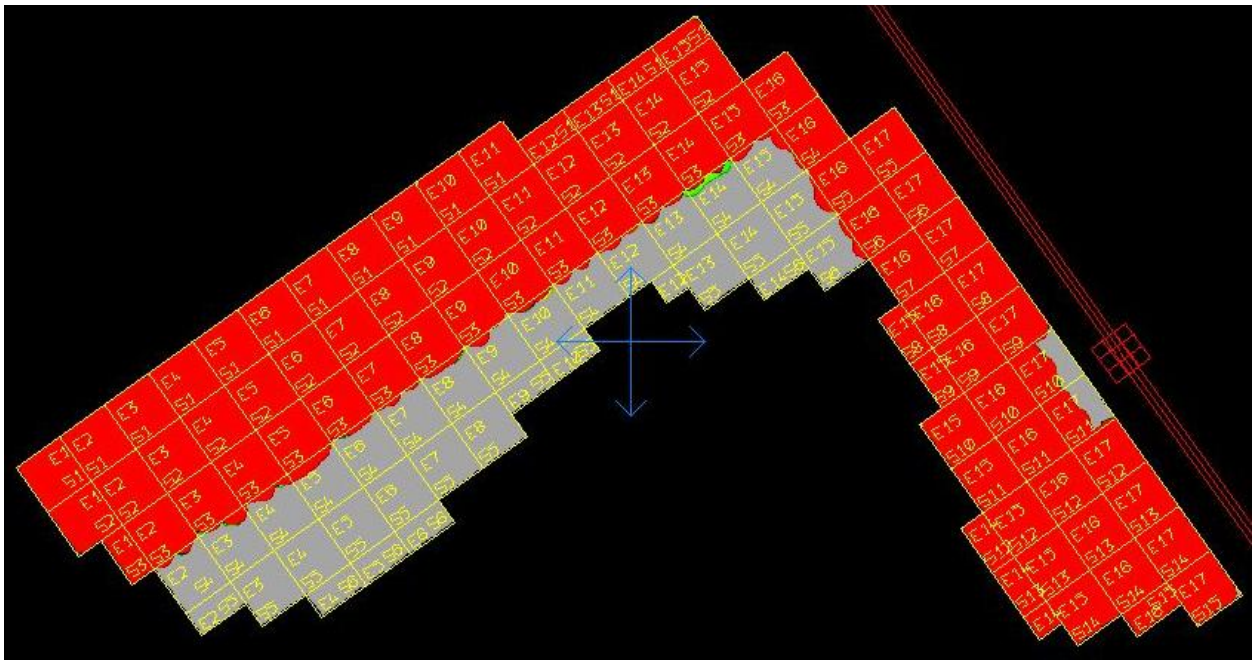
Lang Tool Co.

2520 Glidden Rd.
Beaverton, MI 48612
www.langtool.com
bill@langtool.com
Phone (989) 435-9864
Fax (989) 435-4311

September 17, 2015



Areas mixed to 447 MSL area colored green by the Dual Axis Blender on board computer.
Areas mixed below 447 are colored red.



Metering Plunge Point Coordinates

Easting	Northing	Elevation
,1125996.779084	537312.807222	446.725494
,1125996.819381	537312.836679	446.729553
,1125997.086167	537312.638246	446.525757
,1126000.046736	537314.933894	446.807220
,1126000.450747	537308.914674	446.694916
,1126003.325637	537311.414191	446.808380
,1126005.711383	537318.629926	446.617218
,1126004.577958	537318.467981	446.538025
,1126008.425817	537320.806497	446.635010
,1126006.856059	537315.094087	446.839600
,1126011.676526	537317.073133	446.785400
,1126013.118970	537324.647642	446.678589
,1126015.927850	537327.139280	446.955322
,1126015.820779	537320.223367	446.555328
,1126019.235036	537322.986466	446.757050
,1126021.564256	537329.325098	446.805634
,1126024.607904	537332.249612	446.746521
,1126023.907668	537326.715495	446.568268
,1126023.891774	537326.608615	446.535858
,1126026.973939	537329.042531	446.035278
,1126028.850314	537336.274057	446.751038
,1126032.248889	537338.171296	446.810486
,1126031.312871	537331.460830	446.821381
,1126035.880014	537334.153247	446.579315
,1126035.867618	537334.135368	446.609283

Easting	Northing	Elevation
,1126035.944413	537334.108007	446.578094
,1126035.259967	537333.458721	446.782532
,1126037.515744	537341.933277	446.302948
,1126041.062979	537344.438809	446.785980
,1126041.087524	537344.477002	446.828888
,1126039.806050	537337.880058	446.836121
,1126043.827402	537340.175591	446.855560
,1126044.835073	537347.540245	446.597260
,1126047.556647	537343.740739	446.872009
,1126047.606999	537343.799132	446.910065
,1126047.687070	537343.846870	446.909851
,1126051.468212	537346.169963	446.696259
,1126048.758509	537350.668704	446.806763
,1126053.370296	537352.771398	446.739227
,1126053.265064	537352.716041	446.764404
,1126057.320213	537355.340661	446.605560
,1126055.858174	537349.509999	446.571991
,1126059.418379	537352.155387	446.692017
,1126060.928777	537359.176770	446.677795
,1126064.032933	537354.699109	446.572021
,1126064.228845	537354.853385	446.601349
,1126064.056169	537354.658063	446.608673
,1126067.920200	537357.000787	446.646088
,1126065.496728	537361.556636	446.705719
,1126073.645532	537368.052474	446.708893

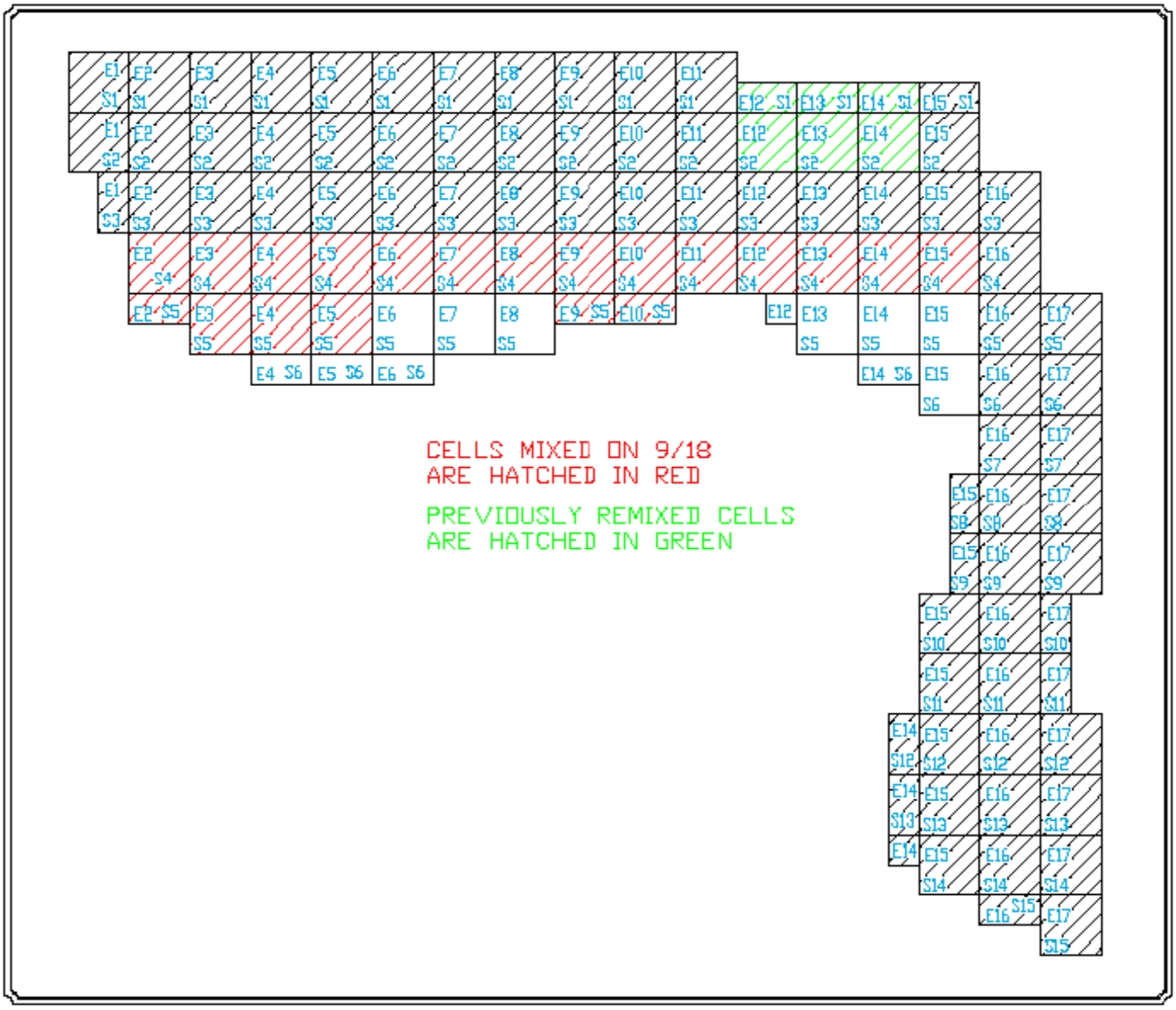
Easting	Northing	Elevation
,1126069.473338	537365.302959	446.357513
,1126071.991986	537360.304502	446.148407
,1126076.424028	537363.505187	446.503815
,1126102.353930	537326.933400	446.906677
,1126105.716033	537323.482591	446.661072
,1126108.881029	537318.891208	446.505859
,1126110.454565	537314.927848	446.659607
,1126110.588780	537308.183288	445.968719
,1126116.787269	537306.435728	446.545471
,1126116.830125	537306.396692	446.557922
,1126112.596831	537304.997722	446.504700
,1126112.585344	537304.989423	446.484772
,1126112.584457	537304.993855	446.490509
,1126112.624790	537304.992310	446.520477
,1126112.611936	537304.992019	446.499786
,1126120.305066	537301.654662	446.482941
,1126122.837558	537298.011433	446.308167
,1126116.190683	537299.193242	446.034790
,1126118.319659	537295.500964	445.799408
,1126125.815526	537294.868583	446.096619
,1126128.073354	537290.068807	446.657898
,1126121.120937	537290.359084	446.415131
,1126124.215436	537287.980317	446.804718

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17
H2O S1	122	122	122	122	122	122	122	122	122	122	122	122	122	122	61	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	951	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	50	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	320	320	320	160	0	0
H2O S2	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0	0
H2O S3	61	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	951	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	160	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S4	0	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	0	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	0	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S5	0	61	122	122	122	122	122	122	61	61	0	31	122	122	122	122	122
PerOX S1	0	951	1,902	1,902	1,902	1,902	1,902	1,902	951	951	0	476	1,902	1,902	1,902	1,902	1,902
Catalyst S1	0	50	100	100	100	100	100	100	50	50	0	25	100	100	100	100	100
Solution Gal	0	160	320	320	320	320	320	320	160	160	0	80	320	320	320	320	320
H2O S6	0	0	0	61	61	61	0	0	0	0	0	0	0	61	122	122	122
PerOX S1	0	0	0	951	951	951	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	50	50	50	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	160	160	160	0	0	0	0	0	0	0	160	320	320	320
H2O S7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320
H2O S8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	61
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	160
H2O S11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	320
H2O S12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	476	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	320	320
H2O S15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160

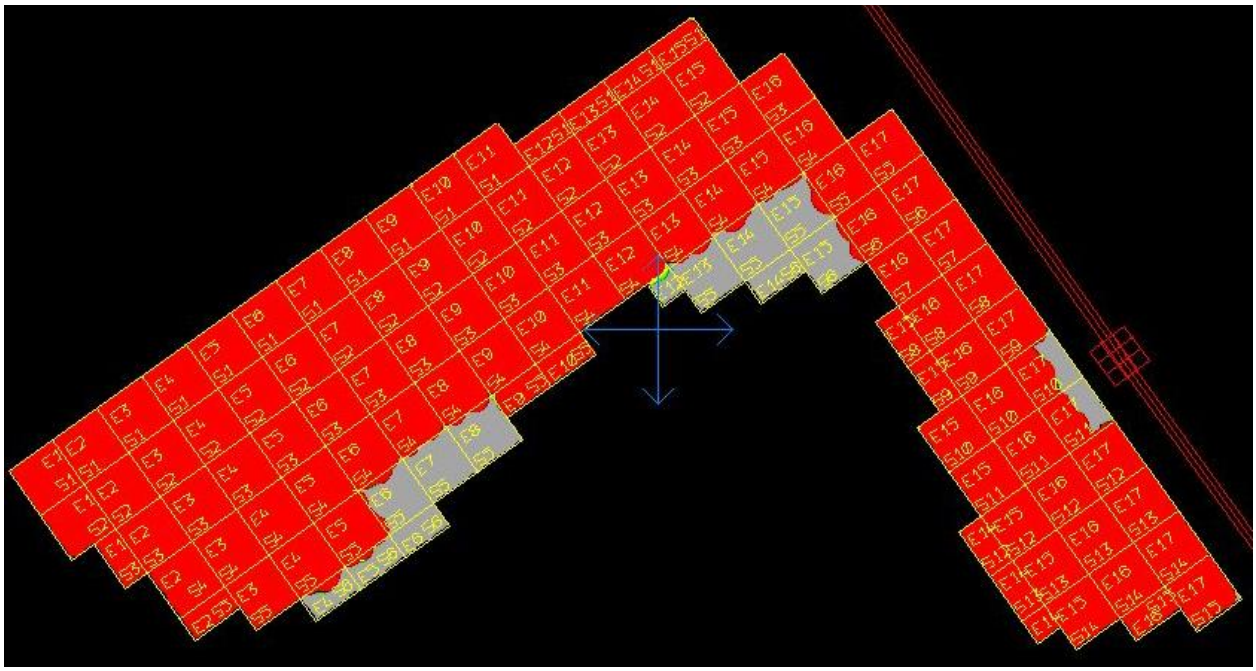
Lang Tool Co.

2520 Glidden Rd.
Beaverton, MI 48612
www.langtool.com
bill@langtool.com
Phone (989) 435-9864
Fax (989) 435-4311

September 18, 2015



Areas mixed to 447 MSL area colored green by the Dual Axis Blender on board computer.
Areas mixed below 447 are colored red.



Metering Plunge Point Coordinates

Easting	Northing	Elevation
,1125969.647168	537280.959132	446.785034
,1125973.200074	537283.491365	446.681183
,1125972.011872	537277.604179	446.664673
,1125972.023885	537277.708491	446.685944
,1125975.111470	537280.179906	446.901672
,1125975.306516	537273.227931	446.691101
,1125978.337341	537275.520559	446.497833
,1125977.880033	537287.329148	446.549255
,1125981.609651	537289.509229	447.042267
,1125981.842178	537289.401565	446.717621
,1125980.958509	537283.143387	446.710114
,1125984.320266	537286.005864	446.741821
,1125985.960982	537292.630172	446.891602
,1125989.461711	537289.502530	446.915710
,1125989.472722	537289.480327	446.912537
,1125989.493238	537289.464708	446.945770
,1125989.451987	537289.416558	446.933075
,1125989.476390	537289.415210	446.894836
,1125992.654460	537291.359189	446.854370
,1125990.432101	537295.789794	446.610107
,1125994.739644	537298.981520	446.685120
,1125997.895166	537301.144004	446.752045
,1125996.533912	537295.094217	446.825806
,1126000.636176	537297.631108	446.877686
,1125995.891254	537294.886358	446.812500

Easting	Northing	Elevation
,1126001.381878	537304.641881	446.710083
,1126005.769346	537307.402211	446.938354
,1126004.467013	537301.444269	446.755829
,1126008.391258	537303.795105	446.854492
,1126010.001886	537309.862519	446.723236
,1126013.585849	537312.492692	446.158661
,1126012.723083	537305.677414	446.806641
,1126016.730244	537308.629464	446.744629
,1126018.968656	537316.074899	446.483521
,1126022.350682	537319.058459	446.578766
,1126021.140943	537311.872672	446.710846
,1126024.757463	537314.743228	446.802704
,1126024.757726	537314.721561	446.800598
,1126024.620698	537314.690467	446.770630
,1126026.491059	537321.563039	446.523346
,1126030.055118	537324.698301	446.834778
,1126032.943912	537320.245046	446.871582
,1126029.322862	537318.359227	446.421967
,1126035.136171	537327.205800	446.721497
,1126038.303615	537330.061814	446.909882
,1126038.324678	537330.032010	446.852173
,1126040.631852	537326.762757	446.666473
,1126037.212835	537323.849046	446.736053
,1126032.317195	537313.641721	446.573395
,1126036.141078	537316.651433	446.882996

Easting	Northing	Elevation
1126040.187605	537319.520911	446.854584
1126043.929862	537322.424865	446.569824
1126043.984060	537322.347058	446.463806
1126043.983007	537322.348828	446.460327
1126043.047893	537333.127935	446.910828
1126046.152333	537336.231393	446.615662
1126049.481970	537332.808767	446.632782
1126049.488996	537332.793634	446.639191
1126049.525715	537332.724061	446.568634
1126045.824767	537330.142644	446.902710
1126051.523534	537339.019433	446.888367
1126054.932529	537341.646509	446.887299
1126053.208923	537335.963813	446.595215

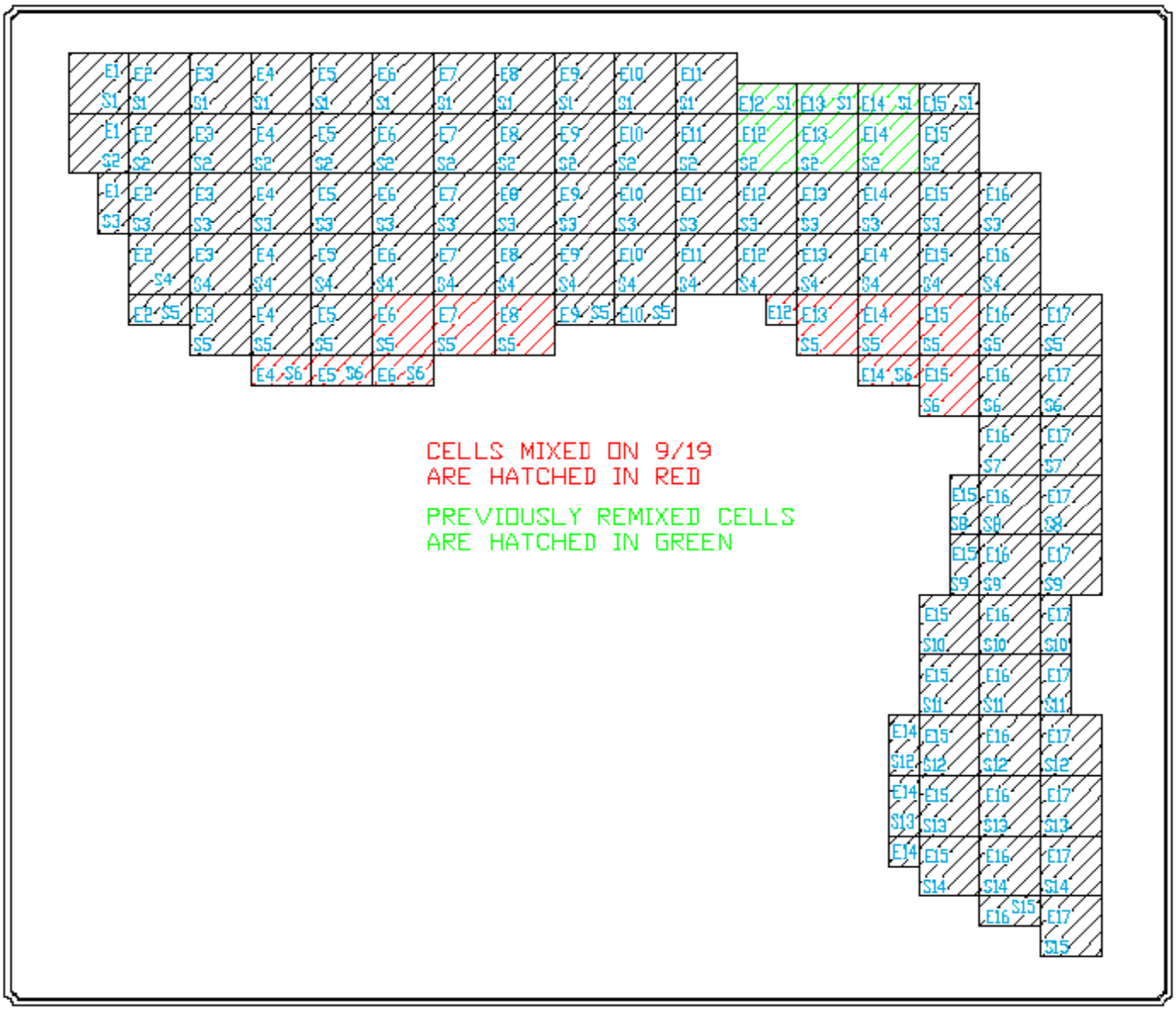
Easting	Northing	Elevation
1126057.191871	537338.147944	446.616516
1126058.840872	537345.374586	446.909912
1126062.874862	537347.195781	446.885376
1126062.216429	537341.445643	446.899597
1126065.245783	537343.912300	446.542145
1126061.567808	537341.290133	446.809204
1126067.461929	537350.823456	446.811493
1126071.353753	537353.172603	446.464935
1126073.825744	537349.791577	446.884033
1126069.501385	537347.268373	446.348969
1126069.373771	537347.334718	446.321594
1126069.364699	537347.280772	446.296417
1126079.045501	537359.086723	446.709076
1126081.690257	537356.413102	446.639954

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17
H2O S1	122	122	122	122	122	122	122	122	122	122	122	244	244	244	61	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	3805	3805	3805	951	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	200	200	200	50	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	640	640	640	160	0	0
H2O S2	122	122	122	122	122	122	122	122	122	122	122	244	198	198	122	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	3805	3805	3805	1,902	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	200	200	200	100	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	640	640	640	320	0	0
H2O S3	61	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	951	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	160	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S4	0	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	0	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	0	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S5	0	61	122	122	122	122	122	122	61	61	0	31	122	122	122	122	122
PerOX S1	0	951	1,902	1,902	1,902	1,902	1,902	1,902	951	951	0	476	1,902	1,902	1,902	1,902	1,902
Catalyst S1	0	50	100	100	100	100	100	100	50	50	0	25	100	100	100	100	100
Solution Gal	0	160	320	320	320	320	320	320	160	160	0	80	320	320	320	320	320
H2O S6	0	0	0	61	61	61	0	0	0	0	0	0	0	61	122	122	122
PerOX S1	0	0	0	951	951	951	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	50	50	50	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	160	160	160	0	0	0	0	0	0	0	160	320	320	320
H2O S7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320
H2O S8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	61
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	160
H2O S11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	320
H2O S12	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	244
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	640
H2O S13	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	244
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	640
H2O S14	0	0	0	0	0	0	0	0	0	0	0	0	0	31	122	122	244
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	476	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	25	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	80	320	320	640
H2O S15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	244
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	640

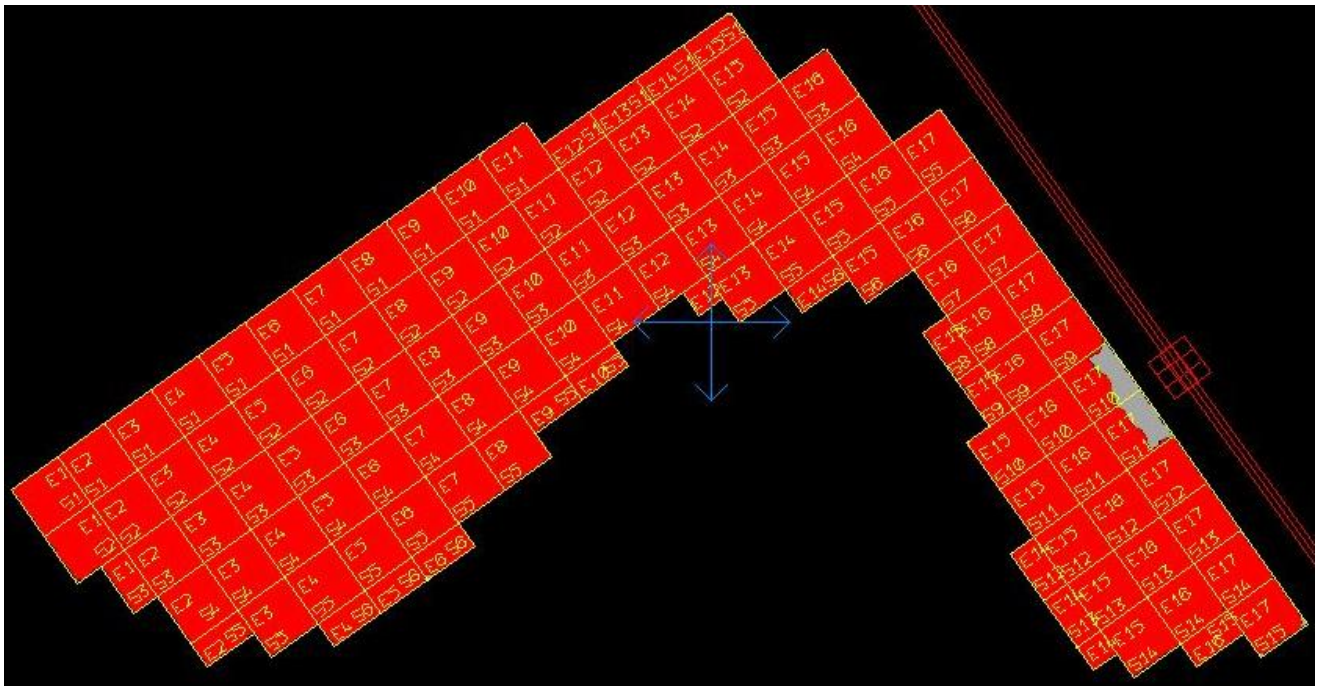
Lang Tool Co.

2520 Glidden Rd.
Beaverton, MI 48612
www.langtool.com
bill@langtool.com
Phone (989) 435-9864
Fax (989) 435-4311

September 18, 2015



Areas mixed to 447 MSL area colored green by the Dual Axis Blender on board computer.
Areas mixed below 447 are colored red.



Metering Plunge Point Coordinates

Easting	Northing	Elevation
,1125996.784053	,537276.647099	,446.506226
,1126000.271217	,537279.758424	,446.727051
,1126000.271163	,537279.627843	,446.677521
,1126005.516511	,537282.464107	,446.728577
,1126009.143693	,537285.824884	,446.848602
,1126007.590364	,537296.639462	,446.855743
,1126011.838324	,537299.470743	,446.766022
,1126011.137288	,537292.491990	,446.810364
,1126014.377355	,537295.561201	,446.684052
,1126013.546075	,537290.174972	,446.449371
,1126013.673764	,537290.401372	,446.317932
,1126014.259656	,537288.913101	,449.773102
,1126018.183072	,537292.147833	,446.863678
,1126016.861383	,537303.182891	,446.812744
,1126019.731824	,537304.788985	,446.562531
,1126019.058740	,537298.531272	,446.562500
,1126021.646978	,537300.826827	,446.603394
,1126023.774266	,537308.412347	,446.694977
,1126028.185373	,537310.844653	,446.842743
,1126026.705964	,537304.604489	,446.866760
,1126030.904227	,537307.066911	,447.012207
,1126059.946342	,537334.376760	,446.584778
,1126064.684007	,537337.291963	,446.680573
,1126068.906216	,537339.798362	,446.604614
,1126071.040929	,537336.368585	,446.673645

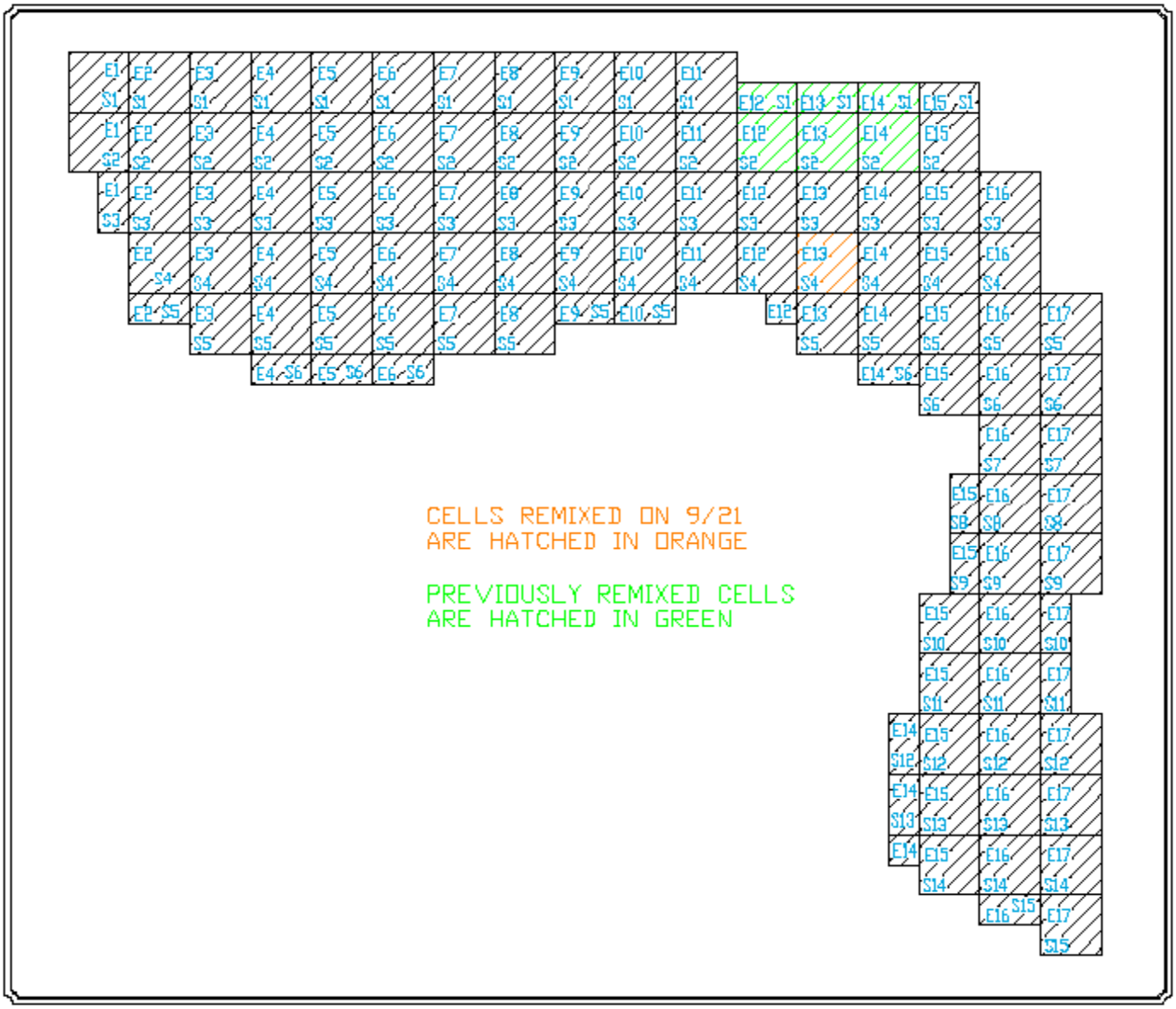
Easting	Northing	Elevation
,1126068.354427	,537333.686048	,446.621521
,1126079.169557	,537342.035405	,446.258209
,1126079.204969	,537342.060599	,446.365356
,1126082.568687	,537337.281898	,446.807922
,1126078.813087	,537334.640186	,446.668152
,1126078.856038	,537334.627105	,446.677368
,1126078.874231	,537334.614286	,446.664673
,1126078.882787	,537334.607757	,446.660767
,1126078.701917	,537334.702548	,446.716400
,1126076.222173	,537338.537021	,446.654114
,1126076.086177	,537338.610713	,446.638184
,1126072.558662	,537343.019710	,446.648773
,1126085.411600	,537351.086702	,446.723633
,1126081.533502	,537348.131652	,446.926697
,1126084.336967	,537344.388499	,446.646301
,1126087.225291	,537346.568939	,446.621582
,1126087.275174	,537346.563084	,446.632721
,1126093.179122	,537339.406774	,446.601013
,1126090.384534	,537343.621839	,446.498596
,1126089.557180	,537336.884198	,446.714355
,1126086.643387	,537340.402255	,446.928314

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17
H2O S1	122	122	122	122	122	122	122	122	122	122	122	244	244	244	61	0	0
PerOX S1	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	2,004	2,004	2,004	951	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	200	200	200	50	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	640	640	640	160	0	0
H2O S2	122	122	122	122	122	122	122	122	122	122	122	244	244	244	122	0	0
PerOX S1	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	2,004	2,004	2,004	1,002	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	200	200	200	100	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	640	640	640	320	0	0
H2O S3	61	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	951	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	0
Catalyst S1	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	160	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S4	0	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	0	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	0
Catalyst S1	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	0	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S5	0	61	122	122	122	122	122	122	61	61	0	31	122	122	122	122	122
PerOX S1	0	951	1,002	1,002	1,002	1,002	1,002	1,002	951	951	0	476	1,002	1,002	1,002	1,002	1,002
Catalyst S1	0	50	100	100	100	100	100	100	50	50	0	25	100	100	100	100	50
Solution Gal	0	160	320	320	320	320	320	320	160	160	0	80	320	320	320	320	320
H2O S6	0	0	0	61	61	61	0	0	0	0	0	0	0	61	122	122	122
PerOX S1	0	0	0	951	951	951	0	0	0	0	0	0	0	951	1,002	1,002	1,002
Catalyst S1	0	0	0	50	50	50	0	0	0	0	0	0	0	50	100	100	50
Solution Gal	0	0	0	160	160	160	0	0	0	0	0	0	0	160	320	320	320
H2O S7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,002	1,002
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320
H2O S8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,002	1,002
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,002	1,002
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	61
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,002	1,002	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	160
H2O S11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	161
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,002	1,002	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	160
H2O S12	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,002	1,002	1,002
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	160
H2O S13	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,002	1,002	1,002
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	160
H2O S14	0	0	0	0	0	0	0	0	0	0	0	0	0	31	122	122	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	476	1,002	1,002	1,002
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	25	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	80	320	320	160
H2O S15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,002
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	160

Lang Tool Co.

2520 Glidden Rd.
Beaverton, MI 48612
www.langtool.com
bill@langtool.com
Phone (989) 435-9864
Fax (989) 435-4311

September 21, 2015



Total remixed soil volume as of 9/21 is 163 cubic yards.

Site Preparation Photos

Mulching machine

Cleared Area

Soil Stockpile Area 2

Area after Top Soil Removed

Treatment Area looking from southern corner

Treatment area cleared

Soil Mixing

Mixing Platform

Starting of the soil mixing in E17

Mixing of E17 row 2

Mixing of E17 Row 4

Reaction while mixing

S1 and S2 Rows just prior to mixing in them

Soil Mixing

Starting S1 Row

S2 Row

Completed cells on the east side

Treated area next to excavated area

Finishing the last remaining cells

Completed treatment area

Sampling

	
Sampling tool	Taking sampling from selected row
	
Going down to depth	Raising sample from selected location
	
Collecting of sample from tool	View of sample going into bucket

Site Restoration

Starting of the site restoration

Clearing the eastern road and installation of perimeter and excavation fencing

Fence installation on the eastern road

Completion of site restoration

Site identification sign

Field crew

APPENDIX B

WESTON DAILY REPORTS

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street]
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 1**
***Date* : 9/10/15**

Prepared By:
Erik Hall

Weather:
Partly Cloudy 80°F

Site Hours:
0630-1830

PROJECT PERSONNEL

***Employer*:**	***Employee:***	***Trade:***	***Work Description:***	***Hours:***
NHDES	Andrew Hoffman	Project Manager	Pre-Construction Meeting	3.5
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	12
Weston Solutions	Vinnie Dello Russo	Project Manager	Pre-Construction Meeting	3.5
Weston Solutions	Fred Symmes	Sr. Tech. Manager	Pre-Construction Meeting	3.5
ISOTEC	Mike Temple	Project Manager	Remediation Prep. Work	10
ISOTEC	Mark Ratner	Site Manager	Remediation Prep. Work	10
LTC	Bill Lang	Project Manager	Remediation Prep. Work	10
LTC	Bill Oberloier	Site Assistant	Remediation Prep. Work	10
LTC	Dave Roe	Equipment Operator	Remediation Prep. Work	3
LTC	Cody Shell	Equipment Operator	Remediation Prep. Work	3
Land & Mowing	Faun Koplovsky	Equipment Operator	Clearing and Grubbing	5

Visitor:

***Company*:**	***Name:***	***Title:***	***Work Description:***	***Hours:***
Town of Conway	Earl Sires	Town Manager	Pre-Construction Meeting	0.5
Town of Conway	Paul DegliAngeli	PW Director	Pre-Construction Meeting	0.5
Hurteau Towing & Recovery	John Hurteau	Property Owner	Pre-Construction Meeting	1

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street]
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) POV and (1) Chevy Express Cargo Van
- **ISOTEC** – (1)Penske Box Truck with various project tools and supplies
- **LTC** – (1)Caterpillar D5K2 Bulldozer, (1) 20-LTC Dual Action Blender, (1) Mack Granite Tractor and lowboy trailer, (1) Mack mixing truck, (1) JLC 8042 fork lift, (2) utility trucks, (1) office/utility trailer
- **Land and Mowing** – (1) Excavator with mulching head
- **NHDES**– (1) SUV

DEVIATIONS FROM PROPOSED SCHEDULE

None.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- All equipment listed above in Project Equipment section was mobilized to the site.
- (6) precast concrete well tiles were delivered by American Concrete Industries to be placed around MWs to be protected with the work area.
- (1) portable bathroom
- (1) project sign was delivered

TEST DATA

(List type and location of tests performed and results)

- None.

SAFETY COMMENTS/VIOLATIONS

1. Rock was projected from the excavator with mulching head which cracked the rear window of the bulldozer.
2. Monitoring Well MW-3005 was accidently knocked over by the bulldozer.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

1. The bulldozer should not have been parked within 300 ft of the operating excavator with mulching head.
2. A spotter should have stayed with the bulldozer instead of walking over to check the location of another monitoring well.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street]
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

WORK COMPLETED- BY WESTON

- Construction oversight; conduct Pre-Construction Meeting

WORK COMPLETED- BY ISOTEC& SUBCONTRACTORS

- Attend Pre-construction meeting
- Set up GPS coordinates
- Clear the majority of the work area
- Inserted siltation sacks in storm drain inlets (CB 7-8 and CB 8-9)
- Removed monitoring wells (MWs-3006, 3008, 3009, 3010 and 3011)
- Placed precast concrete well tiles around select wells (MW-3004, MW-203A, MWS-205, MWS-114, MWS-215 and EW-13B)
- Video documentation of existing conditions of buildings/fence/access road. Denoted leaking hydrant after water meter install by water precinct, existing damage to former water treatment building and the fence surrounding Hurteau HVAC and Towing.
- Fire hydrant adapter hooked up by the water precinct and checked the access inside of the culvert beneath Hobbs Street where the water line will be run. Reading of the water meter at time of install was 430182 gallons.
- M. Temple spoke to dig safe representative who had marked out behind the building (left flags near the propane tank) and said there were no known utilities in the wooded area that they would need to mark out

AGREEMENTS

(Company Name – task description)

D. Hoffman of NHDES agreed to remove MW-3005 after it was accidently hit and damaged. Future discussions between Weston, NHDES and EPA will determine if the MW-3005 will be replaced.

D. Hoffman notified Carl Thibodeau of the existing erosion along storm drain; not caused by NHDES, Weston, or this project. The erosion was video documented.

Notes:
ISOTEC = In-Situ Oxidative Technologies, Inc
LTC = Lang Tool Company
Land & Mowing = Land and Mowing Solutions

Photographs

Photographs (continued)

Site looking East from parking lot upon arrival.

Water precinct installed meter on fire hydrant.

Siltation bag installed in catch basin

DAB arrived at the site.

Precast concrete collar protecting MW

Removal of MWs within the treatment area

Tree clearing

Site at the end of the day from access road looking northwest

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street]
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 2**
***Date* : 9/11/15**

Prepared By:
Erik Hall

Weather:
Showers AM; Partly Cloudy 65°F

Site Hours:
0700-1700

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	10
ISOTEC	Mike Temple	Project Manager	Remediation Prep. Work	10
ISOTEC	Mark Ratner	Site Manager	Remediation Prep. Work	10
LTC	Bill Lang	Project Manager	Remediation Prep. Work	10
LTC	Bill Oberloier	Site Assistant	Remediation Prep. Work	10
LTC	Dave Roe	Equipment Operator	Remediation Prep. Work	10
LTC	Cody Shell	Equipment Operator	Remediation Prep. Work	10
Land & Mowing	Faun Koplovsky	Equipment Operator	Clearing and Grubbing	2

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) POV and (1) Chevy Express Cargo Van
- **ISOTEC** – (1)Penske Box Truck with various project tools and supplies
- **LTC** – (1)Caterpillar D5K2 Bulldozer, (1) 20-LTC Dual Action Blender, (1) Mack Granite Tractor and lowboy trailer, (1) Mack mixing truck, (1) JLC 8042 fork lift, (2) utility trucks, (1) office/utility trailer
- **Land and Mowing** – (1) Excavator with mulching head

DEVIATIONS FROM PROPOSED SCHEDULE

None.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- None

TEST DATA

(List type and location of tests performed and results)

- None.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street]
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

SAFETY COMMENTS/VIOLATIONS

- All work completed in a safe manner.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Delivered MSDSs and emergency contact info to Conway Fire Department. Delivered emergency contact info to Conway Police Department.

WORK COMPLETED- BY ISOTEC& SUBCONTRACTORS

- Daily safety meeting
- Cleared remainder of the work area (mulching, tree removal)
- Moved precast concrete well tile from MWS-215 to CB 7-8
- Provided additional coverage of the culverts beneath Hobbs Street where the water line is run through
- Tested the water line and wet tested the chemical preparation truck
- Installed the silt fence
- Scraped off top soil across the site and placed into stockpiles
- Prepared equipment for soil mixing
- Excavated portions of the overburden in the treatment area. Excavated to approx. Elevation 456.5 ft. above mean sea level (or approximately 1.5 ft. above the soil mixing zone). The soil was dry and used to create a berm.

AGREEMENTS

(Company Name – task description)

None.

Notes:
ISOTEC = In-Situ Oxidative Technologies, Inc.
LTC = Lang Tool Company
Land & Mowing = Land and Mowing Solutions

Photographs

Photographs (continued)

Tree mulcher regrinds tree shreddings into topsoil

Installing silt fence

Water line installed from fire hydrant to mixing area

Bulldozer scraping and stockpile topsoil

Typical silt fence installation

Topsoil stockpile partially covered and excavating overburden material in preparation for soil mixing on Monday

Creating berm using overburden material

Excavation of overburden. Dry soil approximately 5.5' below original grade

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street]
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 3**
***Date* : Sat. 9/12/15**

Prepared By:
Lee Baronas

Weather:
Foggy 54°F to Sunny 75°F

Site Hours:
0700-1400

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Lee Baronas	Covering Site Supt	Construction Oversight	7
ISOTEC	Mike Temple	Project Manager	Remediation Prep. Work	7
ISOTEC	Mark Ratner	Site Manager	Remediation Prep. Work	7
LTC	Bill Lang	Project Manager	Remediation Prep. Work	7
LTC	Bill Oberloier	Site Assistant	Remediation Prep. Work	7
LTC	Dave Roe	Equipment Operator	Remediation Prep. Work	7
LTC	Cody Shell	Equipment Operator	Remediation Prep. Work	7
B-Quip Temp Fence	Mike Guild	Foreman	Fence Installation	3.5
B-Quip Temp Fence	Todd Nalette	Foreman	Fence Installation	3.5

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) POV and (1) Chevy Express Cargo Van
- **ISOTEC** – (1)Penske Box Truck with various project tools and supplies
- **LTC** – (1)Caterpillar D5K2 Bulldozer, (1) Caterpillar 320E Excavator, (1) 20-LTC Dual Action Blender, (1) Mack Granite Tractor and lowboy trailer*, (1) Mack mixing truck**,** (1) JLC 8042 fork lift, (2) utility trucks, (1) office/utility trailer
- **Land and Mowing** – (1) Excavator with mulching head*
- **B-Quip** – Ford F550 stake body with trailer

*on-site but not used during day.

DEVIATIONS FROM PROPOSED SCHEDULE

None. Completed preparations for soil mixing. Anticipate delivery of peroxide on Mon 14 Sep and start of soil mixing.

EQUIPMENT/MA DELIVERED/PICKED-UP

- Temporary fence delivered and erected: 6-ft high wire fencing using 75 panels, 72 anchor bases, and 70 clamps.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street]
In-Situ Chemical Oxidation via Soil Mixing
NHDES Site No. **198708002**

TEST DATA

(List type and location of tests performed and results)

- None.

SAFETY COMMENTS/VIOLATIONS

- All work completed in a safe manner.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None.

WORK COMPLETED- BY WESTON

- Construction oversight.

WORK COMPLETED- BY ISOTEC& SUBCONTRACTORS

- Daily safety meeting
- Complete placement of cover on north topsoil stockpile and cover the south topsoil stockpile with poly sheeting and sandbags.
- Test and troubleshoot controls and monitor on mixing truck. Prepare equipment for soil mixing.
- Test GPS system and layout boundary of treatment area.
- Prepare ground surface and setup temporary secondary containment basin for reagent storage (12’ x 50’ x 10”)
- Complete excavation of the overburden in rows S1, S2, and E17 of the treatment area. Excavated rows S1 and S2 to approx. elevation 456.3 ft. above mean sea level (or approximately 1.3 ft. above soil mixing zone). Row E17 excavated to approx. elevation 456.0 at north end to 455.3 at south end. The excavated soils were dry and used to create a berm. Base of excavation became wet with 1-2 inches of standing water in deepest portions.
- Encounter and sever two conduit and one tubing between EW-13B and former GWTP during excavation of overburden. Items were no longer in use and disconnected and were cleared to enable soil mixing.
- Grade and compact top of berm adjacent to row S1 of treatment area.

WORK COMPLETED- BY B-QUIP TEMPORARY FENCE

- Daily safety meeting
- Furnished and erected temporary 6-ft high wire fencing around perimeter of working area of site.

AGREEMENTS

(Company Name – task description)

Location of temporary fence and gates at site entrance was reviewed and acceptable by Jon Hurteau (property owner).

ISOTEC requested a straight alignment for the secondary barricade for the excavations to enclose a larger area and simplify daily removal and re-placement. WESTON agreed on a temporary basis subject to review by the Field Safety Officer.

Notes:
ISOTEC = In-Situ Oxidative Technologies, Inc.
LTC = Lang Tool Company
Land & Mowing = Land and Mowing Solutions
B-Quip = B-Quip Temporary Fence LLC

Photographs

Excavation of overburden for row S1 and S2, looking west, with berm on right

Conduit and tubing formerly serving EW-13B

North topsoil stockpile covered and grading berm

Temporary secondary containment for reagent storage

Photographs (continued)

Excavation of overburden of row E17, looking south

Excavation of overburden of row E17, looking north, with berm on right

South topsoil stockpile covered

Arrangement of temporary fence and gates at site entrance

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street]
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 3**
***Date* : Sat. 9/14/15**

Prepared By:
Erik Hall

Weather:
Showers 59°F to Sunny 64°F

Site Hours:
0700-1700

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	10
ISOTEC	Mike Temple	Project Manager	Remediation Prep. Work	10
ISOTEC	Mark Ratner	Site Manager	Remediation Prep. Work	10
LTC	Bill Lang	Project Manager	Remediation Prep. Work	10
LTC	Bill Oberloier	Site Assistant	Remediation Prep. Work	10
LTC	Dave Roe	Equipment Operator	Remediation Prep. Work	10
LTC	Cody Shell	Equipment Operator	Remediation Prep. Work	10
Weston Solutions	Steve O' Brien	Div. Safety Manager	Safety Audit	5

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (2) POV and (1) Chevy Express Cargo Van
- **ISOTEC** – (1)Penske Box Truck with various project tools and supplies
- **LTC** – (1)Caterpillar D5K2 Bulldozer, (1) Caterpillar 320E Excavator, (1) 20-LTC Dual Action Blender, (1) Mack Granite Tractor and lowboy trailer*, (1) Mack mixing truck, (1) JLC 8042 fork lift, (2) utility trucks, (1) office/utility trailer

DEVIATIONS FROM PROPOSED SCHEDULE

None.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Land and Mowing's excavator with tree mulcher demobilized from site
- Received 16 totes of 34% hydrogen peroxide (~4,000 gallons or 38,400 lbs) and 2,000 lbs of stabilizing agents.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street]
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

TEST DATA

(List type and location of tests performed and results)

- Aqueous samples collected from CB5-6 for VOCs, hydrogen peroxide (H2O2) and total iron. VOC results expected on Wednesday 9/16/15 from off-site laboratory. Field test kit results from sample collected at 08:15: H202 = 0 parts per million (ppm) and total iron = 1 ppm. Field test kit results from sample collected at 16:30: H202 = 0 ppm and total iron = 0.8 ppm.

SAFETY COMMENTS/VIOLATIONS

- Steve O'Brien from Weston conducted safety audit. Site team working to resolve safety audit findings.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

Comments based on the safety audit:

- ISOTEC – 2 personnel will obtain certificates to operate forklift
- Weston/ ISOTEC will place warning fence, and/or rope to signify that that open excavation exist beyond the barrier
- Weston will review certificates for 1st aid, CPR, competent person training for excavations for subcontractors
- Lang Tool to fix step into office trailer
- Lang Tool to use safety can for filling generator.
- ISOTEC to procure fire extinguishers for bulldozer and JLG forklift.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Conduct safety oversight
- Perform review of erosion controls after weekend rain. Erosion controls are intact and working properly
- Collect aqueous samples from CB 5-6 for VOSs, H2O2 and total iron.
- Perimeter air monitoring with MultiRae. None of the action limits were triggered.
- Installed project sign at main gate
- Installed "Hard Hat Required", Restricted Area" and "Construction Site – Keep Out" sign at all gates on temporary fence.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street]
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

WORK COMPLETED- BY ISOTEC& SUBCONTRACTORS

- Daily safety meeting and review of major AHA topics
- Equipment preparation
- Received 16 totes of hydrogen peroxide
- Soil mixing into 18 cells,
- Excavated overburden from portions of Row E16 in preparation of subsequent soil mixing.

AGREEMENTS

(Company Name – task description)

Gary Kraus of Mann Chemical confirmed via email H2O2 totes do not need to be triple rinsed prior to return , but they do need to empty.

Notes:
ISOTEC = In-Situ Oxidative Technologies, Inc.
LTC = Lang Tool Company

TREATMENT PROGRAM – MIXING SUMMARY

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Catalyst (lbs)	34% H2O2 (lbs)	Cell Dimensions
E12-S2	7:46	8:03	17	80	320	23.5	400	20.5	1920	10' x 10'
E11-S1	8:03	8:20	17	80	320	23.5	400	20.5	1920	10' x 10'
E10-S1	8:38	8:59	21	80	320	19.0	400	20.5	1920	10' x 10'
E11-S2	9:00	9:18	18	80	320	22.2	400	20.5	1920	10' x 10'
E10-S2	9:19	9:39	20	80	320	20.0	400	20.5	1920	10' x 10'
E9-S1	10:25	10:45	20	80	320	20.0	400	20.5	1920	10' x 10'
E9-S2	10:46	11:08	22	80	320	18.2	400	20.5	1920	10' x 10'
E8-S1	11:09	11:31	22	80	320	18.2	400	20.5	1920	10' x 10'
E8-S2	11:43	12:04	21	80	320	19.0	400	20.5	1920	10' x 10'
E7-S1	12:05	12:22	17	80	320	23.5	400	20.5	1920	10' x 10'
E7-S2	12:22	12:49	27	80	320	14.8	400	20.5	1920	10' x 10'
E6-S1	13:17	13:36	19	80	320	21.1	400	20.5	1920	10' x 10'
E6-S2	13:37	13:57	20	80	320	20.0	400	20.5	1920	10' x 10'
E5-S1	13:58	14:18	20	80	320	20.0	400	20.5	1920	10' x 10'
E5-S2	14:19	14:39	20	80	320	20.0	400	20.5	1920	10' x 10'
E4-S1	14:40	14:57	17	80	320	23.5	400	20.5	1920	10' x 10'
E4-S2	14:58	15:16	18	80	320	22.2	400	20.5	1920	10' x 10'
E3-S1	15:20	15:40	20	80	320	20.0	400	20.5	1920	10' x 10'
E3-S2	15:41	16:03	22	80	320	18.2	400	20.5	1920	10' x 10'
E2-S1	16:05	16:25	20	80	320	20.0	400	20.5	1920	10' x 10'
DAY TOTAL/ AVERAGE				1600	6400		8000	410	38400	

Photographs

The S2 row with rain water in excavation prior to mixing looking west.

The E17 row with rain water in excavation prior to mixing looking south.

Soil mixing in cell E17 S15

(notice bubbling from chemical reaction)

Soil mixing in cell E17 S15

Photographs (continued)

Soil Mixing

H2O2 storage with totes covered to minimize degradation

Project sign mounted

Excavating overburden in Row E16

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street]
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 5**
***Date* : Tues 9/15/15**

Prepared By:
Erik Hall

Weather:
Sunny 71°F

Site Hours:
0700-1745

PROJECT PERSONNEL

Employer:	***Employee:***	***Trade:***	***Work Description:***	***Hours:***
NHDES	Andrew Hoffman	Project Manager	Escort Conway Daily Sun	3.5
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	10.5
Weston Solutions	Allie Balter	Field Technician	Sampling	10.5
ISOTEC	Mike Temple	Project Manager	Soil Mixing	10.5
ISOTEC	Mark Ratner	Site Manager	Soil Mixing	10.5
ISOTEC	Kevin O'Neil	Site Manger	Soil Mixing	10.5
LTC	Bill Lang	Project Manager	Soil Mixing	10.5
LTC	Bill Oberloier	Site Assistant	Soil Mixing	10.5
LTC	Dave Roe	Equipment Operator	Soil Mixing	10.5
LTC	Cody Shell	Equipment Operator	Soil Mixing	10.5
Conway Daily Sun	Daymond Steer	Reporter	Met with Andrew Hoffman	1
Conway Daily Sun	Jamie Gemmiti	Photographer	Met with Andrew Hoffman	1

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) POV and (1) Chevy Express Cargo Van
- **ISOTEC** – (1)Penske Box Truck with various project tools and supplies
- **LTC** – (1)Caterpillar D5K2 Bulldozer, (1) Caterpillar 320E Excavator, (1) 20-LTC Dual Action Blender, (1) Mack Granite Tractor and lowboy trailer*, (1) Mack mixing truck, (1) JLC 8042 fork lift, (2) utility trucks, (1) office/utility trailer

DEVIATIONS FROM PROPOSED SCHEDULE

None.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street]
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Received 16 totes of 34% hydrogen peroxide (~4,000 gallons or 38,400 lbs).

TEST DATA

(List type and location of tests performed and results)

- Aqueous samples collected from CB5-6 for hydrogen peroxide (H2O2) and total iron at 08:15: H202 = 0 parts per million (ppm) and total iron = 1 ppm.
- See attached spreadsheets for analytical results of soil mix cells and field test data for CB 5-6.

SAFETY COMMENTS/VIOLATIONS

- None.
- Weston confirmed that Mark Ratner and Kevin O' Neil of ISOTEC have a Class VI forklift operator's certificate.
- Barrier cone system was set-up to signify that an open excavation exists. The system was discussed at daily tailgate meeting.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- Repair silt fence where fence was bent over by excavator bucket.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Perform review of erosion controls. Erosion controls are intact and working properly
- Collect aqueous samples from CB 5-6 for H2O2 and total iron at 15:54. H2O2 = 0 ppm and total iron was 1 ppm.
- Perimeter air monitoring with MultiRae. None of the action limits were triggered.

WORK COMPLETED- BY ISOTEC& SUBCONTRACTORS

- Received 16 totes of hydrogen peroxide,
- Soil mixing into 20 cells,
- Peroxide and total iron field test kits of collected soil samples from 10 cells treated the previous day (E13-S2, E14-S1, E15-S2, E17-S5, E17-S6, E17-S7, E17-S9, E17-S11, E17-S13 and E17-S14). .
- For more details refer attached Daily Reports from ISOTEC and Lang Tool.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street]
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

AGREEMENTS

(Company Name – task description)

Andrew Hoffman was on site today to escort Conway Daily Sun on-site. Conway Daily Sun requested access to take photos of soil mixing project and interview Mr. Hoffman for an article in the newspaper.

Notes:
ISOTEC = In-Situ Oxidative Technologies, Inc.
LTC = Lang Tool Company

TREATMENT PROGRAM – MIXING SUMMARY

See attached Daily Reports from ISOTEC and Lang Tool

Photographs

The excavation from the southeast corner of the site looking north.

The excavation from the northwest corner of the excavation looking east

Typical soil sample collected from approximately 11 feet below ground surface

Typical soil sample collected from approximately 13 feet below ground surface

Photographs (continued)

Collecting the soil mixing samples

Steel plate found in the excavation; now being used to minimize rutting near the soil mix truck

Soil mixing

More soil mixing

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**15-Sep-15**		Client:	**Weston**		Personnel:	**Mike, Mark, Kevin, Bill L, Bill O, Cody, Dave**			
Project:	**KMC Site, Conway, NH**		Job Number:	**801991**		Weather:	**Sunny, 59-83**			
	Time		Mobilization	Safety	Equipment	Sampling	Mixing	De-Con.	Data	Other
Personnel Names			To & From	Meeting	Preparation	Wells &	Time	Equipment	Entry	(Lunch)
	Start	Stop	Job Site			Analysis			Time	
Mike Temple	7:00 AM	5:45 PM	0.25	0.25	0.5		7.5	0.75	0.5	0.25
Mark Ratner	7:00 AM	5:15 PM	0.25	0.25	0.5	3.0	4.5	0.75		0.25
Kevin O'Neal	7:00 AM	5:45 PM	0.25	0.25	0.5	4.0	3.5	0.75	0.5	0.25
Bill Lang	7:00 AM	5:30 PM	0.25	0.25	0.5		7.5	1.0		0.25
Bill Oberloier	7:00 AM	5:30 PM	0.25	0.25	0.5		7.5	1.0		0.25
Dave Roe	7:00 AM	5:30 PM	0.25	0.25	0.5		7.5	1.0		0.25
Cody Shell	7:00 AM	5:30 PM	0.25	0.25	0.5		7.5	1.0		0.25
TOTAL HOURS =	10.00		TOTAL MIXING HOURS =			7.50				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**H2O2 Volume**		**Catalyst Volume**		**H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			E12-S2	80	E12-S2	320	E7-S2	80	E7-S2	320
Generator			E11-S1	80	E11-S1	320	E6-S1	80	E6-S1	320
Mixers			E10-S1	80	E10-S1	320	E6-S2	80	E6-S2	320
Equipment Set			E11-S2	80	E11-S2	320	E5-S1	80	E5-S1	320
Vehicle(s) utilized			E10-S2	80	E10-S2	320	E5-S2	80	E5-S2	320
Raw Materials Used			E9-S1	80	E9-S1	320	E4-S1	80	E4-S1	320
Powder Catalyst	410.0	lbs.	E9-S2	80	E9-S2	320	E4-S2	80	E4-S2	320
Liquid Catalyst	1600	Gallons	E8-S1	80	E8-S1	320	E3-S1	80	E3-S1	320
34% H2O2	4000	Gallons	E8-S2	80	E8-S2	320	E3-S2	80	E3-S2	320
Diluted H2O2	6400	Gallons	E7-S1	80	E7-S1	320	E2-S1	80	E2-S1	320
34% H2O2	38400	lbs.								
			TOTAL INJECTION VOLUME =		8000					

Major Work Activities Performed:

Daily safety meeting and review of safety audit topics mentioned by Steve O'Brien from the day before (Steve spoke with Tom Andrews (ISOTEC DHS) about updating the AHA for excavation protection. We submitted an updated version to Steve via email). Equipment preparation, received 16 totes of hydrogen peroxide, soil mixing into 20 cells, sampling of the down-gradient catch basin for iron and hydrogen peroxide levels. Collected soil samples from 10 cells treated the previous day (E13-S2, E14-S1, E15-S2, E17-S5, E17-S6, E17-S7, E17-S9, E17-S11, E17-S13 and E17-S14). Samples were collected from 3 depth intervals at approximatelly 9, 11 and 13 ft bgs. Samples from each depth showed similar charteristics from samples collected across the treated areas (9' samples were very wet and showed little to no solid soils; 11' samples were similar but occasionally showed a piece of clay within the samples; 13' samples were also very wet and showed some clay sediments mixed in which can be part of the deeper geologic matrix or just the heavier sediments that fell to the bottom of the cell during mixing operations). Pictures of select soil samples were taken by Erik during sample analysis and packaging. Similar to Day 1 mixing, Day 2 mixing proceeded very well with the DAB being able to push down through the saturated soil matrix with little to no resistance and bubbling within the treated areas could be seen throughout the day. Approximately 1-2 feet of swelling was observed within the S1 and S2 rows during soil mixing in those cells.

Health and Safety Items Covered:

General site safety topics and review of safety audit topics. Added fire extinguishers to each of the rental machines that didn't come equipped with one. Mark and Kevin completed an online sfaty class on fork-lift operation and received a permit for operation. Special attention to watching the sides of the excavation areas for cracks/ sliding of materials during the daily safety meeting between ISOTEC (Mike Temple, Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall, Ally). Delivery truck driver on-site for chemical delivery.

Unforeseen Site Conditions:

List of Deliveries:

Received 16 totes of 34% hydrogen peroxide (~4,000 gallons or 38,400 lbs) and 2,000 lbs of stabilizing agents.

Other Comments (Work delays, inspections results, etc.):

Drew Hoffman (NHDES) on-site to speak with local reporters about treatment program activities. Reporters snapped photos that were approved by Weston.

TREATMENT PROGRAM - MIXING VOLUME SUMMARY
KMC Site, Conway, New Hampshire
ISOTEC PROJECT #801991

DATE:	15-Sep-15

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Catalyst (lbs)	34% H2O2 (lbs)	Cell Dimensions
E12-S2	7:46	8:03	17	80	320	23.5	400	20.5	1920	10' x 10'
E11-S1	8:03	8:20	17	80	320	23.5	400	20.5	1920	10' x 10'
E10-S1	8:38	8:59	21	80	320	19.0	400	20.5	1920	10' x 10'
E11-S2	9:00	9:18	18	80	320	22.2	400	20.5	1920	10' x 10'
E10-S2	9:19	9:39	20	80	320	20.0	400	20.5	1920	10' x 10'
E9-S1	10:25	10:45	20	80	320	20.0	400	20.5	1920	10' x 10'
E9-S2	10:46	11:08	22	80	320	18.2	400	20.5	1920	10' x 10'
E8-S1	11:09	11:31	22	80	320	18.2	400	20.5	1920	10' x 10'
E8-S2	11:43	12:04	21	80	320	19.0	400	20.5	1920	10' x 10'
E7-S1	12:05	12:22	17	80	320	23.5	400	20.5	1920	10' x 10'
E7-S2	12:22	12:49	27	80	320	14.8	400	20.5	1920	10' x 10'
E6-S1	13:17	13:36	19	80	320	21.1	400	20.5	1920	10' x 10'
E6-S2	13:37	13:57	20	80	320	20.0	400	20.5	1920	10' x 10'
E5-S1	13:58	14:18	20	80	320	20.0	400	20.5	1920	10' x 10'
E5-S2	14:19	14:39	20	80	320	20.0	400	20.5	1920	10' x 10'
E4-S1	14:40	14:57	17	80	320	23.5	400	20.5	1920	10' x 10'
E4-S2	14:58	15:16	18	80	320	22.2	400	20.5	1920	10' x 10'
E3-S1	15:20	15:40	20	80	320	20.0	400	20.5	1920	10' x 10'
E3-S2	15:41	16:03	22	80	320	18.2	400	20.5	1920	10' x 10'
E2-S1	16:05	16:25	20	80	320	20.0	400	20.5	1920	10' x 10'
DAY TOTAL/ AVERAGE				1600	6400		8000	410	38400	

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 6**
***Date*:Wed 9/16/15**

Prepared By:
Erik Hall

Weather:
Sunny 71°F

Site Hours:
0700-1745

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	10.5
Weston Solutions	Allie Balter	Field Technician	Sampling	10.5
ISOTEC	Mike Temple	Project Manager	Soil Mixing	10.5
ISOTEC	Mark Ratner	Site Manager	Soil Mixing	10.5
ISOTEC	Kevin O'Neil	Site Manger	Soil Mixing	10.5
LTC	Bill Lang	Project Manager	Soil Mixing	10.5
LTC	Bill Oberloier	Site Assistant	Soil Mixing	10.5
LTC	Dave Roe	Equipment Operator	Soil Mixing	10.5
LTC	Cody Shell	Equipment Operator	Soil Mixing	10.5

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) POV and (1) Chevy Express Cargo Van
- **ISOTEC** – (1)Penske Box Truck with various project tools and supplies
- **LTC** – (1)Caterpillar D5K2 Bulldozer, (1) Caterpillar 320E Excavator, (1) 20-LTC Dual Action Blender, (1) Mack Granite Tractor and lowboy trailer*, (1) Mack mixing truck, (1) JLC 8042 fork lift, (2) utility trucks, (1) office/utility trailer

DEVIATIONS FROM PROPOSED SCHEDULE

None.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Received 16 totes of 34% hydrogen peroxide (~4,000 gallons or 38,400 lbs).

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

TEST DATA

(List type and location of tests performed and results)

- Aqueous samples collected from CB5-6 for hydrogen peroxide (H2O2) and total iron at 08:15: H202 = 0 parts per million (ppm) and total iron = 1 ppm.
- See attached spreadsheets for analytical results of soil mix cells and field test data for CB 5-6.

SAFETY COMMENTS/VIOLATIONS

- Weston confirmed that Mark Ratner and Kevin O' Neil of ISOTEC have a Class VI forklift operator's certificate.
- Barrier cone system was set-up to signify that an open excavation exists. The system was discussed at daily tailgate meeting.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- Repair silt fence where fence was bent over by excavator bucket.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Perform review of erosion controls. Erosion controls are intact and working properly
- Collect aqueous samples from CB 5-6 for H2O2 and total iron. Refer to attached spreadsheet for results.
- Perimeter air monitoring with MultiRae. None of the action limits were triggered.

WORK COMPLETED- BY ISOTEC& SUBCONTRACTORS

- Received 16 totes of hydrogen peroxide,
- Soil mixing into 20 cells,
- Peroxide and total iron field test kits of collected soil samples from 10 cells treated the previous day. Refer to attached spreadsheet for results.
- For more details refer attached Daily Reports from ISOTEC and Lang Tool.

AGREEMENTS

(Company Name – task description)

Conway Daily Sun had an article on its cover regarding the site.

Notes:
ISOTEC = In-Situ Oxidative Technologies, Inc.
LTC = Lang Tool Company

TREATMENT PROGRAM – MIXING SUMMARY

See attached Daily Reports from ISOTEC and Lang Tool

Photographs

GPS tracking of blender head as seen from chemical mixing truck

The soil sampling tool collecting a confirmation sample

Collecting a soil confirmation sample

Soil mixing

Photographs (continued)

Looking north from the northeast corner of the excavation

Excavating for the next row of cells

Soil mixing

Chemical mixing truck

Kearsarge Metallurgical Superfund Site
Cell mixing with ISCO
Project Status - 9/16/2015

Poplar Trees

TOP SOIL STOCK PILE

REAGENT DELIVERY EQUIPMENT

MWS-205

MW-3004

MW-3008

MW-3010

MW-3009

MW-3005

EW-13B

MW-203A

MWS-114

TEMPORARY SECURITY FENCE

SOIL TREATMENT AREA (9,076 SQFT)

CELL LAYOUT (10,100 SQFT)

E14 S14

STORM DRAIN

EXTENT OF BERMED SOIL REMOVED FROM EXCAVATION

APPROX. LOCATION OF EXIST. UNDERGROUND COLLECTION TRENCH

Legend

Analytical passed

Cell mixed; awaiting analytical

Cell was mixed >24 hrs ago

Cell was mixed <24 hrs ago

Cell selected for pre-mixing soil sampling due to historical soil data

NOTE:
ALL CELLS ARE 10'x10', 10'x5', OR 5'x5'.

GRAPHIC SCALE
10 5 0 5 10
APPROXIMATE SCALE IN FEET

NO.	DATE	APPR.	REVISION

IN SITU SOIL TREATMENT
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NEW HAMPSHIRE

		CLIENT APPROVALS	DATE
CHECKED			
DES. ENG.			
PROJ. ENG.			
PROJ. MGR.			
APPROVED			
APPROVED		ISSUED FOR	DATE

WESTON SOLUTIONS CONCORD NEW HAMPSHIRE

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

SOIL TREATMENT CELL LAYOUT

DRAWN	DATE	FIGURE NO.	REV. NO.
BEG	AUG 2015	5	
SCALE	W.O. NO.	SHT.	OF
AS SHOWN	20118.015.003		

M:\Design\DWG\KRSARGE\2015\Work Plan\FIG 5.dwg, Layout1, 9/4/2015 11:42:33 AM, girardeb, 1:2

TABLE 1
STORM DRAIN MONITORING FIELD DATASHEET
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NH

Catch Basin Location	Date	Time	Collected By	Hydrogen Peroxide Concentration (ppm)	Dissolved Iron Concentration (ppm)	Notes
CB5-6	9/15/2015	1630	AB	0	1.0	
	9/16/2015	1115	AB	0	0.4	
CB6-7	9/16/2015	1115	AB	0	1.0	
	9/16/2015	1643	AB	0	0.5	

Notes:
ppm = Parts per million

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**16-Sep-15**		Client:	**Weston**		Personnel:	**Mike, Mark, Kevin, Bill L, Bill O, Cody, Dave**			
Project:	**KMC Site, Conway, NH**		Job Number:	**801991**		Weather:	**Sunny, 58-86**			
	Time		Mobilization	Safety	Equipment	Sampling	Mixing	De-Con.	Data	Other
Personnel Names			To & From	Meeting	Preparation	Wells &	Time	Equipment	Entry	(Lunch)
	Start	Stop	Job Site			Analysis			Time	
Mike Temple	7:00 AM	5:45 PM	0.25	0.25	0.5		8.0	1.00	0.5	0.5
Mark Ratner	7:00 AM	5:15 PM	0.25	0.25	0.5	2.0	6.0	1.00		0.5
Kevin O'Neal	7:00 AM	5:45 PM	0.25	0.25	0.5	3.0	5.0	1.00	0.5	0.5
Bill Lang	7:00 AM	5:15 PM	0.25	0.25	0.5		8.0	1.0		0.5
Bill Oberloier	7:00 AM	5:15 PM	0.25	0.25	0.5		8.0	1.0		0.5
Dave Roe	7:00 AM	5:15 PM	0.25	0.25	0.5		8.0	1.0		0.5
Cody Shell	7:00 AM	5:15 PM	0.25	0.25	0.5		8.0	1.0		0.5
TOTAL HOURS =	9.75		TOTAL MIXING HOURS =			8.00				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**H2O2 Volume**		**Catalyst Volume**		**H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			E1-S1	100	E1-S1	320	E16-S8	100	E16-S8	320
Generator			E2-S2	100	E2-S2	320	E16-S7	100	E16-S7	320
Mixers			E1-S2	100	E1-S2	320	E16-S6	100	E16-S6	320
Equipment Set			E16-S15	50	E16-S15	160	E16-S5	100	E16-S5	320
Vehicle(s) utilized			E16-S14	100	E16-S14	320	E16-S4	100	E16-S4	320
Raw Materials Used			E16-S13	100	E16-S13	320	E16-S3	100	E16-S3	320
Powder Catalyst	410.0	lbs.	E16-S12	100	E16-S12	320	E1-S3	50	E1-S3	160
Liquid Catalyst	2000	Gallons	E16-S11	100	E16-S11	320	E2-S3	100	E2-S3	320
34% H2O2	4000	Gallons	E16-S10	100	E16-S10	320	E3-S3	100	E3-S3	320
Diluted H2O2	6400	Gallons	E16-S9	100	E16-S9	320	E4-S3	100	E4-S3	320
34% H2O2	38400	lbs.	E5-S3	100	E5-S3	320				
			TOTAL INJECTION VOLUME =		8400					

Major Work Activities Performed:

Daily safety meeting and discussed safety while working around the excavation areas. Bill Oberloier from LTC has the required competent person training for working around excavations (certificate emailed to steve O'Brien on Wednesday night). Equipment preparation, received 16 totes of hydrogen peroxide (returned 35 totes), soil mixing into 21 cells, sampling of the down-gradient catch basin for iron and hydrogen peroxide levels. Samples collected from cells E17-S11, E17-S13 and E17-S14 came back below site sampling criteria levels. Collected soil samples from 10 cells treated the previous day (E11-S2, E10-S1, E9-S2, E8-S1, E7-S1, E6-S2, E5-S1, E5-S2, E3-S1 and E3-S2). Samples were collected from 2 depth intervals (at approximatelly 9, 11 and 13 ft bgs) at select cells to confirm adequate mixing occurred. Samples apperaed to be fairlry consistent with one another and looked visually well mixed. Similar to Day 1 and Day 2, mixing proceeded very well with the DAB being able to push down through the saturated soil matrix with little to no resistance and bubbling within the treated areas could be seen throughout the day. Approximately 1-2 feet of swelling was observed within treated rows during soil mixing. Cells identified by Weston as having historical soil impacts (E4-S3 and E5-S3) were mixed longer than other treated cells. Cell E9-S2 was remixed (withouth extra reagent) in the morning at the request of Weston.

Health and Safety Items Covered:

General site safety topics and review of working around the excavation areas during the daily safety meeting between ISOTEC (Mike Temple, Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall, Allie Balter). Delivery truck driver on-site for chemical delivery.

Unforeseen Site Conditions:

List of Deliveries:

Received 16 totes of 34% hydrogen peroxide (~4,000 gallons or 38,400 lbs).

Other Comments (Work delays, inspections results, etc.):

Article in the Conway Daily Sun newspaper about the project.

TREATMENT PROGRAM - MIXING VOLUME SUMMARY
KMC Site, Conway, New Hampshire
ISOTEC PROJECT #801991

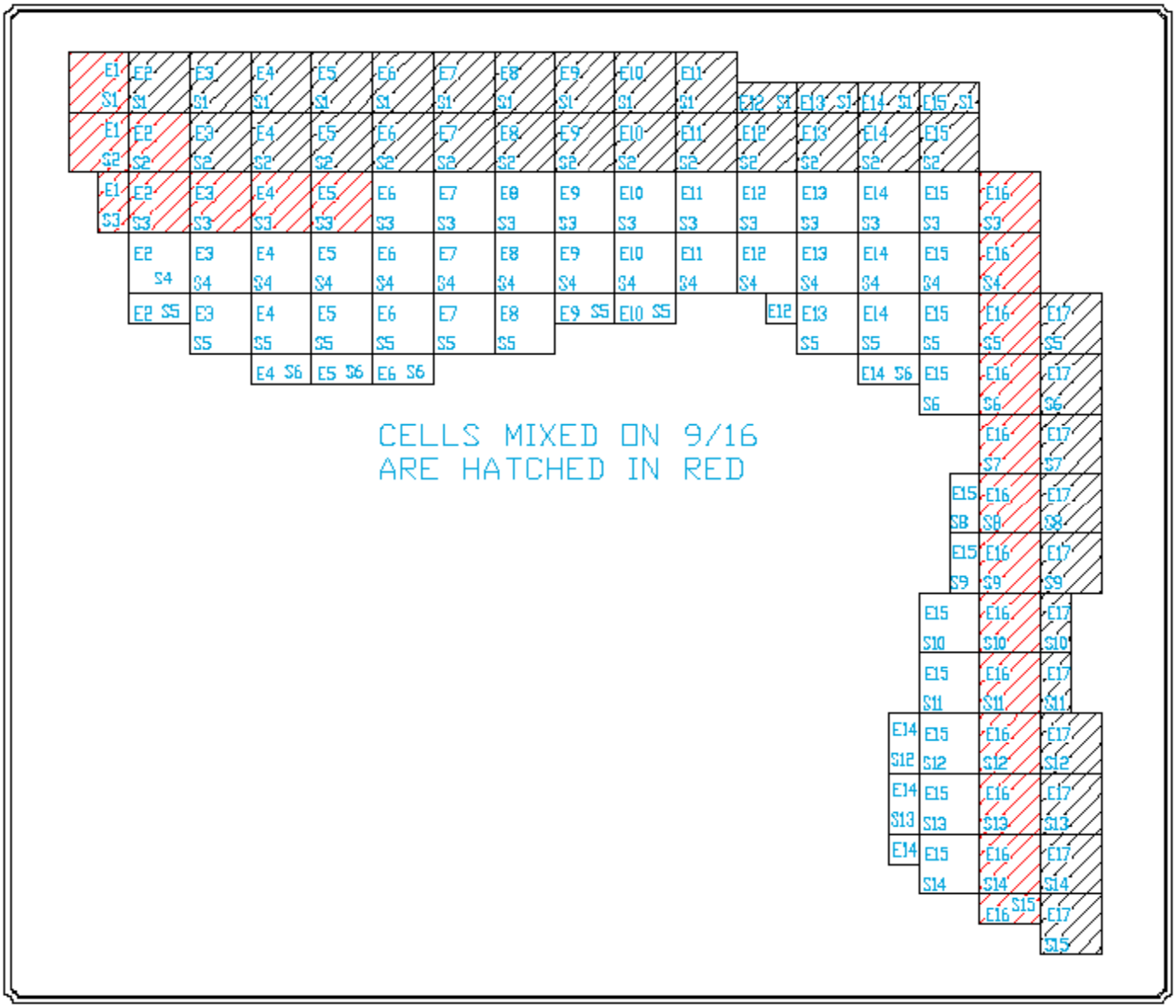
DATE:	16-Sep-15

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Catalyst (lbs)	34% H2O2 (lbs)	Cell Dimensions
E1-S1	7:40	8:10	30	100	320	14.0	420	20.5	1920	10' x 10'
E2-S2	8:10	8:36	26	100	320	16.2	420	20.5	1920	10' x 10'
E1-S2	8:38	9:03	25	100	320	16.8	420	20.5	1920	10' x 10'
E16-S15	9:06	9:21	15	50	160	14.0	210	10.25	960	5' x 10'
E16-S14	9:22	9:46	24	100	320	17.5	420	20.5	1920	10' x 10'
E16-S13	9:46	10:07	21	100	320	20.0	420	20.5	1920	10' x 10'
E16-S12	10:07	10:28	21	100	320	20.0	420	20.5	1920	10' x 10'
E16-S11	10:28	10:28	20	100	320	21.0	420	20.5	1920	10' x 10'
E16-S10	10:48	11:08	20	100	320	21.0	420	20.5	1920	10' x 10'
E16-S9	11:09	11:28	19	100	320	22.1	420	20.5	1920	10' x 10'
E16-S8	11:28	11:48	20	100	320	21.0	420	20.5	1920	10' x 10'
E16-S7	11:48	12:08	20	100	320	21.0	420	20.5	1920	10' x 10'
E16-S6	12:33	12:54	21	100	320	20.0	420	20.5	1920	10' x 10'
E16-S5	12:54	13:18	24	100	320	17.5	420	20.5	1920	10' x 10'
E16-S4	13:18	13:43	25	100	320	16.8	420	20.5	1920	10' x 10'
E16-S3	13:43	14:08	25	100	320	16.8	420	20.5	1920	10' x 10'
E1-S3	14:15	14:30	15	50	160	14.0	210	10.25	960	5' x 10'
E2-S3	14:30	14:54	24	100	320	17.5	420	20.5	1920	10' x 10'
E3-S3	14:54	15:19	25	100	320	16.8	420	20.5	1920	10' x 10'
E4-S3	15:20	15:50	30	100	320	14.0	420	20.5	1920	10' x 10'
E5-S3	15:50	16:20	30	100	320	14.0	420	20.5	1920	10' x 10'
DAY TOTAL/ AVERAGE				2000	6400		8400	410	38400	

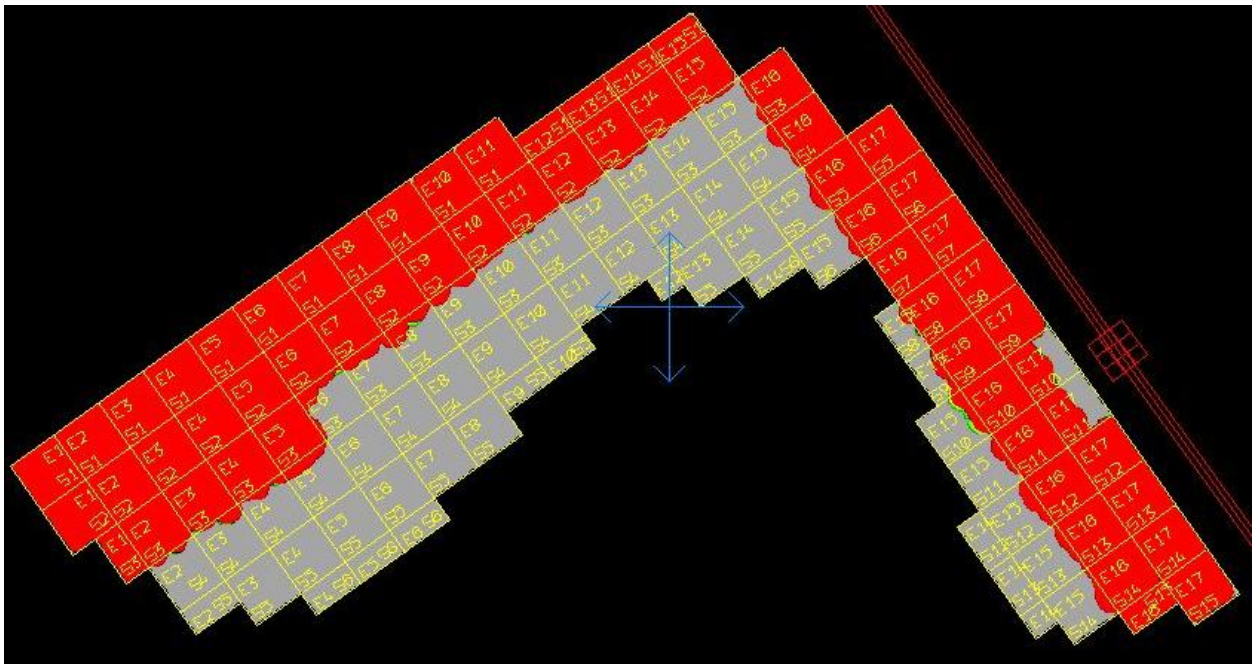
Lang Tool Co.

2520 Glidden Rd.
Beaverton, MI 48612
www.langtool.com
bill@langtool.com
Phone (989) 435-9864
Fax (989) 435-4311

September 14, 2015



Areas mixed to 447 MSL area colored green by the Dual Axis Blender on board computer.
Areas mixed below 447 are colored red.



Metering Plunge Point Coordinates

Easting	Northing	Elevation
,1125947.925972	,537301.711670	,446.840698
,1125944.214240	,537299.277020	,446.730560
,1125947.070352	,537294.900431	,446.694885
,1125950.480647	,537297.975043	,446.831970
,1125961.586507	,537299.335799	,446.610016
,1125958.596284	,537296.627694	,446.757996
,1125964.493183	,537295.625432	,446.596954
,1125960.660005	,537293.411929	,446.829163
,1125949.783607	,537291.732772	,446.614929
,1125954.662099	,537294.061311	,446.878113
,1125956.151915	,537290.691020	,446.681702
,1125952.701023	,537287.384375	,446.697571
,1126151.259711	,537276.114547	,446.736511
,1126146.577512	,537272.903703	,446.667694
,1126148.026876	,537280.376673	,446.808960
,1126145.169667	,537283.473888	,446.793884
,1126143.803519	,537277.380387	,446.744812
,1126141.392410	,537281.088514	,446.606506
,1126141.443616	,537288.642828	,446.689270
,1126139.260820	,537291.354856	,446.745239
,1126134.709050	,537289.188242	,446.907867
,1126137.751180	,537285.828235	,446.429932
,1126135.945264	,537297.223984	,446.618225
,1126133.440076	,537300.348807	,446.612976
,1126129.754453	,537297.125644	,446.831451

Easting	Northing	Elevation
,1126132.397588	,537293.985722	,446.270660
,1126132.171434	,537294.009320	,446.196075
,1126131.001744	,537305.152752	,446.623047
,1126128.382154	,537306.954606	,446.180237
,1126127.162080	,537308.556152	,446.749054
,1126123.836499	,537305.144890	,446.364990
,1126127.056848	,537301.386581	,446.045898
,1126124.666274	,537313.231607	,446.149323
,1126121.604488	,537316.336497	,446.667419
,1126118.450748	,537313.782224	,446.739716
,1126120.414396	,537309.966304	,446.505280
,1126118.398864	,537320.539434	,446.485565
,1126115.271728	,537325.025945	,446.861481
,1126115.631368	,537316.466897	,446.277283
,1126111.533260	,537321.326680	,446.699646
,1126113.192124	,537329.621987	,446.724457
,1126110.557360	,537333.413316	,446.825104
,1126106.265173	,537329.212709	,446.959290
,1126109.170812	,537326.406163	,445.277222
,1126108.259677	,537337.482698	,446.678741
,1126105.021173	,537340.868411	,446.772552
,1126100.686392	,537337.789311	,446.529785
,1126103.875829	,537334.573896	,446.627228
,1126101.322055	,537344.828012	,446.348267
,1126098.820283	,537348.396174	,446.770172

Easting	Northing	Elevation
,1126095.131422	537345.542253	446.850342
,1126097.671560	537342.825259	446.000580
,1126095.279996	537352.705962	446.581665
,1126092.246862	537356.472196	446.459869
,1126089.267278	537353.614669	446.352448
,1126091.537534	537350.585673	446.631165
,1126089.700055	537361.433456	446.488068
,1126087.122632	537365.618266	446.824371
,1126083.306737	537362.136785	446.629395
,1126086.041455	537358.757434	446.575195
,1126081.529836	537373.224044	446.774963
,1126083.818246	537369.008826	446.551025
,1126077.884751	537370.002078	446.689758
,1126079.994952	537365.332328	446.707489
,1125959.782376	537287.140108	446.847229
,1125962.321273	537282.046743	446.810791
,1125964.225766	537290.492781	446.438843
,1125967.541021	537291.737822	446.718201
,1125967.561818	537291.688661	446.686218
,1125966.414113	537285.886470	446.487305
,1125970.764615	537288.914023	446.533234
,1125972.159703	537296.384765	446.748199
,1125975.809777	537298.495183	446.709106

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17
H2O S1	122	122	122	122	122	122	122	122	122	122	122	61	61	61	61	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	951	951	951	951	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	50	50	50	50	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	160	160	160	160	0	0
H2O S2	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0	0
H2O S3	61	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	951	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	160	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S4	0	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	0	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	0	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S5	0	61	122	122	122	122	122	122	61	61	0	31	122	122	122	122	122
PerOX S1	0	951	1,902	1,902	1,902	1,902	1,902	1,902	951	951	0	476	1,902	1,902	1,902	1,902	1,902
Catalyst S1	0	50	100	100	100	100	100	100	50	50	0	25	100	100	100	100	80
Solution Gal	0	160	320	320	320	320	320	320	160	160	0	80	320	320	320	320	320
H2O S6	0	0	0	61	61	61	0	0	0	0	0	0	0	61	122	122	122
PerOX S1	0	0	0	951	951	951	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	50	50	50	0	0	0	0	0	0	0	50	100	100	80
Solution Gal	0	0	0	160	160	160	0	0	0	0	0	0	0	160	320	320	320
H2O S7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	80
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320
H2O S8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	80
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	80
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	61
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	160
H2O S11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	161
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	200
H2O S12	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	400
H2O S13	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	400
H2O S14	0	0	0	0	0	0	0	0	0	0	0	0	0	31	122	122	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	476	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	25	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	80	320	320	400
H2O S15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	400

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 7**
***Date* : Thurs 9/17/15**

Prepared By:
Erik Hall

Weather:
Sunny 53-87°F

Site Hours:
0700-1745

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	12.5
Weston Solutions	Allie Balter	Field Technician	Sampling	12.5
ISOTEC	Mike Temple	Project Manager	Soil Mixing	12.5
ISOTEC	Mark Ratner	Site Manager	Soil Mixing	11.5
ISOTEC	Kevin O'Neil	Site Manger	Soil Mixing	12.5
LTC	Bill Lang	Project Manager	Soil Mixing	11.5
LTC	Bill Oberloier	Site Assistant	Soil Mixing	11.5
LTC	Dave Roe	Equipment Operator	Soil Mixing	11.5
LTC	Cody Shell	Equipment Operator	Soil Mixing	11.5

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) POV and (1) Chevy Express Cargo Van
- **ISOTEC** – (1)Penske Box Truck with various project tools and supplies
- **LTC** – (1)Caterpillar D5K2 Bulldozer, (1) Caterpillar 320E Excavator, (1) 20-LTC Dual Action Blender, (1) Mack Granite Tractor and lowboy trailer*, (1) Mack mixing truck, (1) JLC 8042 fork lift, (2) utility trucks, (1) office/utility trailer

DEVIATIONS FROM PROPOSED SCHEDULE

Retreated cells E12S1, E12S2, E13S1, E13S2, E14S1 and E14S2 after analytical results for E13S2 and E14S1 exceeded project goals.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Received 16 totes of 34% hydrogen peroxide (~4,000 gallons or 38,400 lbs).

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

TEST DATA

(List type and location of tests performed and results)

- See attached spreadsheets for analytical results of soil mixing cells and field test data for catch basins CB 5-6 and CB 6-7.

SAFETY COMMENTS/VIOLATIONS

- None

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- Repaired silt fence where fence was bent over by excavator bucket.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Perform review of erosion controls. Erosion controls are intact and working properly
- Collect aqueous samples from catch basins CB 5-6 and CB 6-7 for H2O2 and total iron. Refer to attached spreadsheet for results.
- Perimeter air monitoring with MultiRae. None of the action limits were triggered.

WORK COMPLETED- BY ISOTEC& SUBCONTRACTORS

- Received 16 totes of hydrogen peroxide
- Soil mixing into 20 cells
- Retreatment of 6 cells; apply a full dose to each retreated cell
- Peroxide and total iron field test kits of collected soil samples from 8 cells treated the previous day. Refer to attached spreadsheet for results.
- For more details refer attached Daily Reports from ISOTEC and Lang Tool.

AGREEMENTS

(Company Name – task description)

NHDES, WESTON, and ISOTEC agreed to retreat cells E12S1, E12S2, E13S1, E13S2, E14S, and E14S2 today and re-sample cells tomorrow.

Notes:
ISOTEC = In-Situ Oxidative Technologies, Inc.
LTC = Lang Tool Company

TREATMENT PROGRAM – MIXING SUMMARY

See attached Daily Reports from ISOTEC and Lang Tool

Photographs

Soil mixing (showing the barrier warning system)

The excavation from the southeast corner of the excavation looking north

Excavating for next row of cells

Soil mixing

Photographs (continued)

Monitoring the chemical injections from the soil mixing truck

Washing the blender at the end of the work day

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E17-S14	14-Sep	10:45	11:04	19	15-Sep	9	Next Day	0.0	0	20.0	NA	NA	
						11		0.0	0	14.0	NA	NA	
						13		0.0	0	28.0	100 U	40 U	Sample Sent to Lab 9/15. Results received 9/16.
E17-S13	14-Sep	11:05	11:20	15	15-Sep	9	Next Day	0.0	0	12.0	NA	NA	
						11		0.0	0	63.0	NA	NA	
						13		0.0	0	32.0	50 U	20 U	Sample Sent to Lab 9/15. Results received 9/16.
E17-S11	14-Sep	11:36	11:42	7	15-Sep	9	Next Day	0.0	0	10.0	NA	NA	
						11		0.0	0	12.0	NA	NA	
						13		0.0	0	18.0	100 U	40 U	Sample Sent to Lab 9/15. Results received 9/16.
E17-S9	14-Sep	11:52	12:17	25	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	9.0	NA	NA	
						13		0.0	0	15.0	100 U	40 U	Sample Sent to Lab 9/16. Results received 9/17.
E17-S7	14-Sep	13:07	13:22	15	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	8.0	NA	NA	
						13		0.0	0	5.0	100 U	40 U	Sample Sent to Lab 9/16. Results received 9/17.
E17-S6	14-Sep	13:23	13:38	15	15-Sep	9	Next Day	0.0	0	11.0	NA	NA	
						11		0.0	0	6.0	NA	NA	
						13		0.0	0	12.0	100 U	30 U	Sample Sent to Lab 9/16. Results received 9/17.
E17-S5	14-Sep	13:39	14:08	29	15-Sep	9	Next Day	0.0	0	6.0	NA	NA	
						11		0.0	0	4.0	NA	NA	
						13		0.0	0	6.0	100 U	40 U	Sample Sent to Lab 9/16. Results received 9/17.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E13-S2	14-Sep	16:16	16:33	17	15-Sep	9	Next Day	0.0	0	12.0	NA	NA	
						11		0.0	0	8.0	NA	NA	
						13		0.0	0	8.0	200	110	Sample Sent to Lab 9/16. Results received 9/17. Exceedance detected. Cell retreated on 9/17.
E14-S1	14-Sep	15:05	15:19	14	15-Sep	9	Next Day	0.0	0	6.0	NA	NA	
						11		0.0	0	12.0	NA	NA	
						13		0.0	0	8.0	100 U	160	Sample Sent to Lab 9/16. Results received 9/17. Exceedance detected. Cell retreated on 9/17.
E15-S2	14-Sep	15:20	15:35	15	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	10.0	NA	NA	
						13		0.0	0	8.0	100 U	50	Sample Sent to Lab 9/16. Results received 9/17.
E11-S2	15-Sep	9:00	9:18	18	16-Sep	11	Next Day	0.0	0	5.0	NA	NA	.
						13		0.0	0	10.0	100	60	Sample Sent to Lab 9/16. Results received 9/17.
E7-S1	15-Sep	12:05	12:22	17	16-Sep	13	Next Day	0.0	1	12.0	100	30	Sample Sent to Lab 9/16. Results received 9/17.
E9-S2	15-Sep	10:46	11:08	22	16-Sep	9	Next Day	0.0	0.0	4.0	NA	NA	
						11		0.0	0.0	9.0	100	50	
						13		0.0	0.8	6.0	NA	NA	Sample Sent to Lab 9/16. Results received 9/17.
E10-S1	15-Sep	8:38	8:59	21	16-Sep	13	Next Day	0.0	0.0	6.0	100	30	Sample Sent to Lab 9/16. Results received 9/17.
E8-S1	15-Sep	11:09	11:31	22	16-Sep	13	Next Day	0.0	0.0	7.0	100	60	Sample Sent to Lab 9/16. Results received 9/17.
E6-S2	15-Sep	13:37	13:57	20	16-Sep	13	Next Day	0.1	0.0	4.0	100	30 J	Sample Sent to Lab 9/16. Results received 9/17.
E5-S2	15-Sep	14:19	14:39	20	16-Sep	13	Next Day	0.1	0.0	10.0	50 J	20 J	Sample Sent to Lab 9/16. Results received 9/17.
E5-S1	15-Sep	13:58	14:18	20	16-Sep	13	Next Day	0.0	0.0	5.0	100	30	Sample Sent to Lab 9/16. Results received 9/17.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E3-S2	15-Sep	15:41	16:03	22	16-Sep	13	Next Day	0.1	0.0	4.0	100 U	30 U	Sample Sent to Lab 9/16. Results received 9/17.
E3-S1	15-Sep	15:20	15:40	20	16-Sep	13	Next Day	0.1	0.0	8.0	100 U	30 U	Sample Sent to Lab 9/16. Results received 9/17.
E4-S3	16-Sep	15:20	15:50	30	17-Sep	11	Next Day	0.0	1.0	5.0			Sample Sent to Lab 9/17.
						13		0.0	0.0	10.0			
E5-S3	16-Sep	15:50	16:20	30	17-Sep	11	Next Day	0.0	1.0	3.0			
						13		0.0	0.0	6.0			Sample Sent to Lab 9/17.
E16-S14	16-Sep	9:22	9:46	24	17-Sep	11	Next Day	0.1	0.0	9.0			Sample Sent to Lab 9/17.
						13		0.1	0.0	5.0			
E16-S11	16-Sep	10:28	10:48	20	17-Sep	13	Next Day	0.0	0.0	8.0			Sample Sent to Lab 9/17.
E1-S2	16-Sep	8:10	8:36	26	17-Sep	13	Next Day	0.0	0.0	7.0			Sample Sent to Lab 9/17.
E16-S6	16-Sep	12:33	12:54	21	17-Sep	13	Next Day	0.1	0.0	2.0			Sample Sent to Lab 9/17.
E16-S9	16-Sep	11:09	11:28	19	17-Sep	13	Next Day	0.1	0.0	9.0			Sample Sent to Lab 9/17.
E16-S3	16-Sep	13:43	14:08	25	17-Sep	13	Next Day	0.1	0.0	7.0			Sample Sent to Lab 9/17.

Note:
Cell Locations = ID locations of the treatment cells that were sampled after the cell was mixed/blended.
FT BGS = Feet below ground surface.
PPM = Parts per million
NA = Not Analyzed
µg/kg = Micrograms per kilogram
Sample Collection Time = Samples collected the morning after day of mixing.
1,1-DCE = 1,1-Dichloroethene (criteria of ≤60 µg/kg)
1,1,1-TCA = 1,1,1-Trichloroethane (criteria of ≤150 µg/kg)
U=Compound was not detected and the reporting limit is shown.
Blue shading indicates results were nondetect for the compounds indicated.
Yellow highlighting indicates detection at or below the criteria for the compound indicated.
Red highlighting indicates detection above the crietria for the compound indicated.
Field testing for hydrogen peroxide was conducted using Quantofix Peroxide 100 test strips.

TABLE 1
STORM DRAIN MONITORING FIELD DATASHEET
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NH

Catch Basin Location	Date	Time	Collected By	Hydrogen Peroxide Concentration (ppm)	Dissolved Iron Concentration (ppm)	Notes
CB5-6	9/15/2015	1630	AB	0	1.0	
	9/16/2015	1115	AB	0	0.4	
	9/16/2015	1643	AB	0	0.1	
	9/17/2015	1021	AB	0	1.4	
	9/17/2015	1610	AB	0	0.3	
CB6-7	9/16/2015	1115	AB	0	1.0	
	9/16/2015	1643	AB	0	0.5	
	9/17/2015	1011	AB	0	1.0	
	9/17/2015	1620	AB	0	0.2	

Notes:
ppm = Parts per million

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	17-Sep-15	Client:	Weston	Personnel:	Mike, Mark, Kevin, Bill L, Bill O, Cody, Dave
Project:	KMC Site, Conway, NH	Job Number:	801991	Weather:	Sunny, 58-86

Personnel Names	Time		Mobilization To & From	Safety Meeting	Equipment Preparation	Sampling Wells &	Mixing Time	De-Con. Equipment	Data Entry	Other (Lunch)
	Start	Stop	Job Site			Analysis			Time	
Mike Temple	7:00 AM	7:45 PM	0.25	0.25	0.75		9.5	1.00	1.0	0.5
Mark Ratner	7:00 AM	6:45 PM	0.25	0.25	0.75	2.0	7.5	1.00		0.5
Kevin O'Neal	7:00 AM	7:45 PM	0.25	0.25	0.75	4.0	5.5	1.00	1.0	0.5
Bill Lang	7:00 AM	6:45 PM	0.25	0.25	0.75		9.5	1.0		0.5
Bill Oberloier	7:00 AM	6:45 PM	0.25	0.25	0.75		9.5	1.0		0.5
Dave Roe	7:00 AM	6:45 PM	0.25	0.25	0.75		9.5	1.0		0.5
Cody Shell	7:00 AM	6:45 PM	0.25	0.25	0.75		9.5	1.0		0.5
TOTAL HOURS =	11.25		TOTAL MIXING HOURS =			9.50				

Support Equipment and Services	Quantity	Hours	Catalyst Volume		H2O2 Volume		Catalyst Volume		H2O2 Volume	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			E6-S3	100	E6-S3	320	E15-S8	50	E15-S8	160
Generator			E7-S3	100	E7-S3	320	E15-S9	50	E15-S9	160
Mixers			E8-S3	100	E8-S3	320	E15-S10	100	E15-S10	320
Equipment Set			E9-S3	100	E9-S3	320	E15-S11	100	E15-S11	320
Vehicle(s) utilized			E10-S3	100	E10-S3	320	E15-S12	100	E15-S12	320
Raw Materials Used			E11-S3	100	E11-S3	320	E15-S13	100	E15-S13	320
Powder Catalyst	445.9	lbs.	E12-S3	100	E12-S3	320	E14-S12	50	E14-S12	160
Liquid Catalyst	2175	Gallons	E13-S3	100	E13-S3	320	E14-S13	50	E14-S13	160
34% H2O2	4350	Gallons	E14-S3	100	E14-S3	320	E15-S14	100	E15-S14	320
Diluted H2O2	6960	Gallons	E15-S3	100	E15-S3	320	E14-S14	25	E14-S14	80
34% H2O2	41760	lbs.	E12-S1 (R)	50	E12-S1 (R)	160	E13-S2 (R)	100	E13-S2 (R)	320
			E12-S2 (R)	100	E12-S2 (R)	320	E14-S1 (R)	50	E14-S1 (R)	160
			E13-S1 (R)	50	E13-S1 (R)	160	E14-S2 (R)	100	E14-S2 (R)	320
			TOTAL INJECTION VOLUME =		9135					

Major Work Activities Performed:

Daily safety meeting. Equipment preparation, received 16 totes of hydrogen peroxide, soil mixing into 20 cells and re-mixing into 6 cells. Sampling of the down-gradient catch basin for iron and hydrogen peroxide levels. Samples collected from cells E13-S2 and E14-S1 came back above site criteria and were subsequently re-mixed. All other samples collected during previous days came back below site sampling criteria levels. Collected soil samples from 8 cells treated the previous day (E4-S3, E5-S3, E16-S14, E16-S11, E1-S2, E16-S6, E16-S9 and E16-S3). Samples were collected from 2 depth intervals (at approximately 9, 11 and 13 ft bgs) at select cells to confirm adequate mixing occurred. Samples appeared to be fairly consistent with one another and looked visually well mixed. Similar to previous days samples, mixing proceeded very well with the DAB being able to push down through the saturated soil matrix with little to no resistance and bubbling within the treated areas could be seen throughout the day. Approximately 1-2 feet of swelling was observed within treated rows during soil mixing. Cells identified by Weston as having historical soil impacts (E13-S3 and E14-S3) were mixed longer than other treated cells.

Health and Safety Items Covered:

General site safety topics during the daily safety meeting between ISOTEC (Mike Temple, Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall, Allie Balter). Delivery truck driver on-site for chemical delivery.

Unforeseen Site Conditions:

List of Deliveries:

Received 16 totes of 34% hydrogen peroxide (~4,000 gallons or 38,400 lbs).

Other Comments (Work delays, inspections results, etc.):

Re-mixed cells E12-S1, E12-S2, E13-S1, E13-S2, E14-S1 and E14-S2.

TREATMENT PROGRAM - MIXING VOLUME SUMMARY
KMC Site, Conway, New Hampshire
ISOTEC PROJECT #801991

DATE:	17-Sep-15

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Catalyst (lbs)	34% H2O2 (lbs)	Cell Dimensions
E6-S3	7:58	8:22	24	100	320	17.5	420	20.5	1920	10' x 10'
E7-S3	8:22	8:48	26	100	320	16.2	420	20.5	1920	10' x 10'
E8-S3	8:51	9:20	29	100	320	14.5	420	20.5	1920	10' x 10'
E9-S3	9:21	9:47	26	100	320	16.2	420	20.5	1920	10' x 10'
E10-S3	9:48	10:17	29	100	320	14.5	420	20.5	1920	10' x 10'
E11-S3	10:18	10:42	24	100	320	17.5	420	20.5	1920	10' x 10'
E12-S3	10:43	11:06	23	100	320	18.3	420	20.5	1920	10' x 10'
E13-S3	11:07	11:37	30	100	320	14.0	420	20.5	1920	10' x 10'
E14-S3	11:37	12:06	29	100	320	14.5	420	20.5	1920	10' x 10'
E15-S3	12:33	12:59	26	100	320	16.2	420	20.5	1920	10' x 10'
E15-S8	13:02	13:14	12	50	160	17.5	210	10.25	960	5' x 10'
E15-S9	13:14	13:26	12	50	160	17.5	210	10.25	960	5' x 10'
E15-S10	13:27	13:50	23	100	320	18.3	420	20.5	1920	10' x 10'
E15-S11	13:50	14:11	21	100	320	20.0	420	20.5	1920	10' x 10'
E15-S12	14:11	14:37	26	100	320	16.2	420	20.5	1920	10' x 10'
E15-S13	14:37	14:59	22	100	320	19.1	420	20.5	1920	10' x 10'
E14-S12	14:59	15:11	12	50	160	17.5	210	10.25	960	5' x 10'
E14-S13	15:11	15:23	12	50	160	17.5	210	10.25	960	5' x 10'
E15-S14	15:23	15:50	27	100	320	15.6	420	20.5	1920	10' x 10'
E14-S14	15:50	15:58	8	25	80	13.1	105	5.125	480	5' x 5'
E12-S1 (Re-mix)	17:47	17:59	12	50	160	17.5	210	10.25	960	5' x 10'
E12-S2 (Re-mix)	17:24	17:47	23	100	320	18.3	420	20.5	1920	10' x 10'
E13-S1 (Re-mix)	17:14	17:24	10	50	160	21.0	210	10.25	960	5' x 10'
E13-S2 (Re-mix)	16:50	17:14	24	100	320	17.5	420	20.5	1920	10' x 10'
E14-S1 (Re-mix)	16:37	16:50	13	50	160	16.2	210	10.25	960	5' x 10'
E14-S2 (Re-mix)	16:06	16:37	31	100	320	13.5	420	20.5	1920	10' x 10'
DAY TOTAL/ AVERAGE				2175	6960		9135	445.9	41760	

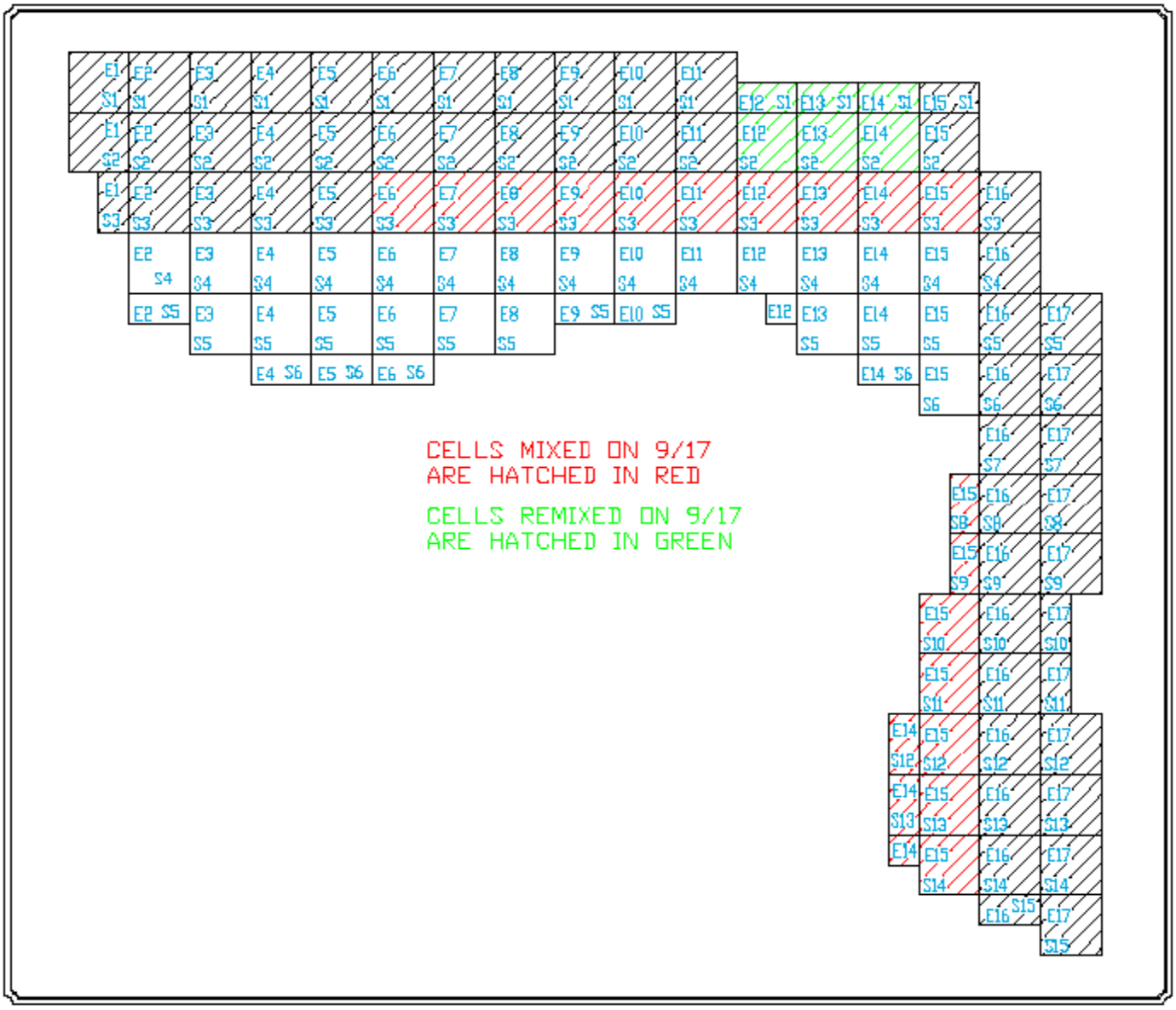
Lang Tool Co.

2520 Glidden Rd.
Beaverton, MI 48612

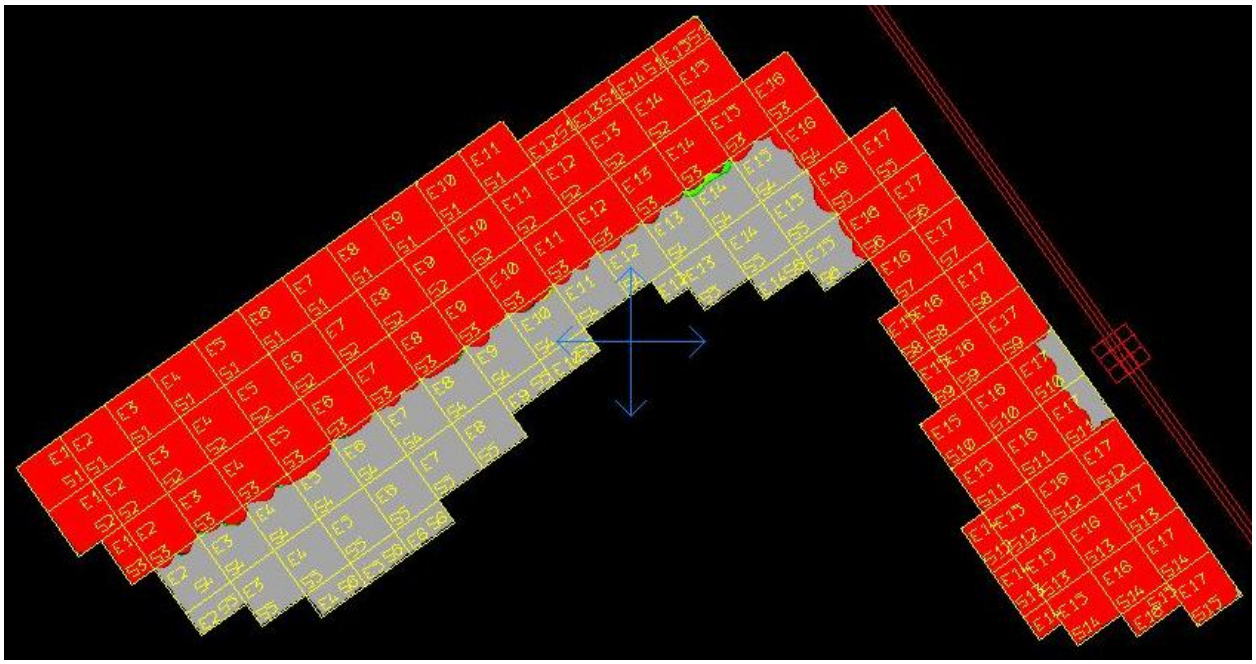
www.langtool.com
bill@langtool.com

Phone (989) 435-9864
Fax (989) 435-4311

September 17, 2015



Areas mixed to 447 MSL area colored green by the Dual Axis Blender on board computer.
Areas mixed below 447 are colored red.



Metering Plunge Point Coordinates

Easting	Northing	Elevation
,1125996.779084	537312.807222	446.725494
,1125996.819381	537312.836679	446.729553
,1125997.086167	537312.638246	446.525757
,1126000.046736	537314.933894	446.807220
,1126000.450747	537308.914674	446.694916
,1126003.325637	537311.414191	446.808380
,1126005.711383	537318.629926	446.617218
,1126004.577958	537318.467981	446.538025
,1126008.425817	537320.806497	446.635010
,1126006.856059	537315.094087	446.839600
,1126011.676526	537317.073133	446.785400
,1126013.118970	537324.647642	446.678589
,1126015.927850	537327.139280	446.955322
,1126015.820779	537320.223367	446.555328
,1126019.235036	537322.986466	446.757050
,1126021.564256	537329.325098	446.805634
,1126024.607904	537332.249612	446.746521
,1126023.907668	537326.715495	446.568268
,1126023.891774	537326.608615	446.535858
,1126026.973939	537329.042531	446.035278
,1126028.850314	537336.274057	446.751038
,1126032.248889	537338.171296	446.810486
,1126031.312871	537331.460830	446.821381
,1126035.880014	537334.153247	446.579315
,1126035.867618	537334.135368	446.609283

Easting	Northing	Elevation
,1126035.944413	537334.108007	446.578094
,1126035.259967	537333.458721	446.782532
,1126037.515744	537341.933277	446.302948
,1126041.062979	537344.438809	446.785980
,1126041.087524	537344.477002	446.828888
,1126039.806050	537337.880058	446.836121
,1126043.827402	537340.175591	446.855560
,1126044.835073	537347.540245	446.597260
,1126047.556647	537343.740739	446.872009
,1126047.606999	537343.799132	446.910065
,1126047.687070	537343.846870	446.909851
,1126051.468212	537346.169963	446.696259
,1126048.758509	537350.668704	446.806763
,1126053.370296	537352.771398	446.739227
,1126053.265064	537352.716041	446.764404
,1126057.320213	537355.340661	446.605560
,1126055.858174	537349.509999	446.571991
,1126059.418379	537352.155387	446.692017
,1126060.928777	537359.176770	446.677795
,1126064.032933	537354.699109	446.572021
,1126064.228845	537354.853385	446.601349
,1126064.056169	537354.658063	446.608673
,1126067.920200	537357.000787	446.646088
,1126065.496728	537361.556636	446.705719
,1126073.645532	537368.052474	446.708893

Easting	Northing	Elevation
,1126069.473338	537365.302959	446.357513
,1126071.991986	537360.304502	446.148407
,1126076.424028	537363.505187	446.503815
,1126102.353930	537326.933400	446.906677
,1126105.716033	537323.482591	446.661072
,1126108.881029	537318.891208	446.505859
,1126110.454565	537314.927848	446.659607
,1126110.588780	537308.183288	445.968719
,1126116.787269	537306.435728	446.545471
,1126116.830125	537306.396692	446.557922
,1126112.596831	537304.997722	446.504700
,1126112.585344	537304.989423	446.484772
,1126112.584457	537304.993855	446.490509
,1126112.624790	537304.992310	446.520477
,1126112.611936	537304.992019	446.499786
,1126120.305066	537301.654662	446.482941
,1126122.837558	537298.011433	446.308167
,1126116.190683	537299.193242	446.034790
,1126118.319659	537295.500964	445.799408
,1126125.815526	537294.868583	446.096619
,1126128.073354	537290.068807	446.657898
,1126121.120937	537290.359084	446.415131
,1126124.215436	537287.980317	446.804718

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17
H2O S1	122	122	122	122	122	122	122	122	122	122	122	122	122	122	61	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	951	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	50	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	320	320	320	160	0	0
H2O S2	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0	0
H2O S3	61	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	951	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	160	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S4	0	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	0	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	0	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S5	0	61	122	122	122	122	122	122	61	61	0	31	122	122	122	122	122
PerOX S1	0	951	1,902	1,902	1,902	1,902	1,902	1,902	951	951	0	476	1,902	1,902	1,902	1,902	1,902
Catalyst S1	0	50	100	100	100	100	100	100	50	50	0	25	100	100	100	100	100
Solution Gal	0	160	320	320	320	320	320	320	160	160	0	80	320	320	320	320	320
H2O S6	0	0	0	61	61	61	0	0	0	0	0	0	0	61	122	122	122
PerOX S1	0	0	0	951	951	951	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	50	50	50	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	160	160	160	0	0	0	0	0	0	0	160	320	320	320
H2O S7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320
H2O S8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	61
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	160
H2O S11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	320
H2O S12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	476	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	320	320
H2O S15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 8**
***Date* : Friday 9/18/15**

Prepared By:
Erik Hall

Weather:
Sunny 53-86°F

Site Hours:
0700-1800

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
U.S. EPA	Darryl Luce	Remedial Proj. Manager	Site Visit	3.5
Weston Solutions	Vinnie DelloRusso	Project Manager	Site Visit	6
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	11
Weston Solutions	Allie Balter	Field Technician	Sampling	11
ISOTEC	Mike Temple	Project Manager	Soil Mixing	11
ISOTEC	Mark Ratner	Site Manager	Soil Mixing	10
ISOTEC	Kevin O'Neil	Site Manger	Soil Mixing	11
LTC	Bill Lang	Project Manager	Soil Mixing	10
LTC	Bill Oberloier	Site Assistant	Soil Mixing	10
LTC	Dave Roe	Equipment Operator	Soil Mixing	10
LTC	Cody Shell	Equipment Operator	Soil Mixing	10

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (2) POV and (1) Chevy Express Cargo Van
- **ISOTEC** – (1)Penske Box Truck with various project tools and supplies
- **LTC** – (1)Caterpillar D5K2 Bulldozer, (1) Caterpillar 320E Excavator, (1) 20-LTC Dual Action Blender, (1) Mack Granite Tractor and lowboy trailer*, (1) Mack mixing truck, (1) JLC 8042 fork lift, (2) utility trucks, (1) office/utility trailer

DEVIATIONS FROM PROPOSED SCHEDULE

None.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Received 26 totes of 34% hydrogen peroxide.
- Returned 32 empty totes to Mann Chemical.

TEST DATA

(List type and location of tests performed and results)

- See attached spreadsheets for analytical results of soil mixing cells and field test data for catch basins CB 5-6 and CB 6-7.

SAFETY COMMENTS/VIOLATIONS

- None

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None

WORK COMPLETED- BY WESTON

- Construction oversight.
- Perform review of erosion controls. Erosion controls are intact and working properly
- Collect aqueous samples from catch basins CB 5-6 and CB 6-7 for H2O2 and total iron. Refer to attached spreadsheet for results.
- Collected soil samples from 10 cells treated the previous day. Refer to attached spreadsheet for results.
- Review analytical data received from off-site laboratory.
- Perimeter air monitoring with MultiRae. None of the action limits were triggered.

WORK COMPLETED- BY ISOTEC& SUBCONTRACTORS

- Soil mixing into 20 cells
- Received 26 totes of hydrogen peroxide (returned 32 empty totes), soil mixing into 20 cells.
- Peroxide and total iron field test kits of collected soil samples from 10 cells treated the previous day. Refer to attached spreadsheet for results.
- For more details refer attached Daily Reports from ISOTEC and Lang Tool.

AGREEMENTS

(Company Name – task description)

None.

Notes:
ISOTEC = In-Situ Oxidative Technologies, Inc.
LTC = Lang Tool Company

TREATMENT PROGRAM – MIXING SUMMARY

See attached Daily Reports from ISOTEC and Lang Tool

Photographs

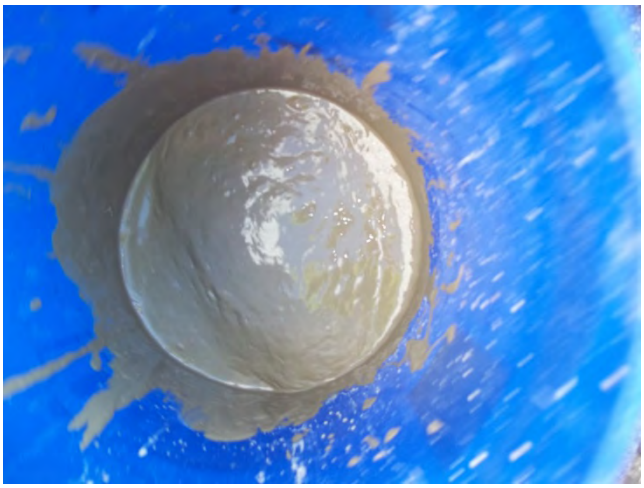
Stainless steel well casing found wrapped around blender head

Soil mixing activities

Looking north from the southeast corner of the excavation

Soil mixing

Photographs (continued)



Typical soil sample (adequately mixed)

Looking south from the northeast corner of the excavation

Kearsarge Metallurgical Superfund Site
Soil mixing mixing with ISCO
Project Status - 9/18/2015

11-DCE=160 ug/kg

1,1-DCE=110 ug/kg
TCA= 200 ug/kg

Cells E12S1, E12S2, E13S1, E13S2, E14S1, E14S2 were remixed on 9/17/15 and re-sampled on 9/18/15.

Poplar Trees

TOP SOIL STOCK PILE

REAGENT DELIVERY EQUIPMENT

MWS-205

MW-3004

MW-3006

MW-3005

MW-3007

MW-3008

MW-3009

MW-3010

MW-207A

MWS-114

EW-13B

MW-4004

TEMPORARY SECURITY FENCE

SOIL TREATMENT AREA (9,076 SQFT)

CELL LAYOUT (10,100 SQFT)

STORM DRAIN

EXTENT OF BERMED SOIL REMOVED FROM EXCAVATION

APPROX. LOCATION OF EXIST. UNDERGROUND COLLECTION TRENCH

NOTE:
ALL CELLS ARE 10'x10', 10'x5', OR 5'x5'.

GRAPHIC SCALE
10 5 0 5 10
APPROXIMATE SCALE IN FEET

Legend

Analytical passed

Cell exceeded the project action limit

Cell mixed; awaiting analytical

Cell was mixed >24 hrs ago

Cell was mixed <24 hrs ago

Cell selected for pre-remedial sampling due to historical soil data

IN SITU SOIL TREATMENT
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NEW HAMPSHIRE

NO.	DATE	APPR.	REVISION

CHECKED	DATE
DES. ENG.	
PROJ. ENG.	
PROJ. MGR.	
APPROVED	
APPROVED	

CLIENT APPROVALS	DATE
ISSUED FOR	DATE

SOIL TREATMENT CELL LAYOUT

DRAWN	DATE	FIGURE NO.	REV. NO.
BEG	AUG 2015	5	
SCALE	W.O. NO.	SHT.	OF
AS SHOWN	20118.015.003		

M:\Design\DWG\KRSARGE\2015\Work Plan\FIG 5.dwg, Layout1, 9/4/2015 11:42:33 AM, girardeb, 1:2

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E17-S14	14-Sep	10:45	11:04	19	15-Sep	9	Next Day	0.0	0	20.0	NA	NA	
						11		0.0	0	14.0	NA	NA	
						13		0.0	0	28.0	100 U	40 U	Sample sent to lab on 9/15. Results received on 9/16.
E17-S13	14-Sep	11:05	11:20	15	15-Sep	9	Next Day	0.0	0	12.0	NA	NA	
						11		0.0	0	63.0	NA	NA	
						13		0.0	0	32.0	50 U	20 U	Sample sent to lab on 9/15. Results received on 9/16.
E17-S11	14-Sep	11:36	11:42	7	15-Sep	9	Next Day	0.0	0	10.0	NA	NA	
						11		0.0	0	12.0	NA	NA	
						13		0.0	0	18.0	100 U	40 U	Sample sent to lab on 9/15. Results received on 9/16.
E17-S9	14-Sep	11:52	12:17	25	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	9.0	NA	NA	
						13		0.0	0	15.0	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.
E17-S7	14-Sep	13:07	13:22	15	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	8.0	NA	NA	
						13		0.0	0	5.0	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.
E17-S6	14-Sep	13:23	13:38	15	15-Sep	9	Next Day	0.0	0	11.0	NA	NA	
						11		0.0	0	6.0	NA	NA	
						13		0.0	0	12.0	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
E17-S5	14-Sep	13:39	14:08	29	15-Sep	9	Next Day	0.0	0	6.0	NA	NA	
						11		0.0	0	4.0	NA	NA	
						13		0.0	0	6.0	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E13-S2	14-Sep	16:16	16:33	17	15-Sep	9	Next Day	0.0	0	12.0	NA	NA	
						11		0.0	0	8.0	NA	NA	
						13		0.0	0	8.0	200	110	Sample sent to lab on on 9/16. Results received on 9/17. Exceedance detected. Cell retreated on 9/17. Analytical data received on 9/19/15 with results below
E14-S1	14-Sep	15:05	15:19	14	15-Sep	9	Next Day	0.0	0	6.0	NA	NA	
						11		0.0	0	12.0	NA	NA	
						13		0.0	0	8.0	100 U	160	Sample sent to lab on on 9/16. Results received on 9/17. Exceedance detected. Cell retreated on 9/17. Analytical data received on 9/19/15 with results below
E15-S2	14-Sep	15:20	15:35	15	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	10.0	NA	NA	
						13		0.0	0	8.0	100 U	50	Sample sent to lab on 9/16. Results received on 9/17.
E11-S2	15-Sep	9:00	9:18	18	16-Sep	11	Next Day	0.0	0	5.0	NA	NA	.
						13		0.0	0	10.0	100	60	Sample sent to lab on 9/16. Results received on 9/17.
E7-S1	15-Sep	12:05	12:22	17	16-Sep	13	Next Day	0.0	1	12.0	100	30	Sample sent to lab on 9/16. Results received on 9/17.
E9-S2	15-Sep	10:46	11:08	22	16-Sep	9	Next Day	0.0	0.0	4.0	NA	NA	
						11		0.0	0.0	9.0	100	50	
						13		0.0	0.8	6.0	NA	NA	Sample sent to lab on 9/16. Results received on 9/17.
E10-S1	15-Sep	8:38	8:59	21	16-Sep	13	Next Day	0.0	0.0	6.0	100	30	Sample sent to lab on 9/16. Results received on 9/17.
E8-S1	15-Sep	11:09	11:31	22	16-Sep	13	Next Day	0.0	0.0	7.0	100	60	Sample sent to lab on 9/16. Results received on 9/17.
E6-S2	15-Sep	13:37	13:57	20	16-Sep	13	Next Day	0.1	0.0	4.0	100	30 J	Sample sent to lab on 9/16. Results received on 9/17.
E5-S2	15-Sep	14:19	14:39	20	16-Sep	13	Next Day	0.1	0.0	10.0	50 J	20 J	Sample sent to lab on 9/16. Results received on 9/17.
E5-S1	15-Sep	13:58	14:18	20	16-Sep	13	Next Day	0.0	0.0	5.0	100	30	Sample sent to lab on 9/16. Results received on 9/17.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E3-S2	15-Sep	15:41	16:03	22	16-Sep	13	Next Day	0.1	0.0	4.0	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
E3-S1	15-Sep	15:20	15:40	20	16-Sep	13	Next Day	0.1	0.0	8.0	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
E4-S3	16-Sep	15:20	15:50	30	17-Sep	11	Next Day	0.0	1.0	5.0	100	40	Sample sent to lab on 9/17. Results received on 9/18.
						13		0.0	0.0	10.0	NA	NA	
E5-S3	16-Sep	15:50	16:20	30	17-Sep	11	Next Day	0.0	1.0	3.0	NA	NA	
						13		0.0	0.0	6.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S14	16-Sep	9:22	9:46	24	17-Sep	11	Next Day	0.1	0.0	9.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
						13		0.1	0.0	5.0	NA	NA	
E16-S11	16-Sep	10:28	10:48	20	17-Sep	13	Next Day	0.0	0.0	8.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E1-S2	16-Sep	8:10	8:36	26	17-Sep	13	Next Day	0.0	0.0	7.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S6	16-Sep	12:33	12:54	21	17-Sep	13	Next Day	0.1	0.0	2.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S9	16-Sep	11:09	11:28	19	17-Sep	13	Next Day	0.1	0.0	9.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S3	16-Sep	13:43	14:08	25	17-Sep	13	Next Day	0.1	0.0	7.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E10-S3	17-Sep	9:48	10:17	29	18-Sep	13	Next Day	0.1	0.0	7.0			Sample sent to lab on 9/18.
E13-S3	17-Sep	11:07	11:37	20	18-Sep	13	Next Day	0.1	0.0	4.0			Sample sent to lab on 9/18.
E14-S12	17-Sep	14:59	15:11	12	18-Sep	13	Next Day	0.0	0.0	10.0			Sample sent to lab on 9/18.
E14-S3	17-Sep	11:37	12:00	23	18-Sep	13	Next Day	0.2	0.0	2.0			Sample sent to lab on 9/18.
E15-S8	17-Sep	13:02	13:14	12	18-Sep	13	Next Day	0.0	0.0	5.0			Sample sent to lab on 9/18.
E15-S10	17-Sep	13:27	13:50	23	18-Sep	13	Next Day	0.0	0.0	3.0			Sample sent to lab on 9/18.
E15-S14	17-Sep	15:23	15:50	27	18-Sep	13	Next Day	0.0	0.0	8.0			Sample sent to lab on 9/18.
E15-S3	17-Sep	12:33	12:59	26	18-Sep	13	Next Day	0.0	0.0	7.0			Sample sent to lab on 9/18.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E12-S1	17-Sep	17:42	17:59	17	18-Sep	11	Next Day	0.0	0.0	3.0			Retreated cell on 9/17. Sample sent to lab on 9/18.
						13		0.0	0.0	5.0			Retreated cell on 9/17.
E12-S2	17-Sep	17:24	17:42	18	18-Sep	11	Next Day	0.0	0.0	5.0			Retreated cell on 9/17.
						13		0.1	0.0	5.0			Retreated cell on 9/17. Sample sent to lab on 9/18.
E13-S1	17-Sep	17:14	17:24	10	18-Sep	11	Next Day	0.0	0.0	3.0			Retreated cell on 9/17.
						13		0.0	0.0	6.0			Retreated cell on 9/17. Sample sent to lab on 9/18.
E13-S2	17-Sep	16:50	17:14	24	18-Sep	11	Next Day	0.0	0.0	4.0			Retreated cell on 9/17.
						13		0.1	0.0	5.0			Retreated cell on 9/17. Sample sent to lab on 9/18.
E14-S1	17-Sep	16:37	16:50	13	18-Sep	11	Next Day	0.1	0.0	6.0			Retreated cell on 9/17. Sample sent to lab on 9/18.
						13		0.0	0.0	8.0			Retreated cell on 9/17.
E14-S2	17-Sep	16:06	16:37	31	18-Sep	11	Next Day	0.0	0.0	7.0			Retreated cell on 9/17.
						13		0.0	0.0	3.0			Retreated cell on 9/17. Sample sent to lab on 9/18.

Note:
Cell Locations = ID locations of the treatment cells that were sampled after the cell was mixed/blended.
FT BGS = Feet below ground surface.
PPM = Parts per million
NA = Not Analyzed
µg/kg = Micrograms per kilogram
Sample Collection Time = Samples collected the morning after day of mixing.
1,1-DCE = 1,1-Dichloroethene (criteria of ≤60 µg/kg)
1,1,1-TCA = 1,1,1-Trichloroethane (criteria of ≤150 µg/kg)
U=Compound was not detected and the reporting limit is shown.
Blue shading indicates results were nondetect for the compounds indicated.
Yellow highlighting indicates detection at or below the criteria for the compound indicated.
Red highlighting indicates detection above the crietria for the compound indicated.
Field testing for hydrogen peroxide was conducted using Quantofix Peroxide 100 test strips.

TABLE 1
STORM DRAIN MONITORING FIELD DATASHEET
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NH

Catch Basin Location	Date	Time	Collected By	Hydrogen Peroxide Concentration (ppm)	Dissolved Iron Concentration (ppm)	Notes
CB5-6	9/15/2015	1630	AB	0	1.0	
	9/16/2015	1115	AB	0	0.4	
	9/16/2015	1643	AB	0	0.1	
	9/17/2015	1021	AB	0	1.4	
	9/17/2015	1610	AB	0	0.3	
	9/18/2015	1102	AB	0	0.6	
	9/18/2015	1610	AB	0	0.2	
CB6-7	9/16/2015	1115	AB	0	1.0	
	9/16/2015	1643	AB	0	0.5	
	9/17/2015	1011	AB	0	1.0	
	9/17/2015	1620	AB	0	0.2	
	9/18/2015	1112	AB	0	0.8	
	9/18/2015	1603	AB	0	0.1	

Notes:
ppm = Parts per million

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**18-Sep-15**		Client:	**Weston**		Personnel:	**Mike, Mark, Kevin, Bill L, Bill O, Cody, Dave**			
Project:	**KMC Site, Conway, NH**		Job Number:	**801991**		Weather:	**Sunny, 52-85**			
	Time		Mobilization	Safety	Equipment	Sampling	Mixing	De-Con.	Data	Other
Personnel Names			To & From	Meeting	Preparation	Wells &	Time	Equipment	Entry	(Lunch)
	Start	Stop	Job Site			Analysis			Time	
Mike Temple	7:00 AM	6:00 PM	0.25	0.25	0.75		8.5	0.5	0.5	0.5
Mark Ratner	7:00 AM	5:30 PM	0.25	0.25	0.75	2.0	6.5	0.5		0.5
Kevin O'Neal	7:00 AM	6:00 PM	0.25	0.25	0.75	4.0	4.5	0.5	0.5	0.5
Bill Lang	7:00 AM	5:30 PM	0.25	0.25	0.75		8.5	0.5		0.5
Bill Oberloier	7:00 AM	5:30 PM	0.25	0.25	0.75		8.5	0.5		0.5
Dave Roe	7:00 AM	5:30 PM	0.25	0.25	0.75		8.5	0.5		0.5
Cody Shell	7:00 AM	5:30 PM	0.25	0.25	0.75		8.5	0.5		0.5
TOTAL HOURS =	10.00		TOTAL MIXING HOURS =			8.50				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**H2O2 Volume**		**Catalyst Volume**		**H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			E2-S5	50	E2-S5	160	E9-S5	50	E9-S5	160
Generator			E2-S4	100	E2-S4	320	E10-S5	50	E10-S5	160
Mixers			E3-S4	100	E3-S4	320	E11-S4	100	E11-S4	320
Equipment Set			E4-S4	100	E4-S4	320	E12-S4	100	E12-S4	320
Vehicle(s) utilized			E5-S4	100	E5-S4	320	E13-S4	100	E13-S4	320
Raw Materials Used			E6-S4	100	E6-S4	320	E14-S4	100	E14-S4	320
Powder Catalyst	379.3	lbs.	E7-S4	100	E7-S4	320	E15-S4	100	E15-S4	320
Liquid Catalyst	1850	Gallons	E8-S4	100	E8-S4	320	E3-S5	100	E3-S5	320
34% H2O2	3700	Gallons	E9-S4	100	E9-S4	320	E4-S5	100	E4-S5	320
Diluted H2O2	5920	Gallons	E10-S4	100	E10-S4	320	E5-S5	100	E5-S5	320
34% H2O2	35520	lbs.		0		0		0		0
				0		0		0		0
				0		0		0		0
			TOTAL INJECTION VOLUME =			7770				

Major Work Activities Performed:

Daily safety meeting. Equipment preparation, received 26 totes of hydrogen peroxide (returned 32 empty totes), soil mixing into 20 cells. Sampling of the down-gradient catch basin for iron and hydrogen peroxide levels. Each sample collected the previous day came back below site criteria. Collected soil samples from 10 cells treated the previous day (E14-S1, E14-S2, E10-S3, E13-S3, E14-S12, E14-S3, E15-S8, E15-S10, E15-S14 and E15-S3). Samples were collected from 2 depth intervals (at approximately 11 and 13 ft bgs) at select cells to confirm adequate mixing occurred. Samples appeared to be fairly consistent with one another and looked visually well mixed. Similar to previous days, mixing proceeded very well with the DAB being able to push down through the saturated soil matrix with little to no resistance and bubbling within the treated areas could be seen throughout the day. Approximately 1-2 feet of swelling was observed within treated rows during soil mixing. Cells identified by Weston as having historical soil impacts (E4-S4, E5-S4, E3-S5, E4-S5, E5-S5, E10-S4, E11-S4, E13-S4, E14-S4) were mixed longer than other treated cells.

Health and Safety Items Covered:

General site safety topics during the daily safety meeting between ISOTEC (Mike Temple, Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall, Allie Balter, Vinnie DelloRusso) and EPA (Darryl Luce). Delivery truck drivers on-site for chemical delivery.

Unforeseen Site Conditions:

List of Deliveries:

Received 26 totes of 34% hydrogen peroxide (~4,000 gallons or 62,400 lbs). Bathroom was serviced.

Other Comments (Work delays, inspections results, etc.):

TREATMENT PROGRAM - MIXING VOLUME SUMMARY
KMC Site, Conway, New Hampshire
ISOTEC PROJECT #801991

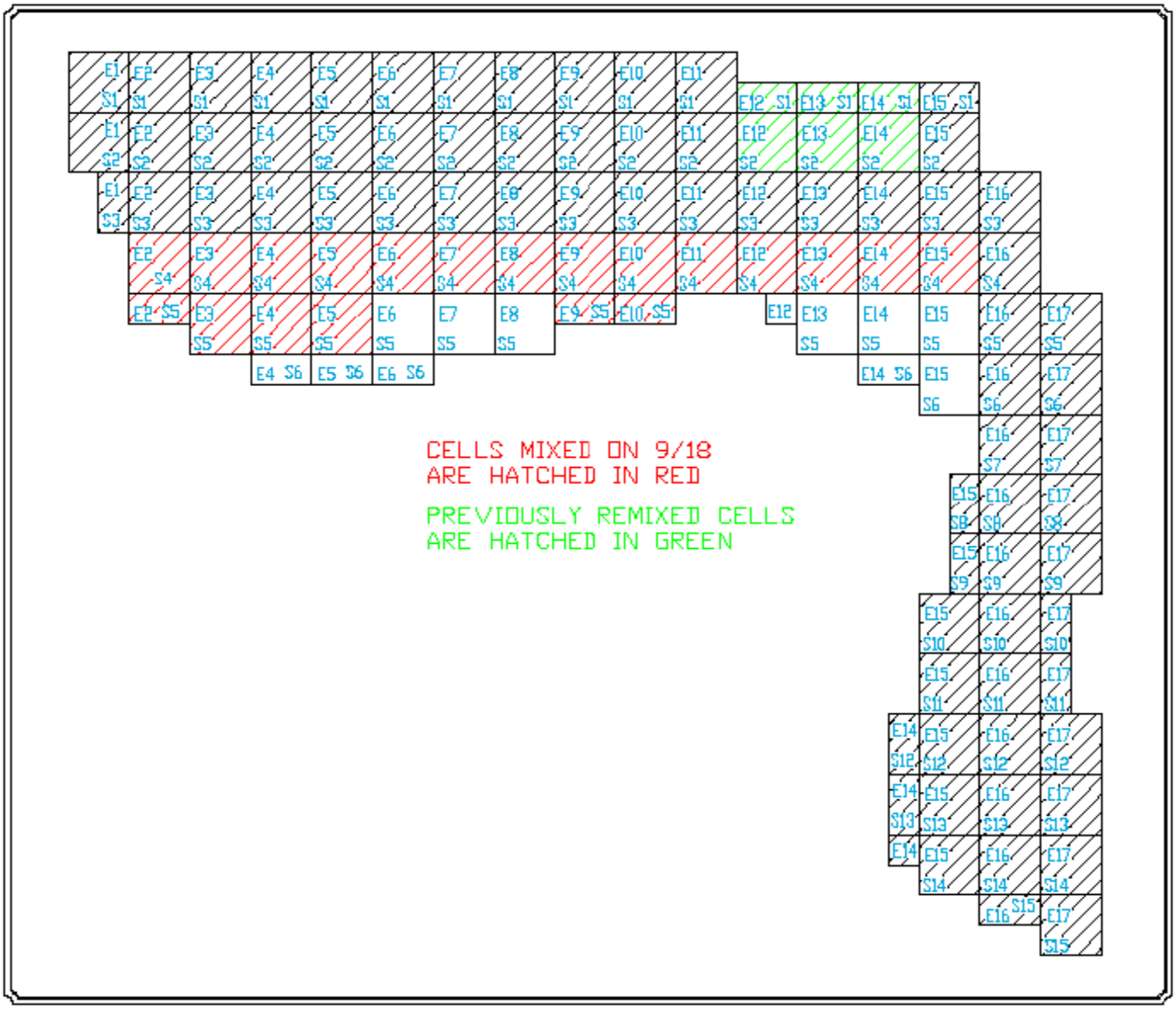
DATE:	18-Sep-15

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Catalyst (lbs)	34% H2O2 (lbs)	Cell Dimensions
E2-S5	7:56	8:06	10	50	160	21.0	210	10.25	960	5' x 10'
E2-S4	8:06	8:37	31	100	320	13.5	420	20.5	1920	10' x 10'
E3-S4	8:50	9:15	25	100	320	16.8	420	20.5	1920	10' x 10'
E4-S4	9:15	9:46	31	100	320	13.5	420	20.5	1920	10' x 10'
E5-S4	9:47	10:16	29	100	320	14.5	420	20.5	1920	10' x 10'
E6-S4	10:16	10:37	21	100	320	20.0	420	20.5	1920	10' x 10'
E7-S4	10:37	11:02	25	100	320	16.8	420	20.5	1920	10' x 10'
E8-S4	11:02	11:26	24	100	320	17.5	420	20.5	1920	10' x 10'
E9-S4	11:26	11:47	21	100	320	20.0	420	20.5	1920	10' x 10'
E10-S4	11:47	12:13	26	100	320	16.2	420	20.5	1920	10' x 10'
E9-S5	12:40	12:50	10	50	160	21.0	210	10.25	960	5' x 10'
E10-S5	12:50	13:01	11	50	160	19.1	210	10.25	960	5' x 10'
E11-S4	13:01	13:32	31	100	320	13.5	420	20.5	1920	10' x 10'
E12-S4	13:34	13:57	23	100	320	18.3	420	20.5	1920	10' x 10'
E13-S4	13:57	14:26	29	100	320	14.5	420	20.5	1920	10' x 10'
E14-S4	14:26	14:56	30	100	320	14.0	420	20.5	1920	10' x 10'
E15-S4	14:56	15:18	22	100	320	19.1	420	20.5	1920	10' x 10'
E3-S5	15:19	15:49	30	100	320	14.0	420	20.5	1920	10' x 10'
E4-S5	15:50	16:18	28	100	320	15.0	420	20.5	1920	10' x 10'
E5-S5	16:18	16:47	29	100	320	14.5	420	20.5	1920	10' x 10'
DAY TOTAL/ AVERAGE				1850	5920		7770	379.3	35520	

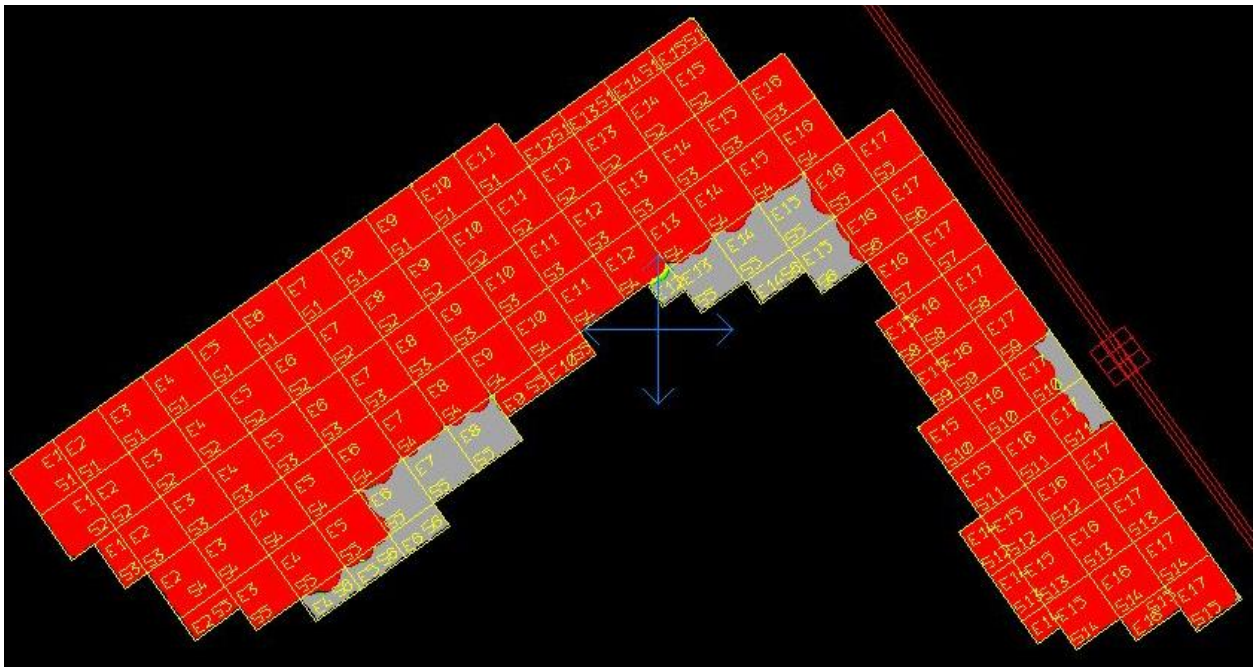
Lang Tool Co.

2520 Glidden Rd.
Beaverton, MI 48612
www.langtool.com
bill@langtool.com
Phone (989) 435-9864
Fax (989) 435-4311

September 18, 2015



Areas mixed to 447 MSL area colored green by the Dual Axis Blender on board computer.
Areas mixed below 447 are colored red.



Metering Plunge Point Coordinates

Easting	Northing	Elevation	Easting	Northing	Elevation
1125969.647168	537280.959132	446.785034	1126001.381878	537304.641881	446.710083
1125973.200074	537283.491365	446.681183	1126005.769346	537307.402211	446.938354
1125972.011872	537277.604179	446.664673	1126004.467013	537301.444269	446.755829
1125972.023885	537277.708491	446.685944	1126008.391258	537303.795105	446.854492
1125975.111470	537280.179906	446.901672	1126010.001886	537309.862519	446.723236
1125975.306516	537273.227931	446.691101	1126013.585849	537312.492692	446.158661
1125978.337341	537275.520559	446.497833	1126012.723083	537305.677414	446.806641
1125977.880033	537287.329148	446.549255	1126016.730244	537308.629464	446.744629
1125981.609651	537289.509229	447.042267	1126018.968656	537316.074899	446.483521
1125981.842178	537289.401565	446.717621	1126022.350682	537319.058459	446.578766
1125980.958509	537283.143387	446.710114	1126021.140943	537311.872672	446.710846
1125984.320266	537286.005864	446.741821	1126024.757463	537314.743228	446.802704
1125985.960982	537292.630172	446.891602	1126024.757726	537314.721561	446.800598
1125989.461711	537289.502530	446.915710	1126024.620698	537314.690467	446.770630
1125989.472722	537289.480327	446.912537	1126026.491059	537321.563039	446.523346
1125989.493238	537289.464708	446.945770	1126030.055118	537324.698301	446.834778
1125989.451987	537289.416558	446.933075	1126032.943912	537320.245046	446.871582
1125989.476390	537289.415210	446.894836	1126029.322862	537318.359227	446.421967
1125992.654460	537291.359189	446.854370	1126035.136171	537327.205800	446.721497
1125990.432101	537295.789794	446.610107	1126038.303615	537330.061814	446.909882
1125994.739644	537298.981520	446.685120	1126038.324678	537330.032010	446.852173
1125997.895166	537301.144004	446.752045	1126040.631852	537326.762757	446.666473
1125996.533912	537295.094217	446.825806	1126037.212835	537323.849046	446.736053
1126000.636176	537297.631108	446.877686	1126032.317195	537313.641721	446.573395
1125995.891254	537294.886358	446.812500	1126036.141078	537316.651433	446.882996

Easting	Northing	Elevation
1126040.187605	537319.520911	446.854584
1126043.929862	537322.424865	446.569824
1126043.984060	537322.347058	446.463806
1126043.983007	537322.348828	446.460327
1126043.047893	537333.127935	446.910828
1126046.152333	537336.231393	446.615662
1126049.481970	537332.808767	446.632782
1126049.488996	537332.793634	446.639191
1126049.525715	537332.724061	446.568634
1126045.824767	537330.142644	446.902710
1126051.523534	537339.019433	446.888367
1126054.932529	537341.646509	446.887299
1126053.208923	537335.963813	446.595215

Easting	Northing	Elevation
1126057.191871	537338.147944	446.616516
1126058.840872	537345.374586	446.909912
1126062.874862	537347.195781	446.885376
1126062.216429	537341.445643	446.899597
1126065.245783	537343.912300	446.542145
1126061.567808	537341.290133	446.809204
1126067.461929	537350.823456	446.811493
1126071.353753	537353.172603	446.464935
1126073.825744	537349.791577	446.884033
1126069.501385	537347.268373	446.348969
1126069.373771	537347.334718	446.321594
1126069.364699	537347.280772	446.296417
1126079.045501	537359.086723	446.709076
1126081.690257	537356.413102	446.639954

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17
H2O S1	122	122	122	122	122	122	122	122	122	122	122	244	244	244	61	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	3805	3805	3805	951	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	200	200	200	50	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	640	640	640	160	0	0
H2O S2	122	122	122	122	122	122	122	122	122	122	122	244	198	198	122	0	0
PerOX S1	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	3805	3805	3805	1,902	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	200	200	200	100	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	640	640	640	320	0	0
H2O S3	61	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	951	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	160	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S4	0	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	0	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,902	0
Catalyst S1	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	0	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S5	0	61	122	122	122	122	122	122	61	61	0	31	122	122	122	122	122
PerOX S1	0	951	1,902	1,902	1,902	1,902	1,902	1,902	951	951	0	476	1,902	1,902	1,902	1,902	1,902
Catalyst S1	0	50	100	100	100	100	100	100	50	50	0	25	100	100	100	100	100
Solution Gal	0	160	320	320	320	320	320	320	160	160	0	80	320	320	320	320	320
H2O S6	0	0	0	61	61	61	0	0	0	0	0	0	0	61	122	122	122
PerOX S1	0	0	0	951	951	951	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	50	50	50	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	160	160	160	0	0	0	0	0	0	0	160	320	320	320
H2O S7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320
H2O S8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	61
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	160
H2O S11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	320
H2O S12	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	244
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	640
H2O S13	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	244
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	640
H2O S14	0	0	0	0	0	0	0	0	0	0	0	0	0	31	122	122	244
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	476	1,902	1,902	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	25	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	80	320	320	640
H2O S15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	244
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,902
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	640

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 10**
***Date* : Mon 9/21/15**

Prepared By:
Erik Hall

Weather:
Sunny 38-70°F

Site Hours:
0700-1800

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	11
ISOTEC	Mike Temple	Project Manager	Soil Mixing	11
ISOTEC	Mark Ratner	Site Manager	Soil Mixing	11
ISOTEC	Kevin O'Neil	Site Manger	Soil Mixing	11
LTC	Bill Lang	Project Manager	Soil Mixing	11
LTC	Bill Oberloier	Site Assistant	Soil Mixing	11
LTC	Dave Roe	Equipment Operator	Soil Mixing	11
LTC	Cody Shell	Equipment Operator	Soil Mixing	11

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) POV and (1) Chevy Express Cargo Van
- **ISOTEC** – (1)Penske Box Truck with various project tools and supplies
- **LTC** – (1)Caterpillar D5K2 Bulldozer, (1) Caterpillar 320E Excavator, (1) 20-LTC Dual Action Blender, (1) Mack Granite Tractor and lowboy trailer*, (1) Mack mixing truck, (1) JLC 8042 fork lift, (2) utility trucks, (1) office/utility trailer

DEVIATIONS FROM PROPOSED SCHEDULE

None.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- None.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

TEST DATA

(List type and location of tests performed and results)

- See attached spreadsheets for analytical results of soil mixing cells and field test data for catch basins CB 5-6 and CB 6-7.

SAFETY COMMENTS/VIOLATIONS

- None

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None

WORK COMPLETED- BY WESTON

- Construction oversight.
- Perform review of erosion controls. Erosion controls are intact and working properly
- Collect aqueous samples from catch basins CB 5-6 and CB 6-7 for H2O2 and total iron. Refer to attached spreadsheet for results.
- Collected soil samples from 6 cells treated the previous day. Refer to attached spreadsheet for results.
- Review analytical data received from off-site laboratory. Cell E13S04 exceeded the project remediation goals. The cell was retreated and resampled.
- Perimeter air monitoring with MultiRae. None of the action limits were triggered.

WORK COMPLETED- BY ISOTEC& SUBCONTRACTORS

- Retreated cell E13S04 that exceeded the project remediation goals
- Peroxide and total iron field test kits of collected soil samples from 4 cells treated the previous work day plus one sample from retreated CellE13S04. . Refer to attached spreadsheet for results
- For more details refer attached Daily Reports from ISOTEC and Lang Tool.

AGREEMENTS

(Company Name – task description)

None.

Notes:
ISOTEC = In-Situ Oxidative Technologies, Inc.
LTC = Lang Tool Company

TREATMENT PROGRAM – MIXING SUMMARY

See attached Daily Reports from ISOTEC and Lang Tool

Photographs

Soil mixing activities

Soil mixing activities

Looking southeast towards the southeast corner of the excavation

Looking north from the southeast corner of the excavation

Photographs (continued)

Treating the last cell

Looking east from the western edge of the excavation

Kearsarge Metallurgical Superfund Site
Soil mixing with ISCO
Project Status - 9/19/2015

Cells E12S1, E12S2, E13S1, E13S2, E14S1, E14S2 were remixed on 9/17/15 and re-sampled on 9/18/15.Results for 6 cells were 40 U for 11DCE and 100 U for 111TCA.

Poplar Trees
TOP SOIL STOCK PILE
REAGENT DELIVERY EQUIPMENT
MWS-205
MW-3004
MW-3006
MW-3005
MW-3007
MW-3008
MW-3009
MW-3010
MW-207A
MWS-114
EW-13B
TEMPORARY SECURITY FENCE
SOIL TREATMENT AREA (9,076 SQFT)
CELL LAYOUT (10,100 SQFT)
STORM DRAIN
EXTENT OF BERMED SOIL REMOVED FROM EXCAVATION
APPROX LOCATION OF EXIST. UNDERGROUND COLLECTION TRENCH
E14 S14

NOTE:
ALL CELLS ARE 10'x10', 10'x5', OR 5'x5'.

GRAPHIC SCALE
10 5 0 5 10
APPROXIMATE SCALE IN FEET

Legend
- Analytical passed
- Cell exceeded the project action limit
- Cell mixed; awaiting analytical
- Cell was mixed >24 hr ago
- Cell was mixed <24 hr ago
- Cell selected for pre-remedial sampling due to historical soil data

NO.	DATE	APPR.	REVISION

IN SITU SOIL TREATMENT
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NEW HAMPSHIRE

		CLIENT APPROVALS	DATE
CHECKED			
DES. ENG.			
PROJ. ENG.			
PROJ. MGR.			
APPROVED			
APPROVED		ISSUED FOR	

WESTON SOLUTIONS CONCORD NEW HAMPSHIRE
NEW HAMPSHIRE DEPARTMENT OF Environmental Services

SOIL TREATMENT CELL LAYOUT

DRAWN	DATE	FIGURE NO.	REV. NO.
BEG	AUG 2015	5	
SCALE	W.O. NO.	SHT.	OF
AS SHOWN	20118.015.003		

M:\Design\DWG\KRSARGE\2015\Work Plan\FIG 5.dwg, Layout1, 9/4/2015 11:42:33 AM, girardeb, 1:2

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E17-S14	14-Sep	10:45	11:04	19	15-Sep	9	Next Day	0.0	0	20.0	NA	NA	
						11		0.0	0	14.0	NA	NA	
						13		0.0	0	28.0	100 U	40 U	Sample sent to lab on 9/15. Results received on 9/16.
E17-S13	14-Sep	11:05	11:20	15	15-Sep	9	Next Day	0.0	0	12.0	NA	NA	
						11		0.0	0	63.0	NA	NA	
						13		0.0	0	32.0	50 U	20 U	Sample sent to lab on 9/15. Results received on 9/16.
E17-S11	14-Sep	11:36	11:42	7	15-Sep	9	Next Day	0.0	0	10.0	NA	NA	
						11		0.0	0	12.0	NA	NA	
						13		0.0	0	18.0	100 U	40 U	Sample sent to lab on 9/15. Results received on 9/16.
E17-S9	14-Sep	11:52	12:17	25	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	9.0	NA	NA	
						13		0.0	0	15.0	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.
E17-S7	14-Sep	13:07	13:22	15	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	8.0	NA	NA	
						13		0.0	0	5.0	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.
E17-S6	14-Sep	13:23	13:38	15	15-Sep	9	Next Day	0.0	0	11.0	NA	NA	
						11		0.0	0	6.0	NA	NA	
						13		0.0	0	12.0	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
E17-S5	14-Sep	13:39	14:08	29	15-Sep	9	Next Day	0.0	0	6.0	NA	NA	
						11		0.0	0	4.0	NA	NA	
						13		0.0	0	6.0	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E13-S2	14-Sep	16:16	16:33	17	15-Sep	9	Next Day	0.0	0	12.0	NA	NA	
						11		0.0	0	8.0	NA	NA	
						13		0.0	0	8.0	200	110	Sample sent to lab on on 9/16. Results received on 9/17. Exceedance detected. Cell retreated on 9/17. Analytical data received on 9/19/15 with results below
E14-S1	14-Sep	15:05	15:19	14	15-Sep	9	Next Day	0.0	0	6.0	NA	NA	
						11		0.0	0	12.0	NA	NA	
						13		0.0	0	8.0	100 U	160	Sample sent to lab on on 9/16. Results received on 9/17. Exceedance detected. Cell retreated on 9/17. Analytical data received on 9/19/15 with results below
E15-S2	14-Sep	15:20	15:35	15	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	10.0	NA	NA	
						13		0.0	0	8.0	100 U	50	Sample sent to lab on 9/16. Results received on 9/17.
E11-S2	15-Sep	9:00	9:18	18	16-Sep	11	Next Day	0.0	0	5.0	NA	NA	.
						13		0.0	0	10.0	100	60	Sample sent to lab on 9/16. Results received on 9/17.
E7-S1	15-Sep	12:05	12:22	17	16-Sep	13	Next Day	0.0	1	12.0	100	30	Sample sent to lab on 9/16. Results received on 9/17.
E9-S2	15-Sep	10:46	11:08	22	16-Sep	9	Next Day	0.0	0.0	4.0	NA	NA	
						11		0.0	0.0	9.0	100	50	
						13		0.0	0.8	6.0	NA	NA	Sample sent to lab on 9/16. Results received on 9/17.
E10-S1	15-Sep	8:38	8:59	21	16-Sep	13	Next Day	0.0	0.0	6.0	100	30	Sample sent to lab on 9/16. Results received on 9/17.
E8-S1	15-Sep	11:09	11:31	22	16-Sep	13	Next Day	0.0	0.0	7.0	100	60	Sample sent to lab on 9/16. Results received on 9/17.
E6-S2	15-Sep	13:37	13:57	20	16-Sep	13	Next Day	0.1	0.0	4.0	100	30 J	Sample sent to lab on 9/16. Results received on 9/17.
E5-S2	15-Sep	14:19	14:39	20	16-Sep	13	Next Day	0.1	0.0	10.0	50 J	20 J	Sample sent to lab on 9/16. Results received on 9/17.
E5-S1	15-Sep	13:58	14:18	20	16-Sep	13	Next Day	0.0	0.0	5.0	100	30	Sample sent to lab on 9/16. Results received on 9/17.
E3-S2	15-Sep	15:41	16:03	22	16-Sep	13	Next Day	0.1	0.0	4.0	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
E3-S1	15-Sep	15:20	15:40	20	16-Sep	13	Next Day	0.1	0.0	8.0	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E4-S3	16-Sep	15:20	15:50	30	17-Sep	11	Next Day	0.0	1.0	5.0	100	40	Sample sent to lab on 9/17. Results received on 9/18.
						13		0.0	0.0	10.0	NA	NA	
E5-S3	16-Sep	15:50	16:20	30	17-Sep	11	Next Day	0.0	1.0	3.0	NA	NA	
						13		0.0	0.0	6.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S14	16-Sep	9:22	9:46	24	17-Sep	11	Next Day	0.1	0.0	9.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
						13		0.1	0.0	5.0	NA	NA	
E16-S11	16-Sep	10:28	10:48	20	17-Sep	13	Next Day	0.0	0.0	8.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E1-S2	16-Sep	8:10	8:36	26	17-Sep	13	Next Day	0.0	0.0	7.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S6	16-Sep	12:33	12:54	21	17-Sep	13	Next Day	0.1	0.0	2.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S9	16-Sep	11:09	11:28	19	17-Sep	13	Next Day	0.1	0.0	9.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S3	16-Sep	13:43	14:08	25	17-Sep	13	Next Day	0.1	0.0	7.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E10-S3	17-Sep	9:48	10:17	29	18-Sep	13	Next Day	0.1	0.0	7.0	100 U	30 J	Sample sent to lab on 9/18. Results received on 9/19.
E13-S3	17-Sep	11:07	11:37	20	18-Sep	13	Next Day	0.1	0.0	4.0	100 U	40 J	Sample sent to lab on 9/18. Results received on 9/19.
E14-S12	17-Sep	14:59	15:11	12	18-Sep	13	Next Day	0.0	0.0	10.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E14-S3	17-Sep	11:37	12:00	23	18-Sep	13	Next Day	0.2	0.0	2.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E15-S8	17-Sep	13:02	13:14	12	18-Sep	13	Next Day	0.0	0.0	5.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E15-S10	17-Sep	13:27	13:50	23	18-Sep	13	Next Day	0.0	0.0	3.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E15-S14	17-Sep	15:23	15:50	27	18-Sep	13	Next Day	0.0	0.0	8.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E15-S3	17-Sep	12:33	12:59	26	18-Sep	13	Next Day	0.0	0.0	7.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E12-S1	17-Sep	17:42	17:59	17	18-Sep	11	Next Day	0.0	0.0	3.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
						13		0.0	0.0	5.0	NA	NA	Retreated cell on 9/17.
E12-S2	17-Sep	17:24	17:42	18	18-Sep	11	Next Day	0.0	0.0	5.0	NA	NA	Retreated cell on 9/17.
						13		0.1	0.0	5.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
E13-S1	17-Sep	17:14	17:24	10	18-Sep	11	Next Day	0.0	0.0	3.0	NA	NA	Retreated cell on 9/17.
						13		0.0	0.0	6.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
E13-S2	17-Sep	16:50	17:14	24	18-Sep	11	Next Day	0.0	0.0	4.0	NA	NA	Retreated cell on 9/17.
						13		0.1	0.0	5.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
E14-S1	17-Sep	16:37	16:50	13	18-Sep	11	Next Day	0.1	0.0	6.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
						13		0.0	0.0	8.0	NA	NA	Retreated cell on 9/17.
E14-S2	17-Sep	16:06	16:37	31	18-Sep	11	Next Day	0.0	0.0	7.0	NA	NA	Retreated cell on 9/17.
						13		0.0	0.0	3.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
E2-S4	18-Sep	7:56	8:06	10	19-Sep	13	Next Day	0.1	0.0	5.0			Sample sent to lab on 9/19.
E3-S5	18-Sep	13:19	13:49	30	19-Sep	13	Next Day	0.1	0.0	13.0			Sample sent to lab on 9/19.
E5-S4	18-Sep	9:47	10:16	29	19-Sep	13	Next Day	0.1	0.0	3.0			Sample sent to lab on 9/19.
E14-S4	18-Sep	14:26	14:56	30	19-Sep	13	Next Day	0.0	0.0	8.0			Sample sent to lab on 9/19.
E4-S5	18-Sep	13:50	14:18	28	19-Sep	13	Next Day	0.1	0.0	4.0			Sample sent to lab on 9/19.
E15-S4	18-Sep	14:56	15:18	22	19-Sep	13	Next Day	0.0	0.0	6.0			Sample sent to lab on 9/19.
E5-S5	18-Sep	16:18	16:47	29	19-Sep	13	Next Day	0.1	0.0	7.0			Sample sent to lab on 9/19.
E7-S4	18-Sep	10:37	11:02	25	19-Sep	13	Next Day	0.1	0.0	5.0			Sample sent to lab on 9/19.
E10-S4	18-Sep	11:42	12:13	31	19-Sep	13	Next Day	0.0	0.0	24.0			Sample sent to lab on 9/19.
E11-S4	18-Sep	13:11	13:32	21	19-Sep	13	Next Day	0.0	0.0	12.0			Sample sent to lab on 9/19.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E13-S4	18-Sep	13:52	14:26	34	19-Sep	13	Next Day	0.1	0.0	13.0			Sample sent to lab on 9/19.

Note:
Cell Locations = ID locations of the treatment cells that were sampled after the cell was mixed/blended.
FT BGS = Feet below ground surface.
PPM = Parts per million
NA = Not Analyzed
µg/kg = Micrograms per kilogram
Sample Collection Time = Samples collected the morning after day of mixing.
1,1-DCE = 1,1-Dichloroethene (criteria of ≤60 µg/kg)
1,1,1-TCA = 1,1,1-Trichloroethane (criteria of ≤150 µg/kg)
U=Compound was not detected and the reporting limit is shown.
Blue shading indicates results were nondetect for the compounds indicated.
Yellow highlighting indicates detection at or below the criteria for the compound indicated.
Red highlighting indicates detection above the crietria for the compound indicated.
Field testing for hydrogen peroxide was conducted using Quantofix Peroxide 100 test strips.

TABLE 1
STORM DRAIN MONITORING FIELD DATASHEET
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NH

Catch Basin Location	Date	Time	Collected By	Hydrogen Peroxide Concentration (ppm)	Dissolved Iron Concentration (ppm)	Notes
CB5-6	9/15/2015	1630	AB	0	1.0	
	9/16/2015	1115	AB	0	0.4	
	9/16/2015	1643	AB	0	0.1	
	9/17/2015	1021	AB	0	1.4	
	9/17/2015	1610	AB	0	0.3	
	9/18/2015	1102	AB	0	0.6	
	9/18/2015	1610	AB	0	0.2	
	9/19/2015	0915	AB	0	0.8	
	9/19/2015	1200	AB	0	0.8	
CB6-7	9/16/2015	1115	AB	0	1.0	
	9/16/2015	1643	AB	0	0.5	
	9/17/2015	1011	AB	0	1.0	
	9/17/2015	1620	AB	0	0.2	
	9/18/2015	1112	AB	0	0.8	
	9/18/2015	1603	AB	0	0.1	
	9/19/2015	0915	AB	0	1.0	
	9/19/2015	1200	AB	0	1.0	

Notes:
ppm = Parts per million

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**19-Sep-15**	Client:	**Weston**	Personnel:	**Mike, Mark, Kevin, Bill L, Bill O, Cody, Dave**
Project:	**KMC Site, Conway, NH**	Job Number:	**801991**	Weather:	**Sunny, 55-85**

Personnel Names	Time		Mobilization To & From Job Site	Safety Meeting	Equipment Preparation	Sampling Wells & Analysis	Mixing Time	De-Con. Equipment	Data Entry Time	Other (Lunch)
	Start	Stop								
Mike Temple	7:30 AM	1:00 PM	0.25	0.25	0.75	1.0	2.5	0.5	0.5	0.5
Mark Ratner	7:30 AM	1:00 PM	0.25	0.25	0.75	1.0	2.5	0.5		
Kevin O'Neal	7:30 AM	1:00 PM	0.25	0.25	0.75	1.0	2.5	0.5		
Bill Lang	7:30 AM	1:00 PM	0.25	0.25	0.75		4.25	0.5		0.5
Bill Oberloier	7:30 AM	1:00 PM	0.25	0.25	0.75		4.25	0.5		0.5
Dave Roe	7:30 AM	1:00 PM	0.25	0.25	0.75		4.25	0.5		0.5
Cody Shell	7:30 AM	1:00 PM	0.25	0.25	0.75		4.25	0.5		0.5
TOTAL HOURS =	5.50		TOTAL MIXING HOURS =			4.25				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**H2O2 Volume**		**Catalyst Volume**		**H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			E6-S5	100	E6-S5	320		0		0
Generator			E7-S5	100	E7-S5	320		0		0
Mixers			E8-S5	100	E8-S5	320		0		0
Equipment Set			E4-S6	50	E4-S6	160		0		0
Vehicle(s) utilized			E5-S6	50	E5-S6	160		0		0
Raw Materials Used			E6-S6	50	E6-S6	160		0		0
Powder Catalyst	189.6	lbs.	E13-S5	100	E13-S5	320		0		0
Liquid Catalyst	925	Gallons	E12-S5	25	E12-S5	80		0		0
34% H2O2	1850	Gallons	E14-S5	100	E14-S5	320		0		0
Diluted H2O2	2960	Gallons	E14-S6	50	E14-S6	160		0		0
34% H2O2	17760	lbs.	E15-S5	100	E15-S5	320		0		0
			E15-S6	100	E15-S6	320		0		0
				0		0		0		0
			TOTAL INJECTION VOLUME =			3885				

Major Work Activities Performed:

Daily safety meeting. Equipment preparation, soil mixing into 12 cells. Sampling of the down-gradient catch basin for iron and hydrogen peroxide levels. Each sample collected the previous day came back below site criteria. Collected soil samples from 12 cells treated the previous day (E2-S4, E3-S5, E5-S4, E14-S4, E4-S5, E15-S4, E5-S5, E7-S4, E10-S4, E11-S4, E13-S4, and E4-S4). Samples were collected from 1 depth interval (at approximately 13 ft bgs) at select cells to confirm adequate mixing occurred.

Health and Safety Items Covered:

General site safety topics during the daily safety meeting between ISOTEC (Mike Temple, Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall, Allie Balter).

Unforeseen Site Conditions:

List of Deliveries:

Other Comments (Work delays, inspections results, etc.):

TREATMENT PROGRAM - MIXING VOLUME SUMMARY
KMC Site, Conway, New Hampshire
ISOTEC PROJECT #801991

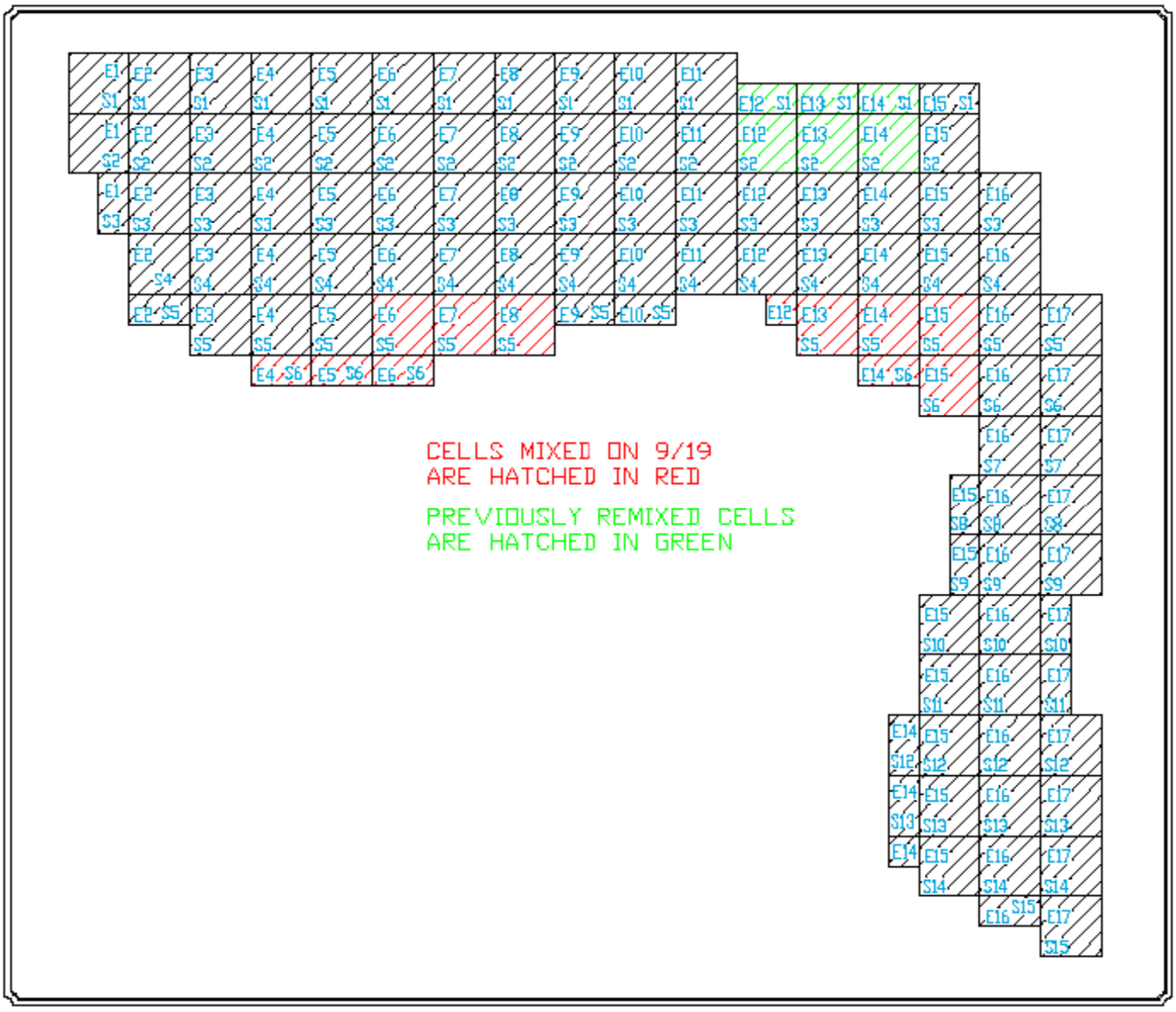
DATE:	19-Sep-15

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Catalyst (lbs)	34% H2O2 (lbs)	Cell Dimensions
E6-S5	8:45	9:15	30	100	320	14.0	420	20.5	1920	10' x 10'
E7-S5	9:25	9:45	20	100	320	21.0	420	20.5	1920	10' x 10'
E8-S5	9:45	10:15	30	100	320	14.0	420	20.5	1920	10' x 10'
E4-S6	8:19	8:32	13	50	160	16.2	210	10.25	960	5' x 10'
E5-S6	8:32	8:45	13	50	160	16.2	210	10.25	960	5' x 10'
E6-S6	9:15	9:25	10	50	160	21.0	210	10.25	960	5' x 10'
E13-S5	10:25	10:47	22	100	320	19.1	420	20.5	1920	10' x 10'
E12-S5	10:15	10:25	10	25	80	10.5	105	5.125	480	5' x 5'
E14-S5	10:47	11:10	23	100	320	18.3	420	20.5	1920	10' x 10'
E14-S6	11:10	11:20	10	50	160	21.0	210	10.25	960	5' x 10'
E15-S5	11:20	11:40	20	100	320	21.0	420	20.5	1920	10' x 10'
E15-S6	11:40	12:05	25	100	320	16.8	420	20.5	1920	10' x 10'
DAY TOTAL/ AVERAGE				925	2960		3885	189.6	17760	

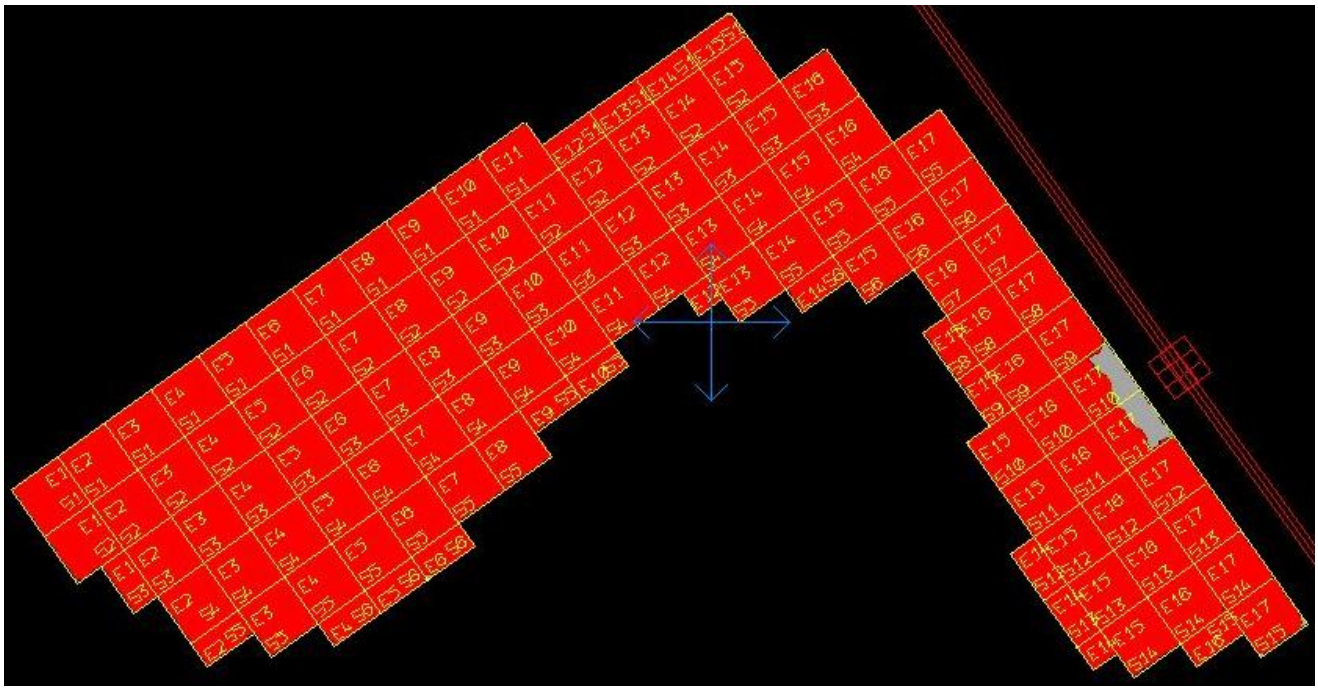
Lang Tool Co.

2520 Glidden Rd.
Beaverton, MI 48612
www.langtool.com
bill@langtool.com
Phone (989) 435-9864
Fax (989) 435-4311

September 18, 2015



Areas mixed to 447 MSL area colored green by the Dual Axis Blender on board computer.
Areas mixed below 447 are colored red.



Metering Plunge Point Coordinates

Easting	Northing	Elevation
,1125996.784053	,537276.647099	,446.506226
,1126000.271217	,537279.758424	,446.727051
,1126000.271163	,537279.627843	,446.677521
,1126005.516511	,537282.464107	,446.728577
,1126009.143693	,537285.824884	,446.848602
,1126007.590364	,537296.639462	,446.855743
,1126011.838324	,537299.470743	,446.766022
,1126011.137288	,537292.491990	,446.810364
,1126014.377355	,537295.561201	,446.684052
,1126013.546075	,537290.174972	,446.449371
,1126013.673764	,537290.401372	,446.317932
,1126014.259656	,537288.913101	,449.773102
,1126018.183072	,537292.147833	,446.863678
,1126016.861383	,537303.182891	,446.812744
,1126019.731824	,537304.788985	,446.562531
,1126019.058740	,537298.531272	,446.562500
,1126021.646978	,537300.826827	,446.603394
,1126023.774266	,537308.412347	,446.694977
,1126028.185373	,537310.844653	,446.842743
,1126026.705964	,537304.604489	,446.866760
,1126030.904227	,537307.066911	,447.012207
,1126059.946342	,537334.376760	,446.584778
,1126064.684007	,537337.291963	,446.680573
,1126068.906216	,537339.798362	,446.604614
,1126071.040929	,537336.368585	,446.673645

Easting	Northing	Elevation
,1126068.354427	,537333.686048	,446.621521
,1126079.169557	,537342.035405	,446.258209
,1126079.204969	,537342.060599	,446.365356
,1126082.568687	,537337.281898	,446.807922
,1126078.813087	,537334.640186	,446.668152
,1126078.856038	,537334.627105	,446.677368
,1126078.874231	,537334.614286	,446.664673
,1126078.882787	,537334.607757	,446.660767
,1126078.701917	,537334.702548	,446.716400
,1126076.222173	,537338.537021	,446.654114
,1126076.086177	,537338.610713	,446.638184
,1126072.558662	,537343.019710	,446.648773
,1126085.411600	,537351.086702	,446.723633
,1126081.533502	,537348.131652	,446.926697
,1126084.336967	,537344.388499	,446.646301
,1126087.225291	,537346.568939	,446.621582
,1126087.275174	,537346.563084	,446.632721
,1126093.179122	,537339.406774	,446.601013
,1126090.384534	,537343.621839	,446.498596
,1126089.557180	,537336.884198	,446.714355
,1126086.643387	,537340.402255	,446.928314

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17
H2O S1	122	122	122	122	122	122	122	122	122	122	122	244	244	244	61	0	0
PerOX S1	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	2,004	2,004	2,004	951	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	200	200	200	50	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	640	640	640	160	0	0
H2O S2	122	122	122	122	122	122	122	122	122	122	122	244	244	244	122	0	0
PerOX S1	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	2,004	2,004	2,004	1,002	0	0
Catalyst S1	100	100	100	100	100	100	100	100	100	100	100	200	200	200	100	0	0
Solution Gal	320	320	320	320	320	320	320	320	320	320	320	640	640	640	320	0	0
H2O S3	61	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	951	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	0
Catalyst S1	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	160	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S4	0	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	0
PerOX S1	0	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	0
Catalyst S1	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
Solution Gal	0	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	0
H2O S5	0	61	122	122	122	122	122	122	61	61	0	31	122	122	122	122	122
PerOX S1	0	951	1,002	1,002	1,002	1,002	1,002	1,002	951	951	0	476	1,002	1,002	1,002	1,002	1,002
Catalyst S1	0	50	100	100	100	100	100	100	50	50	0	25	100	100	100	100	50
Solution Gal	0	160	320	320	320	320	320	320	160	160	0	80	320	320	320	320	320
H2O S6	0	0	0	61	61	61	0	0	0	0	0	0	0	61	122	122	122
PerOX S1	0	0	0	951	951	951	0	0	0	0	0	0	0	951	1,002	1,002	1,002
Catalyst S1	0	0	0	50	50	50	0	0	0	0	0	0	0	50	100	100	50
Solution Gal	0	0	0	160	160	160	0	0	0	0	0	0	0	160	320	320	320
H2O S7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,002	1,002
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320
H2O S8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,002	1,002
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,002	1,002
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320
H2O S10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	61
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,002	1,002	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	160
H2O S11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	122	161
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,002	1,002	951
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	320	160
H2O S12	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,002	1,002	1,002
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	160
H2O S13	0	0	0	0	0	0	0	0	0	0	0	0	0	61	122	122	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,002	1,002	1,002
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	160	320	320	160
H2O S14	0	0	0	0	0	0	0	0	0	0	0	0	0	31	122	122	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	476	1,002	1,002	1,002
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	25	100	100	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	80	320	320	160
H2O S15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	202
PerOX S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	951	1,002
Catalyst S1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100
Solution Gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	160

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 10**
***Date* : Mon 9/21/15**

Prepared By:
Erik Hall

Weather:
Sunny 38-70°F

Site Hours:
0700-1800

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	11
ISOTEC	Mark Ratner	Site Manager	Soil Mixing	11
ISOTEC	Kevin O'Neil	Site Manger	Soil Mixing	11
LTC	Bill Lang	Project Manager	Soil Mixing	11
LTC	Bill Oberloier	Site Assistant	Soil Mixing	11
LTC	Dave Roe	Equipment Operator	Soil Mixing	11
LTC	Cody Shell	Equipment Operator	Soil Mixing	11

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) POV and (1) Chevy Express Cargo Van
- **ISOTEC** – (1)Penske Box Truck with various project tools and supplies
- **LTC** – (1)Caterpillar D5K2 Bulldozer, (1) Caterpillar 320E Excavator, (1) 20-LTC Dual Action Blender, (1) Mack Granite Tractor and lowboy trailer*, (1) Mack mixing truck, (1) JLC 8042 fork lift, (2) utility trucks, (1) office/utility trailer

DEVIATIONS FROM PROPOSED SCHEDULE

None.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- None.

TEST DATA

(List type and location of tests performed and results)

- See attached spreadsheets for analytical results of soil mixing cells and field test data for catch basins CB 5-6 and CB 6-7.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

SAFETY COMMENTS/VIOLATIONS

- None

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None

WORK COMPLETED- BY WESTON

- Construction oversight.
- Perform review of erosion controls. Erosion controls are intact and working properly
- Collect aqueous samples from catch basins CB 5-6 and CB 6-7 for H2O2 and total iron. Refer to attached spreadsheet for results.
- Collected soil samples from 6 cells treated the previous day. Refer to attached spreadsheet for results.
- Review analytical data received from off-site laboratory. Cell E13S04 exceeded the project remediation goals. The cell was retreated and resampled.
- Duct taped and crimped black poly line water line to prevent sediment from entering EW-13B; located approximately at Northing 537282.762, Easting 1125950.636, and approximately 460.5 feet above mean sea level.
- Perimeter air monitoring with MultiRae. None of the action limits were triggered.

WORK COMPLETED- BY ISOTEC& SUBCONTRACTORS

- Retreated cell E13S04 that exceeded the project remediation goals
- Peroxide and total iron field test kits of collected soil samples from 4 cells treated the previous work day plus one sample from retreated CellE13S04. . Refer to attached spreadsheet for results
- Re-established access road along the eastern edge of the excavation. Pushed bermed material along the eastern edge into the excavation. Reinstalled silt fence along the access road.
- Began installation of orange construction fence along the perimeter of the excavation.
- For more details refer attached Daily Reports from ISOTEC and Lang Tool.

AGREEMENTS

(Company Name – task description)

D. Hoffman of NHDES, D. Luce on USEPA and V. DelloRusso decided that monitoring of the catch basins for hydrogen peroxide and iron was no longer necessary as peroxide is rarely detected the next day in soil samples from within the excavations. E. Hall agreed to cease collection of the samples and demobilize the peristaltic pump.

Notes:
ISOTEC = In-Situ Oxidative Technologies, Inc.
LTC = Lang Tool Company

TREATMENT PROGRAM – MIXING SUMMARY

See attached Daily Reports from ISOTEC and Lang Tool

Photographs

Looking southeast towards the southeast corner of the excavation

Removing the silt fence prior to re-establishing the access road on the eastern edge of the site.

Duct taped and crimped black poly line water line to prevent sediment from entering EW-13B

Looking northeast from the southwest corner of the excavation

Photographs (continued)

Decontaminating the excavator

Decontaminated sampler tool

Re-established access road along the eastern edge of the site

Looking southwest from the northeastern corner of the excavation

Cells E13S04 was retreated on 9/21/15 at 12:38 and was sampled at 14:30. Results for sample collected on 9/19 were 80 ug/kg for 11DCE and 100 U ug/kg for 111TCA.

Cells E12S1, E12S2, E13S1, E13S2, E14S1, E14S2 were retreated on 9/17/15 and re-sampled on 9/18/15.Results for 6 cells were 40 U ug/kg for 11DCE and 100 U ug/kg for 111TCA.

Kearsarge Metallurgical Superfund Site
Soil mixing with ISCO
Project Status - 9/21/2015

REAGENT DELIVERY EQUIPMENT

TOP SOIL STOCK PILE

TEMPORARY SECURITY FENCE

SOIL TREATMENT AREA (9,076 SQFT)

CELL LAYOUT (10,100 SQFT)

STORM DRAIN

EXTENT OF BERMED SOIL REMOVED FROM EXCAVATION

NOTE:
ALL CELLS ARE 10'x10', 10'x5', OR 5'x5'.

GRAPHIC SCALE
10 5 0 5 10
APPROXIMATE SCALE IN FEET

Legend

- Analytical passed
- Cell exceeded the project action limit
- Cell was mixed; awaiting analytical
- Cell was mixed >24 hrs ago
- Cell was mixed <24 hrs ago
- Cell selected for preferential sampling due to historical soil data
- SOIL STOCK PILE
- APPROX. LOCATION OF EXIST. UNDERGROUND COLLECTION TRENCH

Poplar Trees

MW-3004 MW-3005 MW-3006 MW-3008 MW-3009 MW-3010 MW-4004 MW-208A MWS-114 EW-13B

CB 8-9 CB 7-8 CB 6-7

NO.	DATE	APPR.	REVISION

IN SITU SOIL TREATMENT
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NEW HAMPSHIRE

WESTON SOLUTIONS CONCORD NEW HAMPSHIRE

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

CHECKED	DATE	CLIENT APPROVALS	DATE
DES. ENG.			
PROJ. ENG.			
PROJ. MGR.			
APPROVED			
APPROVED		ISSUED FOR	DATE

SOIL TREATMENT CELL LAYOUT

DRAWN	DATE	FIGURE NO.	REV. NO.
BEG	AUG 2015	5	
SCALE	W.O. NO.	SHT.	OF
AS SHOWN	20118.015.003		

M:\Design\DWG\KRSARGE\2015\Work Plan\FIG 5.dwg, Layout1, 9/4/2015 11:42:33 AM, girardab, 1:2

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E17-S14	14-Sep	10:45	11:04	19	15-Sep	9	Next Day	0.0	0	20.0	NA	NA	
						11		0.0	0	14.0	NA	NA	
						13		0.0	0	28.0	100 U	40 U	Sample sent to lab on 9/15. Results received on 9/16.
E17-S13	14-Sep	11:05	11:20	15	15-Sep	9	Next Day	0.0	0	12.0	NA	NA	
						11		0.0	0	63.0	NA	NA	
						13		0.0	0	32.0	50 U	20 U	Sample sent to lab on 9/15. Results received on 9/16.
E17-S11	14-Sep	11:36	11:42	7	15-Sep	9	Next Day	0.0	0	10.0	NA	NA	
						11		0.0	0	12.0	NA	NA	
						13		0.0	0	18.0	100 U	40 U	Sample sent to lab on 9/15. Results received on 9/16.
E17-S9	14-Sep	11:52	12:17	25	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	9.0	NA	NA	
						13		0.0	0	15.0	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.
E17-S7	14-Sep	13:07	13:22	15	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	8.0	NA	NA	
						13		0.0	0	5.0	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.
E17-S6	14-Sep	13:23	13:38	15	15-Sep	9	Next Day	0.0	0	11.0	NA	NA	
						11		0.0	0	6.0	NA	NA	
						13		0.0	0	12.0	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
E17-S5	14-Sep	13:39	14:08	29	15-Sep	9	Next Day	0.0	0	6.0	NA	NA	
						11		0.0	0	4.0	NA	NA	
						13		0.0	0	6.0	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E13-S2	14-Sep	16:16	16:33	17	15-Sep	9	Next Day	0.0	0	12.0	NA	NA	
						11		0.0	0	8.0	NA	NA	
						13		0.0	0	8.0	200	110	Sample sent to lab on on 9/16. Results received on 9/17. Exceedance detected. Cell retreated on 9/17. Analytical data received on 9/19/15 with results below project goals.
E14-S1	14-Sep	15:05	15:19	14	15-Sep	9	Next Day	0.0	0	6.0	NA	NA	
						11		0.0	0	12.0	NA	NA	
						13		0.0	0	8.0	100 U	160	Sample sent to lab on on 9/16. Results received on 9/17. Exceedance detected. Cell retreated on 9/17. Analytical data received on 9/19/15 with results below project goals.
E15-S2	14-Sep	15:20	15:35	15	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	10.0	NA	NA	
						13		0.0	0	8.0	100 U	50	Sample sent to lab on 9/16. Results received on 9/17.
E11-S2	15-Sep	9:00	9:18	18	16-Sep	11	Next Day	0.0	0	5.0	NA	NA	.
						13		0.0	0	10.0	100	60	Sample sent to lab on 9/16. Results received on 9/17.
E7-S1	15-Sep	12:05	12:22	17	16-Sep	13	Next Day	0.0	1	12.0	100	30	Sample sent to lab on 9/16. Results received on 9/17.
E9-S2	15-Sep	10:46	11:08	22	16-Sep	9	Next Day	0.0	0.0	4.0	NA	NA	
						11		0.0	0.0	9.0	100	50	
						13		0.0	0.8	6.0	NA	NA	Sample sent to lab on 9/16. Results received on 9/17.
E10-S1	15-Sep	8:38	8:59	21	16-Sep	13	Next Day	0.0	0.0	6.0	100	30	Sample sent to lab on 9/16. Results received on 9/17.
E8-S1	15-Sep	11:09	11:31	22	16-Sep	13	Next Day	0.0	0.0	7.0	100	60	Sample sent to lab on 9/16. Results received on 9/17.
E6-S2	15-Sep	13:37	13:57	20	16-Sep	13	Next Day	0.1	0.0	4.0	100	30 J	Sample sent to lab on 9/16. Results received on 9/17.
E5-S2	15-Sep	14:19	14:39	20	16-Sep	13	Next Day	0.1	0.0	10.0	50 J	20 J	Sample sent to lab on 9/16. Results received on 9/17.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E5-S1	15-Sep	13:58	14:18	20	16-Sep	13	Next Day	0.0	0.0	5.0	100	30	Sample sent to lab on 9/16. Results received on 9/17.
E3-S2	15-Sep	15:41	16:03	22	16-Sep	13	Next Day	0.1	0.0	4.0	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
E3-S1	15-Sep	15:20	15:40	20	16-Sep	13	Next Day	0.1	0.0	8.0	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
E4-S3	16-Sep	15:20	15:50	30	17-Sep	11	Next Day	0.0	1.0	5.0	100	40	Sample sent to lab on 9/17. Results received on 9/18.
						13		0.0	0.0	10.0	NA	NA	
E5-S3	16-Sep	15:50	16:20	30	17-Sep	11	Next Day	0.0	1.0	3.0	NA	NA	
						13		0.0	0.0	6.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S14	16-Sep	9:22	9:46	24	17-Sep	11	Next Day	0.1	0.0	9.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
						13		0.1	0.0	5.0	NA	NA	
E16-S11	16-Sep	10:28	10:48	20	17-Sep	13	Next Day	0.0	0.0	8.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E1-S2	16-Sep	8:10	8:36	26	17-Sep	13	Next Day	0.0	0.0	7.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S6	16-Sep	12:33	12:54	21	17-Sep	13	Next Day	0.1	0.0	2.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S9	16-Sep	11:09	11:28	19	17-Sep	13	Next Day	0.1	0.0	9.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S3	16-Sep	13:43	14:08	25	17-Sep	13	Next Day	0.1	0.0	7.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E10-S3	17-Sep	9:48	10:17	29	18-Sep	13	Next Day	0.1	0.0	7.0	100 U	30 J	Sample sent to lab on 9/18. Results received on 9/19.
E13-S3	17-Sep	11:07	11:37	20	18-Sep	13	Next Day	0.1	0.0	4.0	100 U	40 J	Sample sent to lab on 9/18. Results received on 9/19.
E14-S12	17-Sep	14:59	15:11	12	18-Sep	13	Next Day	0.0	0.0	10.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E14-S3	17-Sep	11:37	12:00	23	18-Sep	13	Next Day	0.2	0.0	2.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E15-S8	17-Sep	13:02	13:14	12	18-Sep	13	Next Day	0.0	0.0	5.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E15-S10	17-Sep	13:27	13:50	23	18-Sep	13	Next Day	0.0	0.0	3.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E15-S14	17-Sep	15:23	15:50	27	18-Sep	13	Next Day	0.0	0.0	8.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E15-S3	17-Sep	12:33	12:59	26	18-Sep	13	Next Day	0.0	0.0	7.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E12-S1	17-Sep	17:42	17:59	17	18-Sep	11	Next Day	0.0	0.0	3.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
						13		0.0	0.0	5.0	NA	NA	Retreated cell on 9/17.
E12-S2	17-Sep	17:24	17:42	18	18-Sep	11	Next Day	0.0	0.0	5.0	NA	NA	Retreated cell on 9/17.
						13		0.1	0.0	5.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
E13-S1	17-Sep	17:14	17:24	10	18-Sep	11	Next Day	0.0	0.0	3.0	NA	NA	Retreated cell on 9/17.
						13		0.0	0.0	6.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
E13-S2	17-Sep	16:50	17:14	24	18-Sep	11	Next Day	0.0	0.0	4.0	NA	NA	Retreated cell on 9/17.
						13		0.1	0.0	5.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
E14-S1	17-Sep	16:37	16:50	13	18-Sep	11	Next Day	0.1	0.0	6.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
						13		0.0	0.0	8.0	NA	NA	Retreated cell on 9/17.
E14-S2	17-Sep	16:06	16:37	31	18-Sep	11	Next Day	0.0	0.0	7.0	NA	NA	Retreated cell on 9/17.
						13		0.0	0.0	3.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
E4-S5	18-Sep	13:50	14:18	28	19-Sep	13	Next Day	0.1	0.0	4.0	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
E15-S4	18-Sep	14:56	15:18	22	19-Sep	13	Next Day	0.0	0.0	6.0	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
E5-S5	18-Sep	16:18	16:47	29	19-Sep	13	Next Day	0.1	0.0	7.0	100 U	30 J	Sample Sent to Lab 9/19. Analytical data received on 9/21.
E7-S4	18-Sep	10:37	11:02	25	19-Sep	13	Next Day	0.1	0.0	5.0	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
E10-S4	18-Sep	11:42	12:13	31	19-Sep	13	Next Day	0.0	0.0	24.0	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
E11-S4	18-Sep	13:11	13:32	21	19-Sep	13	Next Day	0.0	0.0	12.0	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
E13-S4	18-Sep	13:52	14:26	34	19-Sep	13	Next Day	0.1	0.0	13.0	100 U	80	Sample sent to lab on on 9/19. Results received on 9/21. Exceedance detected. Cell retreated on 9/21. Analytical data received on 9/22 with results below project goals.
E5-S6	19-Sep	8:32	8:45	13	21-Sep	13	Approx. 47 hrs	0.0	0.0	4.0			Sample Sent to Lab 9/21.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E8-S5	19-Sep	9:45	10:15	30	21-Sep	13	Approx. 46 hrs	0.1	0.0	10.0	Lab broke sample bottle. Cell was resampled at 14:30 on 9/21.		Sample Sent to Lab 9/21.
E13-S5	19-Sep	10:25	10:47	22	21-Sep	13	Approx. 45 hrs	0.0	0.0	10.0			Sample Sent to Lab 9/21.
E15-S6	19-Sep	11:40	12:05	25	21-Sep	13	Approx. 44 hrs	0.0	0.0	6.0			Sample Sent to Lab 9/21.
E13-S4	21-Sep	12:38	13:12	33	21-Sep	13	Approx. 4 hrs	0.0	2.5	13.0			Sample Sent to Lab 9/19. Cell was retreated on 9/21 at 12:38. Cell was resampled at 14:38 on 9/21. A
E8-S5	21-Sep	9:45	10:15	30	21-Sep	13	Approx. 2 days	0.0	10.0	10.0			Sample Sent to Lab 9/21.

Note:
Cell Locations = ID locations of the treatment cells that were sampled after the cell was mixed/blended.
FT BGS = Feet below ground surface.
PPM = Parts per million
NA = Not Analyzed
µg/kg = Micrograms per kilogram
Sample Collection Time = Samples collected the morning after day of mixing.
1,1-DCE = 1,1-Dichloroethene (criteria of ≤60 µg/kg)
1,1,1-TCA = 1,1,1-Trichloroethane (criteria of ≤150 µg/kg)
U=Compound was not detected and the reporting limit is shown.
Blue shading indicates results were nondetect for the compounds indicated.
Yellow highlighting indicates detection at or below the criteria for the compound indicated
Red highlighting indicates detection above the crietria for the compound indicated
Field testing for hydrogen peroxide was conducted using Quantofix Peroxide 100 test strips
Field testing for Total Iron was conducted using Hach Iron Color Disc Test Kit, Model IR-18A .

TABLE 1
STORM DRAIN MONITORING FIELD DATASHEET
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NH

Catch Basin Location	Date	Time	Collected By	Hydrogen Peroxide Concentration (ppm)	Dissolved Iron Concentration (ppm)	Notes
CB5-6	9/15/2015	1630	AB	0	1.0	
	9/16/2015	1115	AB	0	0.4	
	9/16/2015	1643	AB	0	0.1	
	9/17/2015	1021	AB	0	1.4	
	9/17/2015	1610	AB	0	0.3	
	9/18/2015	1102	AB	0	0.6	
	9/18/2015	1610	AB	0	0.2	
	9/19/2015	0915	AB	0	0.8	
	9/19/2015	1200	AB	0	0.8	
	9/21/2015	0910	EH	0	0.0	
	9/21/2015	1515	EH	0	0.8	
CB6-7	9/16/2015	1115	AB	0	1.0	
	9/16/2015	1643	AB	0	0.5	
	9/17/2015	1011	AB	0	1.0	
	9/17/2015	1620	AB	0	0.2	
	9/18/2015	1112	AB	0	0.8	
	9/18/2015	1603	AB	0	0.1	
	9/19/2015	0915	AB	0	1.0	
	9/19/2015	1200	AB	0	1.0	
	9/21/2015	0915	EH	0	0.0	
	9/21/2015	1510	EH	0	0.8	

Notes:
ppm = Parts per million

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**21-Sep-15**	Client:	**Weston**	Personnel:	**Kevin, Mark, Bill L, Bill O, Cody, Dave**
Project:	**KMC Site, Conway, NH**	Job Number:	**801991**	Weather:	**Overcast, 45-71**

Personnel Names	Time		Mobilization To & From Job Site	Safety Meeting	Equipment Preparation	Sampling Wells & Analysis	Mixing Time	De-Con. Equipment	Data Entry Time	Other (Lunch)
	Start	Stop								
Kevin O'Neal	7:00 AM	6:00 PM		0.25	8.25	1.00	0.50	0.50	0.50	0.50
Mark Ratner	7:00 AM	6:00 PM		0.25	8.25	1.00	0.50	0.50		0.50
Bill Lang	7:00 AM	2:00 PM		0.25	4.75	1.00	0.50	0.50		0.50
Bill Oberloier	7:00 AM	6:00 PM		0.25	8.25	1.00	0.50	0.50		0.50
Dave Roe	1:00 PM	2:00 PM		0.25	4.75	1.00	0.50	0.50		0.50
Cody Shell	1:00 PM	2:00 PM		0.25	4.75	1.00	0.50	0.50		0.50
TOTAL HOURS =	11.00		TOTAL MIXING HOURS =			0.50				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**17% H2O2 Volume**		**Catalyst Volume**		**17% H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			E13-S4	100	E13-S4	320	0	0	0	0
Generator			0	0	0	0	0	0	0	0
Mixers			0	0	0	0	0	0	0	0
Equipment Set			0	0	0	0	0	0	0	0
Vehicle(s) utilized			0	0	0	0	0	0	0	0
Raw Materials Used			0	0	0	0	0	0	0	0
Powder Catalyst	33	lbs.	0	0	0	0	0	0	0	0
Liquid Catalyst	100	Gallons	0	0	0	0	0	0	0	0
34% H2O2	160	Gallons	0	0	0	0	0	0	0	0
17% H2O2	320	Gallons	0	0	0	0	0	0	0	0
			TOTAL INJECTION VOLUME =		420					

Major Work Activities Performed:

Daily safety meeting. Equipment preparation, re-mixing into 1 cell. Sampling of the down-gradient catch basin for iron and hydrogen peroxide levels. Collected a total of 6 soil samples from 4 cells treated on Saturday (E5-S6, E8-S5, E13-S5 and E15-S6), 1 cell treated today 9/21 (E13-S4) and a second sample of E8-S5 collected at ~17:00 to replace the damaged sample sent to the lab earlier in the day. Samples were collected from 1 depth interval (at approximately 13 ft bgs) at select cells to confirm adequate mixing occurred. Removed portions of the perimeter fence and silt fence to allow the bulldozer to push in bermed (clean/ dry overburden soils) soils back into the excavation area. Re-installed silt fence and perimeter fence.

Health and Safety Items Covered:

General site safety topics during the daily safety meeting between ISOTEC (Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall).

Unforeseen Site Conditions:

List of Deliveries:

Bathroom serviced.

Other Comments (Work delays, inspections results, etc.):

TREATMENT PROGRAM - MIXING VOLUME SUMMARY
KMC Site, Conway, New Hampshire
ISOTEC PROJECT #801991

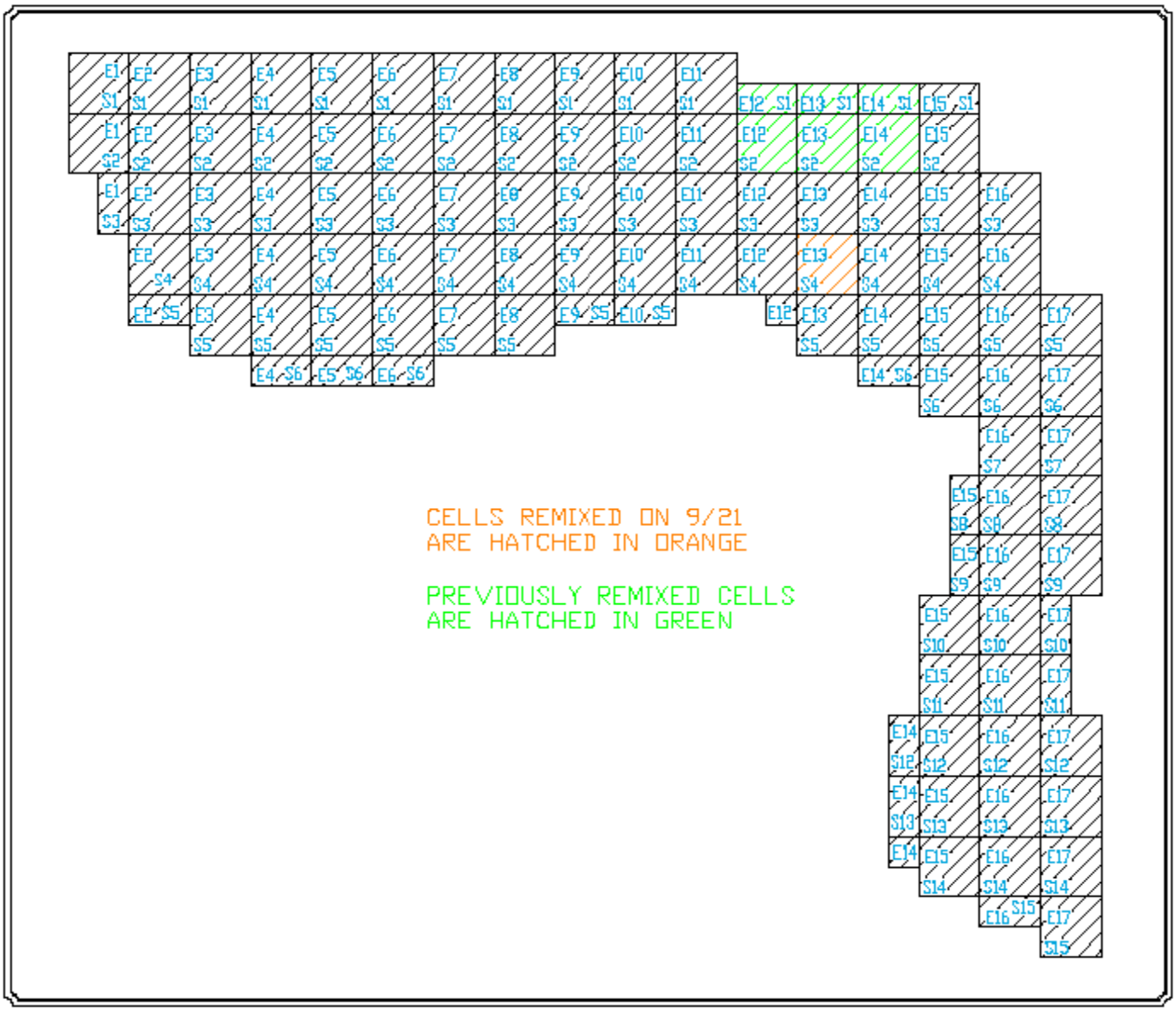
DATE:	21-Sep-15

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 (17%) Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Comments
E13-S4	12:38	13:12	34	100	320	12.35	420	
DAY TOTAL/ AVERAGE				100	320		420	

Lang Tool Co.

2520 Glidden Rd.
Beaverton, MI 48612
www.langtool.com
bill@langtool.com
Phone (989) 435-9864
Fax (989) 435-4311

September 21, 2015



Total remixed soil volume as of 9/21 is 163 cubic yards.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 11**
***Date* : Tues 9/22/15**

Prepared By:
Erik Hall

Weather:
Sunny 45-68°F

Site Hours:
0700-1815

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	11.25
ISOTEC	Mark Ratner	Site Manager	Soil Mixing	11.25
ISOTEC	Kevin O'Neil	Site Manger	Soil Mixing	11.25
LTC	Bill Lang	Project Manager	Soil Mixing	11.25
LTC	Bill Oberloier	Site Assistant	Soil Mixing	11.25
LTC	Dave Roe	Equipment Operator	Soil Mixing	11.25
LTC	Cody Shell	Equipment Operator	Soil Mixing	11.25

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) POV and (1) Chevy Express Cargo Van
- **ISOTEC** – (1)Penske Box Truck with various project tools and supplies
- **LTC** – (1)Caterpillar D5K2 Bulldozer, (1) Caterpillar 320E Excavator, (1) 20-LTC Dual Action Blender, (1) Mack Granite Tractor and lowboy trailer*, (1) Mack mixing truck, (1) JLC 8042 fork lift, (2) utility trucks, (1) office/utility trailer

DEVIATIONS FROM PROPOSED SCHEDULE

None.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- None.

TEST DATA

(List type and location of tests performed and results)

- None.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

SAFETY COMMENTS/VIOLATIONS

- None

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None

WORK COMPLETED- BY WESTON

- Construction oversight.
- Perform review of erosion controls. Erosion controls are intact and working properly.
- Review analytical data received from off-site laboratory.
- Perimeter air monitoring with MultiRae. None of the action limits were triggered.

WORK COMPLETED- BY ISOTEC& SUBCONTRACTORS

- Complete installation of construction fence surrounding the open excavation.
- Prepare equipment for demobilization first tomorrow morning.
- For more details refer attached Daily Reports from ISOTEC and Lang Tool.

AGREEMENTS

(Company Name – task description)

None.

Notes:
ISOTEC = In-Situ Oxidative Technologies, Inc.
LTC = Lang Tool Company

TREATMENT PROGRAM – MIXING SUMMARY

See attached Daily Reports from ISOTEC and Lang Tool

Photographs

Water hose removed from the hydrant

Decontaminated blender

Construction fence surrounds the excavation

Looking east from the western edge of the excavation

Photographs (continued)

Blender on low boy ready to demobe in the morning

Catch basin along Hobbs Street where water line was run under the road. Pull string left in place in case restoration contractor needs access to the hydrant.

Kearsarge Metallurgical Superfund Site
Soil mixing with ISCO
Project Status - 9/22/2015

Cells E13S04 was retreated on 9/21/15 at 12:38 and was re-sampled at 14:38. Results for the retreated sample are 40 U ug/kg for 11DCE and 100 U ug/kg for 111TCA.

Cells E12S1, E12S2, E13S1, E13S2, E14S1, E14S2 were retreated on 9/17/15 and re-sampled on 9/18/15.Results for 6 cells were 40 U ug/kg for 11DCE and 100 U ug/kg for 111TCA.

REAGENT DELIVERY EQUIPMENT

TOP SOIL STOCK PILE

TEMPORARY SECURITY FENCE

SOIL TREATMENT AREA (9,076 SQFT)

CELL LAYOUT (10,100 SQFT)

STORM DRAIN

EXTENT OF BERMED SOIL REMOVED FROM EXCAVATION

APPROX. LOCATION OF EXIST. UNDERGROUND COLLECTION TRENCH

Legend

- Analytical passed
- Cell exceeded the project action limit
- Cell was mixed; awaiting analytical
- Cell was mixed >24 hrs ago
- Cell was mixed <24 hrs ago
- Area was retreated
- TOP SOIL STOCK PILE
- Cell selected for pre-treatment sampling due to historical soil data

NOTE:
ALL CELLS ARE 10'x10', 10'x5', OR 5'x5'.

GRAPHIC SCALE
10 5 0 5 10
APPROXIMATE SCALE IN FEET

Poplar Trees

MW-3004 MW-3005 MW-3006 MW-3007 MW-3008 MW-3009 MW-3010 MW-4004 MWS-114 EW-13B MW-207A

CB 8-9 CB 7-8 CB 6-7

NO.	DATE	APPR.	REVISION

IN SITU SOIL TREATMENT
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NEW HAMPSHIRE

		CLIENT APPROVALS	DATE
CHECKED	DATE		
DES. ENG.			
PROJ. ENG.			
PROJ. MGR.			
APPROVED			
APPROVED		ISSUED FOR	DATE

WESTON SOLUTIONS CONCORD NEW HAMPSHIRE

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

SOIL TREATMENT CELL LAYOUT

DRAWN	DATE	FIGURE NO.	REV. NO.
BEG	AUG 2015	5	
SCALE	W.O. NO.	SHT.	OF
AS SHOWN	20118.015.003		

M:\Design\DWG\KRSARGE\2015\Work Plan\FIG 5.dwg, Layout1, 9/4/2015 11:42:33 AM, girardeb, 1:2

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E17-S14	14-Sep	10:45	11:04	19	15-Sep	9	Next Day	0.0	0	20.0	NA	NA	
						11		0.0	0	14.0	NA	NA	
						13		0.0	0	28.0	100 U	40 U	Sample sent to lab on 9/15. Results received on 9/16.
E17-S13	14-Sep	11:05	11:20	15	15-Sep	9	Next Day	0.0	0	12.0	NA	NA	
						11		0.0	0	63.0	NA	NA	
						13		0.0	0	32.0	50 U	20 U	Sample sent to lab on 9/15. Results received on 9/16.
E17-S11	14-Sep	11:36	11:42	7	15-Sep	9	Next Day	0.0	0	10.0	NA	NA	
						11		0.0	0	12.0	NA	NA	
						13		0.0	0	18.0	100 U	40 U	Sample sent to lab on 9/15. Results received on 9/16.
E17-S9	14-Sep	11:52	12:17	25	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	9.0	NA	NA	
						13		0.0	0	15.0	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.
E17-S7	14-Sep	13:07	13:22	15	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	8.0	NA	NA	
						13		0.0	0	5.0	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.
E17-S6	14-Sep	13:23	13:38	15	15-Sep	9	Next Day	0.0	0	11.0	NA	NA	
						11		0.0	0	6.0	NA	NA	
						13		0.0	0	12.0	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
E17-S5	14-Sep	13:39	14:08	29	15-Sep	9	Next Day	0.0	0	6.0	NA	NA	
						11		0.0	0	4.0	NA	NA	
						13		0.0	0	6.0	100 U	40 U	Sample sent to lab on 9/16. Results received on 9/17.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E13-S2	14-Sep	16:16	16:33	17	15-Sep	9	Next Day	0.0	0	12.0	NA	NA	
						11		0.0	0	8.0	NA	NA	
						13		0.0	0	8.0	200	110	Sample sent to lab on on 9/16. Results received on 9/17. Exceedance detected. Cell retreated on 9/17. Analytical data received on 9/19/15 with results below project goals.
E14-S1	14-Sep	15:05	15:19	14	15-Sep	9	Next Day	0.0	0	6.0	NA	NA	
						11		0.0	0	12.0	NA	NA	
						13		0.0	0	8.0	100 U	160	Sample sent to lab on on 9/16. Results received on 9/17. Exceedance detected. Cell retreated on 9/17. Analytical data received on 9/19/15 with results below project goals.
E15-S2	14-Sep	15:20	15:35	15	15-Sep	9	Next Day	0.0	0	14.0	NA	NA	
						11		0.0	0	10.0	NA	NA	
						13		0.0	0	8.0	100 U	50	Sample sent to lab on 9/16. Results received on 9/17.
E11-S2	15-Sep	9:00	9:18	18	16-Sep	11	Next Day	0.0	0	5.0	NA	NA	.
						13		0.0	0	10.0	100	60	Sample sent to lab on 9/16. Results received on 9/17.
E7-S1	15-Sep	12:05	12:22	17	16-Sep	13	Next Day	0.0	1	12.0	100	30	Sample sent to lab on 9/16. Results received on 9/17.
E9-S2	15-Sep	10:46	11:08	22	16-Sep	9	Next Day	0.0	0.0	4.0	NA	NA	
						11		0.0	0.0	9.0	100	50	
						13		0.0	0.8	6.0	NA	NA	Sample sent to lab on 9/16. Results received on 9/17.
E10-S1	15-Sep	8:38	8:59	21	16-Sep	13	Next Day	0.0	0.0	6.0	100	30	Sample sent to lab on 9/16. Results received on 9/17.
E8-S1	15-Sep	11:09	11:31	22	16-Sep	13	Next Day	0.0	0.0	7.0	100	60	Sample sent to lab on 9/16. Results received on 9/17.
E6-S2	15-Sep	13:37	13:57	20	16-Sep	13	Next Day	0.1	0.0	4.0	100	30 J	Sample sent to lab on 9/16. Results received on 9/17.
E5-S2	15-Sep	14:19	14:39	20	16-Sep	13	Next Day	0.1	0.0	10.0	50 J	20 J	Sample sent to lab on 9/16. Results received on 9/17.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E5-S1	15-Sep	13:58	14:18	20	16-Sep	13	Next Day	0.0	0.0	5.0	100	30	Sample sent to lab on 9/16. Results received on 9/17.
E3-S2	15-Sep	15:41	16:03	22	16-Sep	13	Next Day	0.1	0.0	4.0	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
E3-S1	15-Sep	15:20	15:40	20	16-Sep	13	Next Day	0.1	0.0	8.0	100 U	30 U	Sample sent to lab on 9/16. Results received on 9/17.
E4-S3	16-Sep	15:20	15:50	30	17-Sep	11	Next Day	0.0	1.0	5.0	100	40	Sample sent to lab on 9/17. Results received on 9/18.
						13		0.0	0.0	10.0	NA	NA	
E5-S3	16-Sep	15:50	16:20	30	17-Sep	11	Next Day	0.0	1.0	3.0	NA	NA	
						13		0.0	0.0	6.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S14	16-Sep	9:22	9:46	24	17-Sep	11	Next Day	0.1	0.0	9.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
						13		0.1	0.0	5.0	NA	NA	
E16-S11	16-Sep	10:28	10:48	20	17-Sep	13	Next Day	0.0	0.0	8.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E1-S2	16-Sep	8:10	8:36	26	17-Sep	13	Next Day	0.0	0.0	7.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S6	16-Sep	12:33	12:54	21	17-Sep	13	Next Day	0.1	0.0	2.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S9	16-Sep	11:09	11:28	19	17-Sep	13	Next Day	0.1	0.0	9.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E16-S3	16-Sep	13:43	14:08	25	17-Sep	13	Next Day	0.1	0.0	7.0	100 U	30 U	Sample sent to lab on 9/17. Results received on 9/18.
E10-S3	17-Sep	9:48	10:17	29	18-Sep	13	Next Day	0.1	0.0	7.0	100 U	30 J	Sample sent to lab on 9/18. Results received on 9/19.
E13-S3	17-Sep	11:07	11:37	20	18-Sep	13	Next Day	0.1	0.0	4.0	100 U	40 J	Sample sent to lab on 9/18. Results received on 9/19.
E14-S12	17-Sep	14:59	15:11	12	18-Sep	13	Next Day	0.0	0.0	10.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E14-S3	17-Sep	11:37	12:00	23	18-Sep	13	Next Day	0.2	0.0	2.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E15-S8	17-Sep	13:02	13:14	12	18-Sep	13	Next Day	0.0	0.0	5.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E15-S10	17-Sep	13:27	13:50	23	18-Sep	13	Next Day	0.0	0.0	3.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E15-S14	17-Sep	15:23	15:50	27	18-Sep	13	Next Day	0.0	0.0	8.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.
E15-S3	17-Sep	12:33	12:59	26	18-Sep	13	Next Day	0.0	0.0	7.0	100 U	40 U	Sample sent to lab on 9/18. Results received on 9/19.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E12-S1	17-Sep	17:42	17:59	17	18-Sep	11	Next Day	0.0	0.0	3.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
						13		0.0	0.0	5.0	NA	NA	Retreated cell on 9/17.
E12-S2	17-Sep	17:24	17:42	18	18-Sep	11	Next Day	0.0	0.0	5.0	NA	NA	Retreated cell on 9/17.
						13		0.1	0.0	5.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
E13-S1	17-Sep	17:14	17:24	10	18-Sep	11	Next Day	0.0	0.0	3.0	NA	NA	Retreated cell on 9/17.
						13		0.0	0.0	6.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
E13-S2	17-Sep	16:50	17:14	24	18-Sep	11	Next Day	0.0	0.0	4.0	NA	NA	Retreated cell on 9/17.
						13		0.1	0.0	5.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
E14-S1	17-Sep	16:37	16:50	13	18-Sep	11	Next Day	0.1	0.0	6.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
						13		0.0	0.0	8.0	NA	NA	Retreated cell on 9/17.
E14-S2	17-Sep	16:06	16:37	31	18-Sep	11	Next Day	0.0	0.0	7.0	NA	NA	Retreated cell on 9/17.
						13		0.0	0.0	3.0	100 U	40 U	Retreated cell on 9/17. Sample sent to lab on 9/18. Analytical data received on 9/19.
E4-S5	18-Sep	13:50	14:18	28	19-Sep	13	Next Day	0.1	0.0	4.0	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
E15-S4	18-Sep	14:56	15:18	22	19-Sep	13	Next Day	0.0	0.0	6.0	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
E5-S5	18-Sep	16:18	16:47	29	19-Sep	13	Next Day	0.1	0.0	7.0	100 U	30 J	Sample Sent to Lab 9/19. Analytical data received on 9/21.
E7-S4	18-Sep	10:37	11:02	25	19-Sep	13	Next Day	0.1	0.0	5.0	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
E10-S4	18-Sep	11:42	12:13	31	19-Sep	13	Next Day	0.0	0.0	24.0	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
E11-S4	18-Sep	13:11	13:32	21	19-Sep	13	Next Day	0.0	0.0	12.0	100 U	30 U	Sample Sent to Lab 9/19. Analytical data received on 9/21.
E13-S4	18-Sep	13:52	14:26	34	19-Sep	13	Next Day	0.1	0.0	13.0	100 U	80	Sample sent to lab on on 9/19. Results received on 9/21. Exceedance detected. Cell retreated on 9/21. Analytical data received on 9/22 with results below project goals.
E5-S6	19-Sep	8:32	8:45	13	21-Sep	13	Approx. 47 hrs	0.0	0.0	4.0	100 U	30 U	Sample Sent to Lab 9/21. Analytical data received on 9/22.

Weston/ NHDES
Treatment Field Sampling Data
Kearsarge Superfund Site
Conway, New Hampshire
ISOTEC #801991

Cell Location	Date of Blending	Start time of Blending	Stop time of Blending	Total Blending Time (minutes)	Date of Sampling	Depth of Sample (ft bgs)	Sample Collection Time After Blending	PID Screening (ppm)	Post-Treatment Hydrogen Peroxide Concentration (ppm)	Post-Treatment Dissolved Iron Concentration (ppm)	Post-Treatment 1,1,1-TCA Concentration (ug/kg)	Post-Treatment 1,1-DCE Concentration (ug/kg)	Notes
E8-S5	19-Sep	9:45	10:15	30	21-Sep	13	Approx. 46 hrs	0.1	0.0	10.0	Lab broke sample bottle. Cell was resampled at 14:30 on 9/21.		Sample Sent to Lab 9/21.
E13-S5	19-Sep	10:25	10:47	22	21-Sep	13	Approx. 45 hrs	0.0	0.0	10.0	100 U	40 U	Sample Sent to Lab 9/21. Analytical data received on 9/22.
E15-S6	19-Sep	11:40	12:05	25	21-Sep	13	Approx. 44 hrs	0.0	0.0	6.0	100 U	30 U	Sample Sent to Lab 9/21. Analytical data received on 9/22.
E13-S4	21-Sep	12:38	13:12	33	21-Sep	13	Approx. 4 hrs	0.0	2.5	13.0	100 U	30 U	Sample Sent to Lab 9/19. Cell was retreated on 9/21 at 12:38. Cell was resampled at 14:38 on 9/21. Analytical data received on 9/22
E8-S5	21-Sep	9:45	10:15	30	21-Sep	13	Approx. 2 days	0.0	10.0	10.0	70 J	20 J	Sample Sent to Lab 9/21. Lab broke sample bottle. Cell will be resampled at approx. 14:30 on 9/21. Analytical data received on 9/22.

Note:
Cell Locations = ID locations of the treatment cells that were sampled after the cell was mixed/blended.
FT BGS = Feet below ground surface.
PPM = Parts per million
NA = Not Analyzed
µg/kg = Micrograms per kilogram
Sample Collection Time = Samples collected the morning after day of mixing.
1,1-DCE = 1,1-Dichloroethene (criteria of ≤60 µg/kg)
1,1,1-TCA = 1,1,1-Trichloroethane (criteria of ≤150 µg/kg)
U=Compound was not detected and the reporting limit is shown.
Blue shading indicates results were nondetect for the compounds indicated.
Yellow highlighting indicates detection at or below the criteria for the compound indicated
Red highlighting indicates detection above the crietria for the compound indicated
Field testing for hydrogen peroxide was conducted using Quantofix Peroxide 100 test strips
Field testing for Total Iron was conducted using Hach Iron Color Disc Test Kit, Model IR-18A .

ISOTEC

In-Situ Oxidative Technologies

DAILY FIELD REPORT

11 Princess Rd, Suite A
Lawrenceville, NJ 08648
(609) 275-8500

Date:	**22-Sep-15**	Client:	**Weston**	Personnel:	**Kevin, Mark, Bill L, Bill O, Cody, Dave**
Project:	**KMC Site, Conway, NH**	Job Number:	**801991**	Weather:	**Overcast, 45-70**

Personnel Names	Time		Mobilization To & From Job Site	Safety Meeting	Equipment Preparation	Sampling Wells & Analysis	Mixing Time	De-Con. Equipment	Data Entry Time	Other (Lunch)
	Start	Stop								
Kevin O'Neal	7:00 AM	6:15 PM		0.25	9.75			0.50	0.25	0.50
Mark Ratner	7:00 AM	6:15 PM		0.25	9.75			0.50		0.50
Bill Lang	7:00 AM	6:15 PM		0.25	9.75			0.50		0.50
Bill Oberloier	7:00 AM	6:15 PM		0.25	9.75			0.50		0.50
Dave Roe	7:00 AM	6:15 PM		0.25	9.75			0.50		0.50
Cody Shell	7:00 AM	6:15 PM		0.25	9.75			0.50		0.50
TOTAL HOURS =	11.00		TOTAL MIXING HOURS =			0.00				

Support Equipment and Services	**Quantity**	**Hours**	**Catalyst Volume**		**17% H2O2 Volume**		**Catalyst Volume**		**17% H2O2 Volume**	
Compressor			Cell ID	Volume	Cell ID	Volume	Cell ID	Volume	Cell ID	Volume
Pumps			0	0	0	0	0	0	0	0
Generator			0	0	0	0	0	0	0	0
Mixers			0	0	0	0	0	0	0	0
Equipment Set			0	0	0	0	0	0	0	0
Vehicle(s) utilized			0	0	0	0	0	0	0	0
Raw Materials Used			0	0	0	0	0	0	0	0
Powder Catalyst		lbs.	0	0	0	0	0	0	0	0
Liquid Catalyst		Gallons	0	0	0	0	0	0	0	0
34% H2O2		Gallons	0	0	0	0	0	0	0	0
Diluted H2O2		Gallons	0	0	0	0	0	0	0	0
34% H2O2		lbs.								
			TOTAL INJECTION VOLUME =		0					

Major Work Activities Performed:

Daily safety meeting. Decon equipment, installed the rest of the snow fence, cleaned up trash around the site, loaded all of Lang's equipment and machinery for demobilization tomorrow morning (9/23).

Health and Safety Items Covered:

General site safety topics during the daily safety meeting between ISOTEC (Mark Ratner, Kevin O'Neal), LTC (Bill L, Bill O, Cody S, Dave Roe), Weston (Erik Hall).

Unforeseen Site Conditions:

List of Deliveries:

None

Other Comments (Work delays, inspections results, etc.):

TREATMENT PROGRAM - MIXING VOLUME SUMMARY
KMC Site, Conway, New Hampshire
ISOTEC PROJECT #801991

DATE:	23-Sep-15

Mixing Cell ID	Start Time	Stop Time	Mixing Time (mins)	Catalyst Volume (gal)	H2O2 (17%) Volume (gal)	Reagent Flow Rate (gal/min)	Total Volume	Comments
							0	
DAY TOTAL/ AVERAGE				0	0		0	

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 12**
***Date* : Wed 9/23/15**

Prepared By:
Erik Hall

Weather:
Sunny 45-68°F

Site Hours:
0700-1300

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	4
ISOTEC	Mark Ratner	Site Manager	Soil Mixing	6
ISOTEC	Kevin O'Neil	Site Manger	Soil Mixing	6
LTC	Bill Lang	Project Manager	Soil Mixing	0.5
LTC	Bill Oberloier	Site Assistant	Soil Mixing	0.5
LTC	Dave Roe	Equipment Operator	Soil Mixing	0.5
LTC	Cody Shell	Equipment Operator	Soil Mixing	0.5

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) POV and (1) Chevy Express Cargo Van
- **ISOTEC** – (1)Penske Box Truck with various project tools and supplies
- **LTC** – (1)Caterpillar D5K2 Bulldozer, (1) Caterpillar 320E Excavator, (1) 20-LTC Dual Action Blender, (1) Mack Granite Tractor and lowboy trailer*, (1) Mack mixing truck, (1) JLC 8042 fork lift, (2) utility trucks, (1) office/utility trailer

DEVIATIONS FROM PROPOSED SCHEDULE

None.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- LTC demobilized (1) Caterpillar D5K2 Bulldozer, (1) 20-LTC Dual Action Blender, (1) Mack Granite Tractor and lowboy trailer*, (1) Mack mixing truck, (2) utility trucks, (1) office/utility trailer. ISOTEC returned remaining hydrogen peroxide totes to Mann Chemical via common carrier. ISOTEC demobilized (1)Penske Box Truck with various project tools and supplies

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

TEST DATA

(List type and location of tests performed and results)

- None.

SAFETY COMMENTS/VIOLATIONS

- None

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None

WORK COMPLETED- BY WESTON

- Construction oversight.
- Team photo.
- Conduct post-remediation videos

WORK COMPLETED- BY ISOTEC& SUBCONTRACTORS

- Team photo.
- Return remaining hydrogen peroxide totes to Mann Chemical
- ISOTEC removed secondary containment and packed the box truck from demobilization.
- LTC demobilized first tomorrow morning.

AGREEMENTS

(Company Name – task description)

None.

Notes:
ISOTEC = In-Situ Oxidative Technologies, Inc.
LTC = Lang Tool Company

Photographs

Team Photo: (Left to Right)Kevin O'Neal-ISOTEC, Bill Lang – LTC, Cody Shell-LTC, Erik Hall- Weston, Bill Oberloier – LTC, Mark Ratner- ISOTEC, Dave Roe-LTC

Topsoil stockpile located north of the excavation

Topsoil stockpile located south of the excavation

Looking north from the southeastern edge of the excavation

Photographs (continued)

Looking west from the northern edge of the excavation

Looking east from the northern edge of the excavation

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 13**
***Date* : Mon 9/28/15**

Prepared By:
Erik Hall

Weather:
Sunny – Cloudy with showers 45-76°F

Site Hours:
1000-1900

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Vinnie Dello Russo	Project Manager	Site Visit	2.5
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	9
Active Environmental	Louis Evangelista	Equipment Operator	Site Restoration	9
Active Environmental	Jim McPherson	Equipment Operator	Site Restoration	8
Active Environmental	Brandon Horn	Laborer	Site Restoration	9
Active Environmental	Nicholas Evangelista	Laborer	Site Restoration	8

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) personally owned vehicle (POV) and (1) Chevy Express Cargo Van
- **Active** – (2) Ford F350 pickup trucks with various project tools and supplies, (1)John Deere 700J Bulldozer, (1) Volvo EC160C Excavator, (1) Hydroseeder, (1) POV,

DEVIATIONS FROM PROPOSED SCHEDULE

None.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Active mobilized (2) Ford F350 pickup trucks with various project tools and supplies, (1)John Deere 700J Bulldozer, (1) Volvo EC160C Excavator, (1) Hydroseeder, (1) POV, 15 pounds (lbs) of wetland seed mix, 75 lbs of upland seed mix

TEST DATA

(List type and location of tests performed and results)

- None. Compared seed mix to specifications. Seed is acceptable. Attached are PDFs of the seed mix tags.

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner. Conducted kickoff meeting with the Active and Weston site team. Reviewed Weston's HASP and Active's JSAs. Reviewed competent person for excavations and filled out the forms.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Daily reports

WORK COMPLETED- BY ISOTEC& SUBCONTRACTORS

- Mobilize equipment.
- Began backfill of the excavation. During backfilling on test cell, material swelled to original grade. See attached Site Status Map.

AGREEMENTS

(Company Name – task description)

None.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Looking north from the southeastern edge of the excavation prior to backfilling activities

Looking west from the northeastern edge of the excavation prior to backfilling activities

Installing temporary berm

Installing temporary berm

Photographs (continued)

Backfilling activities

Swelled material to original grade in test cell.

Area of swelled material to original grade. Will let settle overnight.

Kearsarge Metallurgical Superfund Site
Soil Treatment Restoration
Project Status - 9/28/2015

Poplar Trees

TOP SOIL STOCK PILE

REAGENT DELIVERY EQUIPMENT

TEMPORARY SECURITY FENCE

MW-3004

MW-3005

MW-3006

MW-3008

MW-3010

MW-203A

MWS-114

EW-13B

CB 8-9

CB 7-8

CB 6-7

Area of temporary berm

Cell not backfilled

Cell was backfilled/ surcharged

Legend

APPROX. LOCATION OF EXIST. UNDERGROUND COLLECTION TRENCH

SOIL TREATMENT AREA (9,076 SQFT)

CELL LAYOUT (10,100 SQFT)

STORM DRAIN

EXTENT OF BERMED SOIL REMOVED FROM EXCAVATION

NOTE:
ALL CELLS ARE 10'x10', 10'x5', OR 5'x5'.

GRAPHIC SCALE
10 5 0 5 10
APPROXIMATE SCALE IN FEET

M:\Design\DWG\KRSARGE\2015\Work Plan\FIG 5.dwg, Layout1, 9/4/2015 11:42:33 AM, girardab, 1:2

NO.	DATE	APPR.	REVISION

IN SITU SOIL TREATMENT
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NEW HAMPSHIRE

WESTON SOLUTIONS — CONCORD NEW HAMPSHIRE

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

CHECKED	DATE	CLIENT APPROVALS	DATE
DES. ENG.			
PROJ. ENG.			
PROJ. MGR.			
APPROVED			
APPROVED		ISSUED FOR	DATE

SOIL TREATMENT CELL LAYOUT

DRAWN	DATE	FIGURE NO.	REV. NO.
BEG	AUG 2015	5	
SCALE	W.O. NO.	SHT.	OF
AS SHOWN	20118.015.003		

Upland Seed Mixture

Pure Seed		Germination
38.80%	CREEPING RED	85%
38.80%	PERENNIAL RYEGRASS	90%
6.59%	BIRDSFOOT TREFOIL	79%+11% hard seed
6.59%	ALSIKE CLOVER	85%
6.38%	RED TOP	85%
0.10%	Other Crop Seed	
4.27%	Inert Matter	Lot Number 28008
0.07%	Weed Seed	Test Date 1-15

Jersey Seed 18B Jules Lane New Brunswick NJ 08901

WETLAND RESTORATION MIXTURE

PURE SEED		GERMINATION
19..60%	VIRGINIA WILD RYE	89%
19.40%	CREEPING RED FESCUE	85%
11.25%	LITTLE BLUESTEM	62%+33% DORMANT
9.86%	SWITCHGRASS	87%
9.67%	FOX SEDGE	26%+54% DORMANT
8.08%	BIG BLUESTEM	74%+21% DORMANT
4.92%	BLUE VERVAIN	1%+90% DORMANT
1.97%	GREEN BULRUSH	0%+90% DORMANT
1.97%	SOFT RUSH	1%+90% DORMANT
1.79%	ROUGH BENTGRASS	91%
0.98%	WOOLGRASS	3%+91% DORMANT
0.95%	NEW ENGLAND ASTER	83%+9% DORMANT
0.84%	BONESET	25%+52% DORMANT
0.68%	GRASS LEAVED GOLDENROD	29%+66% DORMANT
0.15%	OTHER CROP SEED	
7.80%	INERT MATTER	LOT NUMBER 28009
0.09%	WEED SEED	TEST DATE 12/14

JERSEY SEED 18B JULES LANE NEW BRUNSWICK NJ 08901

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 14**
***Date* : Tues 9/29/15**

Prepared By:
Erik Hall

Weather:
Sunny – Cloudy with showers 59-63°F

Site Hours:
0700-1900

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
NHDES	Andrew Hoffman	Project Manager	Site Visit	8
Weston Solutions	Fred Symmes	Technical Manager	Site Visit/Deliver Geotextile	1
Weston Solutions	Lee Baronas	Technical Manager	Site Visit	12
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	10.5
Active Environmental	Louis Evangelista	Equipment Operator	Site Restoration	10
Active Environmental	Jim McPherson	Equipment Operator	Site Restoration	11
Active Environmental	Brandon Horn	Laborer	Site Restoration	11
Active Environmental	Nicholas Evangelista	Laborer	Site Restoration	

PROJECT EQUIPMENT

(Company Name – Description)

- **NHDES** – (1) government vehicle
- **WESTON** – (2) personally owned vehicle (POV) and (1) Chevy Express Cargo Van
- **Active** – (2) Ford F350 pickup trucks with various project tools and supplies, (1)John Deere 700J Bulldozer, (1) Volvo EC160C Excavator, (1) Hydroseeder, (1) POV,

DEVIATIONS FROM PROPOSED SCHEDULE

None.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Two rolls of SKAPPS 8 oz. nonwoven geotextile (12.5 ft. wide by 360 ft. long)

TEST DATA

(List type and location of tests performed and results)

- None.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Daily report

WORK COMPLETED- BY ISOTEC& SUBCONTRACTORS

- Continue backfill of the excavation. During backfilling, material swelled to original grade. An excavation approximately105 ft. long by 20 ft. by 4 ft. deep (and below final grade) was excavated to allow swelled material to exit the soil mixing excavation. The new excavation filled with approximately 12-24 inches of swelled material at completion of work today. See attached Site Status Map and photos bellows for more details.

AGREEMENTS

(Company Name – task description)

Active, Weston and NHDES agreed to excavate the cell south of the soil mix excavation to all relief of the swell material as backfill continued in the soil mix excavation.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Test cell from yesterday. Swelled material settled approximately 6 inches overnight.

Swelled material exiting test cell over the temporary berm into the remaining portion of the exaction as the test cell is backfilled.

Backfilling the excavation

Backfilled test cell. Looking north from the former southeast corner of the excavation.

Photographs (continued)

Backfilling activities

Excavating the relief cell for the swelled material located south of the soil mixing excavation.

Looking southeast from the northwest corner of the excavation

Re-establishing the excavation barrier fence at the end of the backfill activities.

Kearsarge Metallurgical Superfund Site
Soil Treatment Cell Restoration
Project Status - 9/29/2015

TOP SOIL STOCK PILE

REAGENT DELIVERY EQUIPMENT

TEMPORARY SECURITY FENCE

Poplar Trees

MWS-205

MW-3004

MW-3009

MW-3010

MW-3008

MW-3005

MW-3007

MW-3011

MW-203A

EW-13B

MWS-114

CB 8-9

CB 7-8

CB 6-7

464

463

462

461

E1 S1 E1 S2 E1 S3 E1 S4 E1 S5 E1 S6
E2 S1 E2 S2 E2 S3 E2 S4 E2 S5
E3 S1 E3 S2 E3 S3 E3 S4 E3 S5
E4 S1 E4 S2 E4 S3 E4 S4 E4 S5 E4 S6
E5 S1 E5 S2 E5 S3 E5 S4 E5 S5 E5 S6
E6 S1 E6 S2 E6 S3 E6 S4 E6 S5 E6 S6
E7 S1 E7 S2 E7 S3 E7 S4 E7 S5
E8 S1 E8 S2 E8 S3 E8 S4 E8 S5
E9 S1 E9 S2 E9 S3 E9 S4 E9 S5
E10 S1 E10 S2 E10 S3 E10 S4 E10 S5
E11 S1 E11 S2 E11 S3 E11 S4
E12 S1 E12 S2 E12 S3 E12 S4 E12 S5
E13 S1 E13 S2 E13 S3 E13 S4 E13 S5
E14 S1 E14 S2 E14 S3 E14 S4 E14 S5 E14 S6
E15 S1 E15 S2 E15 S3 E15 S4 E15 S5 E15 S6
E16 S3 E16 S4 E16 S5 E16 S6
E17 S6 E17 S7 E17 S8 E17 S9 E17 S10 E17 S11 E17 S12 E17 S13 E17 S14 E17 S15
E15 S8 E16 S7 E16 S8 E16 S9 E16 S10 E16 S11 E16 S12 E16 S13 E16 S14 E16 S15
E15 S9 E15 S10 E15 S11 E15 S12 E15 S13 E15 S14
E14 S2 E14 S3 E14 S4 E14 S5 E14 S6
E14 S12 E14 S13

E12 S5

Area of temporary berm

TOP SOIL STOCK PILE

Cell not backfilled

Cell was backfilled/ surcharged

Legend

APPROX. LOCATION OF EXIST. UNDERGROUND COLLECTION TRENCH

E14 S14

CELL LAYOUT (10,100 SQFT)

SOIL TREATMENT AREA (9,076 SQFT)

STORM DRAIN

EXTENT OF BERMED SOIL REMOVED FROM EXCAVATION

NOTE:
ALL CELLS ARE 10'x10', 10'x5', OR 5'x5'.

GRAPHIC SCALE
10 5 0 5 10
APPROXIMATE SCALE IN FEET

NO.	DATE	APPR.	REVISION

NO.	DATE	APPR.	REVISION

IN SITU SOIL TREATMENT
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NEW HAMPSHIRE

WESTON SOLUTIONS CONCORD NEW HAMPSHIRE

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

CHECKED	DATE	CLIENT APPROVALS	DATE
DES. ENG.			
PROJ. ENG.			
PROJ. MGR.			
APPROVED			
APPROVED		ISSUED FOR	DATE

SOIL TREATMENT CELL LAYOUT

DRAWN	DATE	FIGURE NO.	REV. NO.
BEG	AUG 2015	5	
SCALE	W.O. NO.	SHT.	OF
AS SHOWN	20118.015.003		

M:\Design\DWG\KRSARGE\2015\Work Plan\FIG 5.dwg, Layout1, 9/4/2015 11:42:33 AM, girardeb, 1:2

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 15**
***Date* : Tues 9/30/15**

Prepared By:
Erik Hall

Weather:
Sunny – Cloudy with showers 59-63°F

Site Hours:
0730-1100;
1400-1900

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	9.5
Active Environmental	Louis Evangelista	Site Manager	Site Restoration	6
Active Environmental	Brandon Horn	Laborer	Site Restoration	4
Active Environmental	Nicholas Evangelista	Laborer	Site Restoration	1

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) personally owned vehicle (POV) and (1) Chevy Express Cargo Van
- **Active** – (1) Ford F350 pickup trucks with various project tools and supplies, (1)John Deere 700J Bulldozer, (1) Volvo EC160C Excavator, (1) Hydroseeder, (1) POV,

DEVIATIONS FROM PROPOSED SCHEDULE

None.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- 10 bales of straw
- 22 bales of hay
- (1) 2" trash pump and (1) 2"submersible pump

TEST DATA

(List type and location of tests performed and results)

- None.

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner. Site received over 5 inches of rain. Ponded areas undermined the silt fence in two places. No obvious discharge of silt occurred.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- Staked hay bales in front and behind silt fence in the two areas of silt fence where the ponded water was discharging.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures; Repair as discussed above
- Installed geotextile and hay bale structure to pump water from excavation
- Daily report

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Inspect erosion control measures; Repair as discussed above
- Installed geotextile and hay bale structure to pump water from excavation

AGREEMENTS

(Company Name – task description)

1. Active and Weston discussed path forward.
2. Dewater excavation. Pump water through hay bale/geotextile structure and through additional hay bales and silt fence.
3. Berm off the existing relief excavation dug on 9/29/15.
4. Dig additional relieve excavation(s) to the south of the one excavated on Tuesday 9/29/15, if water table allows after the rain. Work the material to the west side of the excavation.
5. Place the material that is located to the west of the soil mixing excavation into the excavation; working west to east.
6. Attempt mixing of additional dry soil with soil mixed material in the excavation.
7. If material in relief cells allow, install geotextile to attempt to encapsulate soil mixing material and minimize displacement to the surface.
8. Re-assess plan including means, methods, potential additives, and potential off site materials.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Site conditions at 0730.

Site conditions at 0730.

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Hay bales staked along areas where silt fence was discharging in southeastern corner of the site

Hay bales staked along areas where silt fence was discharging in southwestern corner of the site.

Photographs (continued)

Ponded area at 1400 after rain stopped.

Ponded area at 1400 after rain stopped.

.

Ponded area at 1400 after rain stopped.

Hay bale and geotextile structure to filter water pumped from the excavation.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 15**
***Date* : Thurs 10/01/15**

Prepared By:
Erik Hall

Weather:
Sunny, 40-63°F

Site Hours:
0700-2100

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	14
Weston Solutions	Fred Symmes	Technical Manager	Construction Oversight	12
Active Environmental	Louis Evangelista	Site Manager	Site Restoration	12
Active Environmental	Brandon Horn	Operator/Laborer	Site Restoration	12
Active Environmental	Nicholas Evangelista	Laborer	Site Restoration	12

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) personally owned vehicle (POV). (1) Chevy pickup, and (1) Chevy Express Cargo Van
- **Active** – (1) Ford F350 pickup trucks with various project tools and supplies, (1)John Deere 700J Bulldozer, (1) Volvo EC160C Excavator, (1) Hydroseeder, (1) POV,

DEVIATIONS FROM PROPOSED SCHEDULE

None.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- 25 bales of hay
- (1) 3” trash pump

TEST DATA

(List type and location of tests performed and results)

- None.

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures.
- Relocated the geotextile and hay bale structure to pump water from excavation to the southwest corner of the site
- Delivered 25 bales of hay.
- Daily report

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Delivered one rental 3" trash pump.
- Relocated the geotextile and hay bale structure to pump water from excavation to the southwest corner of the site
- Pumped water into geotextile/hay bale structure
- Continued backfill of the excavation. Relocated the trench to 105 ft. long by 20 ft. by 4 ft. deep excavation to allow swelled material to exit the soil mixing excavation to the west. See attached Site Status Map and photos bellows for more details.

AGREEMENTS

(Company Name – task description)

- Status update with Andrew Hoffman of NHDES and Darryl Luce of EPA.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Site conditions at 0730.

Site conditions at 0730.

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Visitor to the site

Backfilling activities

Photographs (continued)

Site conditions at 1600. Water removed from soil mixing excavation.

Ponded area north of soil mixing area at 1600.

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Attempt to blend soil mixing material with common fill. Very time consuming. Soil mixing material did not dry out after 1.5 hours and did not blend well when pushed with the bulldozer.

Water quality of discharge point of the wetland.

TOP SOIL STOCK PILE

REAGENT DELIVERY EQUIPMENT

Poplar Trees

MW-3004

MW-3005

MW-3006

MW-3008

MW-3009

MW-3010

MW-4004

MWS-205

MWS-114

EW-13B

CB 6-7

CB 7-8

TEMPORARY SECURITY FENCE

New trench excavated today.

Area of ponded water

Cell not backfilled

Cell was backfilled/ surcharged

TOP SOIL STOCK PILE

MW-203A

APPROX. LOCATION OF EXIST. UNDERGROUND COLLECTION TRENCH

E12 S5

E14 S14

SOIL TREATMENT AREA (9,076 SQFT)

CELL LAYOUT (10,100 SQFT)

STORM DRAIN

EXTENT OF BERMED SOIL REMOVED FROM EXCAVATION

Legend

NOTE:
ALL CELLS ARE 10'x10', 10'x5', OR 5'x5'.

GRAPHIC SCALE
10 5 0 5 10
APPROXIMATE SCALE IN FEET

NO.	DATE	APPR.	REVISION

IN SITU SOIL TREATMENT
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NEW HAMPSHIRE

WESTON SOLUTIONS CONCORD NEW HAMPSHIRE

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

	CHECKED	DATE	CLIENT APPROVALS	DATE
DES. ENG.				
PROJ. ENG.				
PROJ. MGR.				
APPROVED				
APPROVED			ISSUED FOR	DATE

SOIL TREATMENT CELL LAYOUT

DRAWN	DATE	FIGURE NO.	REV. NO.
BEG	AUG 2015	5	
SCALE	W.O. NO.	SHT.	OF
AS SHOWN	20118.015.003		

M:\Design\DWG\KRSARGE\2015\Work Plan\FIG 5.dwg, Layout1, 9/4/2015 11:42:33 AM, girardeb, 1:2

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 16**
***Date* : Fri 10/02/15**

Prepared By:
Erik Hall

Weather:
Sunny, 47-55°F

Site Hours:
0545-1900

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
NHDES	Andrew Hoffman	Project Manager	Site Visit	5.5
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	13
Active Environmental	Louis Evangelista	Site Manager	Site Restoration	12
Active Environmental	Jason Richards	Operator	Site Restoration	12
Active Environmental	Brandon Horn	Operator/Laborer	Site Restoration	2.75
Active Environmental	Nicholas Evangelista	Laborer	Site Restoration	12.75
G.E. Brown	Ron Sheaff Jr.	Truck Driver	Haul silty sand	9
B.E. Quint	Brian Brook	Truck Driver	Haul silty sand	9.75
Rotten Rock	Brian Lamontange	Truck Driver	Haul silty sand	9

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) personally owned vehicle (POV). (1) Chevy pickup, and (1) Chevy Express Cargo Van
- **Active** – (1) Ford F350 pickup trucks with various project tools and supplies, (1) John Deere 700J Bulldozer, (1) Volvo EC160C Excavator, (1) John Deere 200D Excavator, (1) Hydroseeder, (1) POV,

DEVIATIONS FROM PROPOSED SCHEDULE

- Backfilling of excavation is behind schedule due to the nature of silty material created during soil mixing.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Mobilized (1) John Deere 200D excavator.
- (1) Volvo EC160C excavator remains on site, but taken off rent.
- 878 cubic yards of silty sand was delivered.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

TEST DATA

(List type and location of tests performed and results)

- Collected (1) aqueous sample from Catch Basin CB5-6 and (2) solid samples of sandy fill backfill material delivered from Alvin J. Coleman's pit. All samples will be analyzed for volatile organic compounds (VOCs) by Absolute Resource Associates.

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner. The Volvo excavator had a hydraulic fuel line separate under the floor panel. Approximately 5 to 8 gallons of hydraulic fluid that leaked to the ground was containerized for off-site disposal by Active.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- The fuel line was repaired on the Volvo Excavator. The excavator was parked and taken off-rent.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures.
- Daily report
- Collected (1) aqueous sample from Catch Basin CB5-6 and (2) solid samples of sandy fill backfill material.

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Continued backfill of the excavation. See attached photos below for more details.
- Pumped water into geotextile/hay bale structure.
- Mobilized (1) John Deere 200D excavator.
- Containerize approximately 5 to 8 gallons of hydraulic fluid (and associated impacted soil) that spilled from a separated hose under the excavator floor board.
- Conducted a soil mixing test. One excavator bucket of soil mix silty material was mixed with approximately 3 buckets of silty sand. It took approximately 3:17 to mix to a consistency that could be used as suitable backfill material.

AGREEMENTS

(Company Name – task description)

- None.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Site conditions at 0730.

Site conditions at 0730.

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Backfill material

Site conditions at 1600.

Photographs (continued)

Site conditions at 1600.

Hydraulic fluid spill from the Volvo excavator.

.

Hydraulic fitting that separated under the floor board of the excavator

Containerizing the hydraulic fluid and associated impacted soil.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 17**
***Date* : Sat 10/03/15**

Prepared By:
Erik Hall

Weather:
Sunny, 34-62°F

Site Hours:
0700-1400

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Vinnie DelloRusso	Project Manager	Site Visit	4.75
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	7
Active Environmental	Louis Evangelista	Site Manager	Site Restoration	7
Active Environmental	Jason Richards	Operator	Site Restoration	7
Active Environmental	Nicholas Evangelista	Laborer	Site Restoration	7
Coleman	Errol Wiggin	Truck Driver	Haul silty sand	2.75
Coleman	Mike O Rourke	Truck Driver	Haul silty sand	2.75

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) personally owned vehicle (POV). (1) Chevy pickup, and (1) Chevy Express Cargo Van
- **Active** – (1) Ford F350 pickup trucks with various project tools and supplies, (1) John Deere 700J Bulldozer, (1) Volvo EC160C Excavator, (1) John Deere 200D Excavator, (1) Hydroseeder, (1) POV,

DEVIATIONS FROM PROPOSED SCHEDULE

- Backfilling of excavation is behind schedule due to the nature of silty material created during soil mixing.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- 288 cubic yards of silty sand was delivered.

TEST DATA

(List type and location of tests performed and results)

- None

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures.
-

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Continued backfill of the excavation. See attached photos below for more details.
- Pumped water into geotextile/hay bale structure.

AGREEMENTS

(Company Name – task description)

- None.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Site conditions at 0730

Site conditions at 0730

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Site conditions at 0730

Mixing silty sand in the former soil mix cell

Photographs (continued)

Site conditions at 1400

Site conditions at 1400

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Site conditions at 1400

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 18**
***Date* : Mon10/05/15**

Prepared By:
Erik Hall

Weather:
Sunny, 34-62°F

Site Hours:
0555-1400

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Lee Baronas	Technical Manager	Construction Oversight	11
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	7
Active Environmental	Jason Richards	Operator	Site Restoration	5
Active Environmental	Nicholas Evangelista	Laborer	Site Restoration	5
Rotten Rock	Bryan Lamontagne	Truck Driver	Haul silty sand	9
G.E. Brown	Ron Sheaff Jr.	Truck Driver	Haul silty sand	9

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) personally owned vehicle (POV). (1) Chevy pickup, and (1) Chevy Express Cargo Van
- **Active** – (1) Ford F350 pickup trucks with various project tools and supplies, (1) John Deere 700J Bulldozer, (1) Volvo EC160C Excavator, (1) John Deere 200D Excavator, (1) Hydroseeder,

DEVIATIONS FROM PROPOSED SCHEDULE

- Backfilling of excavation is behind schedule due to the nature of silty material created during soil mixing.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- 482 cubic yards of silty sand was delivered.

TEST DATA

(List type and location of tests performed and results)

- Conducted 3 bucket tests of silty soil with Portland cement at ratios by volume of 2%, 4% and 8%.

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures.

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Continued backfill of the excavation. See attached photos below for more details.

AGREEMENTS

(Company Name – task description)

- Vinnie DelloRusso notified Lee Baronas to continue hauling silty sand up to 600 cubic yards for the day.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Site conditions at 0930

Site conditions at 0930

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Site conditions at 0930

Mixing silty sand in the former soil mix cell

Photographs (continued)

Site conditions at 1600

Site conditions at 1600

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Site conditions at 1600

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 19**
***Date* : Tues 10/06/15**

Prepared By:
Erik Hall

Weather:
Sunny, 34-61°F

Site Hours:
0645-1400

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	11.25
Active Environmental	Jason Richards	Operator	Site Restoration	8
Active Environmental	Nicholas Evangelista	Laborer	Site Restoration	10
Active Environmental	Louis Evangelista	Site Superintendent	Site Restoration	7
Rotten Rock	Bryan Lamontagne	Truck Driver	Haul silty sand	4.25

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) personally owned vehicle (POV) and (1) Chevy Express Cargo Van
- **Active** – (1) Ford F350 pickup trucks with various project tools and supplies, (1) John Deere 700J Bulldozer, (1) Volvo EC160C Excavator, (1) John Deere 200D Excavator, (1) Hydroseeder, (1) POV

DEVIATIONS FROM PROPOSED SCHEDULE

- Backfilling of excavation is behind schedule due to the nature of silty material created during soil mixing.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- 140 cubic yards of silty sand was delivered.

TEST DATA

(List type and location of tests performed and results)

- Conducted 3 bucket tests of silty soil with Portland cement at ratios by volume of 2%, 4% and 8%.

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures.

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Continued backfill of the excavation. See attached photos below for more details.
- Pump water to the geotextile/hay bale structure.
- Prepare site to demobilize.

AGREEMENTS

(Company Name – task description)

- During a conference call between EPA, NHDES, and Weston, D. Hoffman requested that hauling of silty sand stop due to financial restrictions. Decision was made demobilize the crew until NHDES, EPA, and Weston agree upon a path forward.
- At 14:55, E. Hall received a call from V. DelloRusso that the crew will not demobilize and to continue to backfill excavation to prepare for additional of cement kiln dust.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Site conditions at 0730

Site conditions at 0730

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Site conditions at 0730

Site conditions at 0730

Photographs (continued)

Site conditions at 1700

Site conditions at 1700

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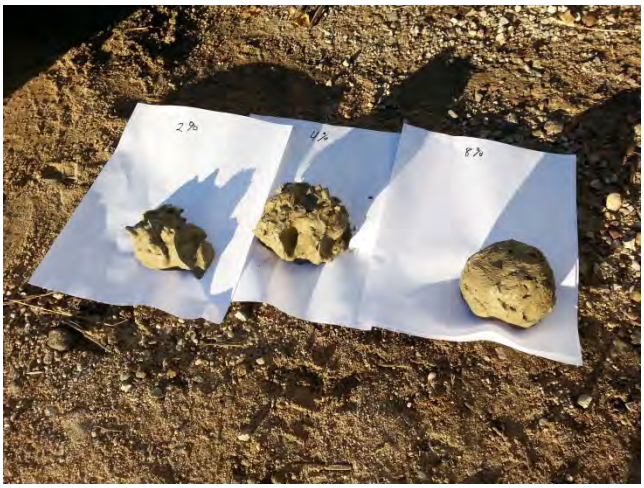
Site conditions at 1700



Portland cement and soil mix soil ratio results after 14 hrs. of cure time

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 20**
***Date* : Weds 10/07/15**

Prepared By:
Erik Hall

Weather:
Sunny, 54-63°F

Site Hours:
0700-1630

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	9
Active Environmental	Jacob Siletti	Laborer	Site Restoration	9
Active Environmental	Nicholas Evangelista	Project Admin/Laborer	Site Restoration	9
Active Environmental	Louis Evangelista	Site Superintendent	Site Restoration	9

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) personally owned vehicle (POV) and (1) Chevy Express Cargo Van
- **Active** – (1) Ford F350 pickup trucks with various project tools and supplies, (1) John Deere 700J Bulldozer, (1) Volvo EC160C Excavator, (1) John Deere 200D Excavator, (1) Hydroseeder, (2) POV

DEVIATIONS FROM PROPOSED SCHEDULE

- Backfilling of excavation is behind schedule due to the nature of silty material created during soil mixing.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- None.

TEST DATA

(List type and location of tests performed and results)

- None.

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures.

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Continued backfill of the excavation. See attached photos below for more details.

AGREEMENTS

(Company Name – task description)

None.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Mixing soil mix material that was placed south of the relief cell

Mixing soil mix material that was placed south of the relief cell

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Mixing soil mix material that was placed south of the relief cell

Site conditions at 15:30

Photographs (continued)

Site conditions at 15:30

Site conditions at 15:30

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CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 21**
***Date* : Thurs 10/08/15**

Prepared By:
Erik Hall

Weather:
Sunny, 54-63°F

Site Hours:
0700-1730

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
NHDES	Robin Mongeon	Program Manager	Site Visit	2.5
NHDES	Andrew Hoffman	Project Manager	Site Visit	2.5
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	9
Active Environmental	Jacob Siletti	Laborer	Site Restoration	9
Active Environmental	Nicholas Evangelista	Project Admin/Laborer	Site Restoration	10.5
Active Environmental	Louis Evangelista	Site Superintendent	Site Restoration	9
Active Environmental	Brandon Horn	Operator	Site Restoration	6.5
Active Environmental	Brian Way	Laborer	Site Restoration	6.5

PROJECT EQUIPMENT

(Company Name – Description)

- **NHDES** - (1) SUV
- **WESTON** – (1) personally owned vehicle (POV) and (1) Chevy Express Cargo Van
- **Active** – (1) Ford F350 pickup trucks with various project tools and supplies, (1) John Deere 700J Bulldozer, (1) Volvo EC160C Excavator (off rent), (1) John Deere 200D Excavator, (1) Hydroseeder, (2) POV

DEVIATIONS FROM PROPOSED SCHEDULE

- Backfilling of excavation is behind schedule due to the nature of silty material created during soil mixing.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Delivery of 21 tons of cement kiln dust (CKD).
- Picked up 14 hay bales.

TEST DATA

(List type and location of tests performed and results)

- Conducted bucket tests of CKD.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures.
- Bucket test of CKD.

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Continued backfill of the excavation. See attached photos below for more details.
- Spread load of CKD.

AGREEMENTS

(Company Name – task description)

None.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Site conditions at 07:30

Site conditions at 07:30

Site conditions at 07:30

Delivery of cement kiln dust

Photographs (continued)

Site conditions at 17:30

Site conditions at 17:30

.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 22**
***Date* : Fri 10/09/15**

Prepared By:
Erik Hall

Weather:
Rain, 40-47°F

Site Hours:
0700-1230

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversight	5.5
Active Environmental	Jacob Siletti	Laborer	Site Restoration	4.5
Active Environmental	Brandon Horn	Operator	Site Restoration	5
Active Environmental	Brian Way	Laborer	Site Restoration	5

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) personally owned vehicle (POV) and (1) Chevy Express Cargo Van
- **Active** – (1) Ford F350 pickup trucks with various project tools and supplies, (1) John Deere 700J Bulldozer, (1) Volvo EC160C Excavator (off rent), (1) John Deere 200D Excavator, (1) Hydroseeder, (1) POV

DEVIATIONS FROM PROPOSED SCHEDULE

- Backfilling of excavation is behind schedule due to the nature of silty material created during soil mixing.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Delivery of 27.65 tons of cement kiln dust (CKD).
- Delivery of 35.9 tons of lime kiln dust (LKD).

TEST DATA

(List type and location of tests performed and results)

- Conducted bucket tests of LKD (4% and 8% of LKD by volume to soil mix material).

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures.
- Inspected CKD bucket tests from yesterday. Material did not stiffen overnight.
- Bucket tests of LKD. Bucket will be check tomorrow.

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Spread load of CKD
- Conducted mixing test of LKD. (10 excavator buckets of soil mix material with 3/4 bucket of LKD). Placed mixed material under poly to be inspected tomorrow.
- Prepared site for rain.

AGREEMENTS

(Company Name – task description)

None.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Delivery of CKD

Delivery of LKD

Site conditions at 12:30

Material mixed with LKD approximately 2 hours after mixing

Photographs (continued)

LKD Bucket test (4% by volume)

LKD Bucket test (8% by volume)

.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 23**
***Date* : Sat 10/10/15**

Prepared By:
Erik Hall

Weather:
Sunny, 52-74°F

Site Hours:
0730-1015

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Vinnie DelloRusso	Project Manager	Receive Kiln Dust	2.75
Active Environmental	Brian Way	Laborer	Receive Kiln Dust	2.25

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) personally owned vehicle (POV) and (1) Chevy Express Cargo Van
- **Active** – (1) Ford F350 pickup trucks with various project tools and supplies, (1) John Deere 700J Bulldozer, (1) Volvo EC160C Excavator (off rent), (1) John Deere 200D Excavator, (1) Hydroseeder, (1) POV

DEVIATIONS FROM PROPOSED SCHEDULE

- Backfilling of excavation is behind schedule due to the nature of silty material created during soil mixing.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Delivery of 36.15 tons of lime kiln dust (LKD).

TEST DATA

(List type and location of tests performed and results)

- Reviewed bucket tests of LKD collected on Friday 10/09/15. The 4% LKD by volume was still very soft. The 8% by volume was stiff enough to work into a ball but not crumbly. The LKD test soil pile that was mixed by the excavator (approximately 8-10% by volume) looked very workable and stiff.

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures.
- Received LKD.
- Reviewed bucket tests of LKD collected on Friday 10/09/15.

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Uncovered LKD prior to delivery
- Recovered LKD piles after delivery

AGREEMENTS

(Company Name – task description)

None.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Delivery of lime kiln dust (LKD)

Covered LKD piles

Site conditions in southeast corner of the site

Site conditions in southeast corner of the site

Photographs (continued)

Site conditions looking east from the western edge of the relief cell

LKD bucket test (8% by volume)

.

LKD bucket test (4% by volume)

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 24**
***Date* : Tues 10/13/15**

Prepared By:
Erik Hall

Weather:
Showers, 56-76°F

Site Hours:
0700-1800

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
NHDES	Robin Mongeon	Program Manager	Site Visit	2.75
NHDES	Andrew Hoffman	Project Manager	Site Visit	2.75
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversite	11
Weston Solutions	Vinnie DelloRusso	Project Manager	Site Visit	7.75
Active Environmental	Louis Evangelista	Site Superintendent	Site Restoration	11
Active Environmental	Mike Nardone	Operator	Site Restoration	11
Active Environmental	Brian Way	Laborer	Site Restoration	11

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (2) personally owned vehicle (POV) and (1) Chevy Express Cargo Van
- **Active** – (1) Ford F350 pickup trucks with various project tools and supplies, (1) John Deere 700J Bulldozer, (1) Volvo EC160C Excavator (off rent), (1) John Deere 200D Excavator, (1) Kubota SVL-90-2, skid steer (1) Hydroseeder, (1) POV

DEVIATIONS FROM PROPOSED SCHEDULE

- Backfilling of excavation is behind schedule due to the nature of silty material created during soil mixing.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Delivery of 36.81 tons of lime kiln dust (LKD).
- Delivery of Kubota SVL-90-2 skid steer

TEST DATA

(List type and location of tests performed and results)

- None.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures. All controls are in good shape.
- Received LKD.

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Continued backfill of the excavation. Mixed in LKD to stiffen soil with good results. Was able to grade portions of raised areas with the bulldozer. See attached photos below for more details.

AGREEMENTS

(Company Name – task description)

NHDES and Weston agreed to order 3 more loads of LKD for delivery tomorrow.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Results of the LKD bucket test after 96 hours (conducted on Friday 10/9/15). 4% by volume is still soft. 8% by volume is workable material.

Results of LKD test conducted on Friday 10/9/15. Material was mixed with approximately 8-10% by volume LKD. Material is stiff, crumbly and very workable.

Site conditions at 08:00

Site conditions at 08:00

Photographs (continued)

Site conditions at 08:00

Mixing in LKD in southeast corner of the site

.

Grading portions of the raised area after stiffening material with LKD

Site conditions at 17:00. Portions of raised area were lowered with bulldozer.

Photographs (continued)

Site conditions at 17:00. Portions of raised area were lowered with bulldozer.

Site conditions at 17:00. Portions of raised area were lowered with bulldozer.

Site conditions at 17:00. Portions of raised area were lowered with bulldozer.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 25**
***Date* : Tues 10/14/15**

Prepared By:
Erik Hall

Weather:
Showers, 58-75°F

Site Hours:
0700-1700

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
EPA	Darryl Luce	Remedial Proj. Manager	Site Visit	2.
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversite	10
Active Environmental	Louis Evangelista	Site Superintendent	Site Restoration	10
Active Environmental	Mike Nardone	Operator	Site Restoration	10
Active Environmental	Brian Way	Laborer	Site Restoration	10
Active Environmental	Jacob Siletti	Laborer	Site Restoration	10

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (2) personally owned vehicle (POV) and (1) Chevy Express Cargo Van
- **Active** – (1) Ford F350 pickup trucks with various project tools and supplies, (1) John Deere 700J Bulldozer, (1) Volvo EC160C Excavator (off rent), (1) John Deere 200D Excavator, (1) Kubota SVL-90-2, skid steer (1) Hydroseeder, (1) POV

DEVIATIONS FROM PROPOSED SCHEDULE

- Backfilling of excavation is behind schedule due to the nature of silty material created during soil mixing.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Delivery of 55.589 tons of lime kiln dust (LKD).

TEST DATA

(List type and location of tests performed and results)

- None.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.
- Soil was backfilled against the silt fence.
- LKD delivery truck spill LKD on Hobbs Street as it exited.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- Weston requested that soil be shoveled away from the silt fence. Active restored the silt fence area in question.
- Weston requested that Active fill hydroseeder and wash LKD that spilled from delivery truck from Hobbs Street., Active complied.

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures. All controls are in good shape.
- Received LKD
- Met with EPA Remedial Project Manager on site.

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Continued backfill of the excavation. Mixed in LKD to stiffen soil with good results. Was able to rough grade portions of raised areas with the bulldozer. Some soft spots still exist and will be thickened with KLD tomorrow. See attached photos below for more details.
- Pumped rain water into geotextile/hay bale structures to dewater site.

AGREEMENTS

(Company Name – task description)

None.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Washed LKD off Hobbs Street that LKD truck spilled as it exited

Rough grading the site

Mixing KLD into soft spots

Site conditions at 17:00. Standing on southern topsoil pile looking east.

Photographs (continued)

Site conditions at 17:00. Standing on southern topsoil pile looking northeast.

Site conditions at 17:00. Standing on southern topsoil pile looking north.

Site conditions at 17:00. Standing on northern topsoil pile looking southeast.

Site conditions at 17:00. Standing on northern topsoil pile looking south.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.* : 25**
***Date* : Thurs 10/15/15**

Prepared By:
Erik Hall

Weather:
Showers, 39-52°F

Site Hours:
0700-1700

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Lee Baronas	Technical Manager	Construction Oversite	5
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversite	7
Active Environmental	Louis Evangelista	Site Superintendent	Site Restoration	10
Active Environmental	Mike Nardone	Operator	Site Restoration	9
Active Environmental	Brian Way	Laborer	Site Restoration	9
Active Environmental	Jacob Siletti	Laborer	Site Restoration	10

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (2) personally owned vehicle (POV) and (1) Chevy Express Cargo Van
- **Active** – (1) Ford F350 pickup trucks with various project tools and supplies, (1) John Deere 700J Bulldozer, (1) Volvo EC160C Excavator (off rent), (1) John Deere 200D Excavator, (1) Kubota SVL-90-2, skid steer (1) Hydroseeder, (2) POV

DEVIATIONS FROM PROPOSED SCHEDULE

- Backfilling of excavation is behind schedule due to the nature of silty material created during soil mixing.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- 100 bales of hay delivered for mulching after seeding.
- Skid steer was demobilized.
- 1.5 rolls of geotextile demobilized. To be delivered to the Keefe site.

TEST DATA

(List type and location of tests performed and results)

- None.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures. All controls are in good shape.
- Shot elevations, with a survey level and rod, at perimeter of site to develop grading plan. A swale will be installed between the north topsoil stockpile and soil mixing area with the discharge at the wetland on the southwest corner of the site. . The wetland to the north of the site will be incorporated into that swale. Another swale will be installed along the eastern edge of the site and will discharge in the southeast corner of the site. The rest of the site will be graded to either of these swales. See attached proposed grading plan.

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Mixed in lime kiln dust (LKD) to stiffen soil with good results.
- Rough graded the raised areas with the bulldozer. Some soft spots still exist and will be allowed to stiffen over the weekend. See attached photos below for more details.
- Pumped rain water into geotextile/hay bale structures to dewater site.
- Decontaminated the skid steer and the excavator with the hydroseeder.
- Demobilized the skid steer.
- Received 100 bales of hay. Hay was placed on and covered by poly.

AGREEMENTS

(Company Name – task description)

None.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Thickening soft spots with LKD

Rough grading the site

Rough grading the site

Site conditions at 17:00. Standing on southern topsoil pile looking east.

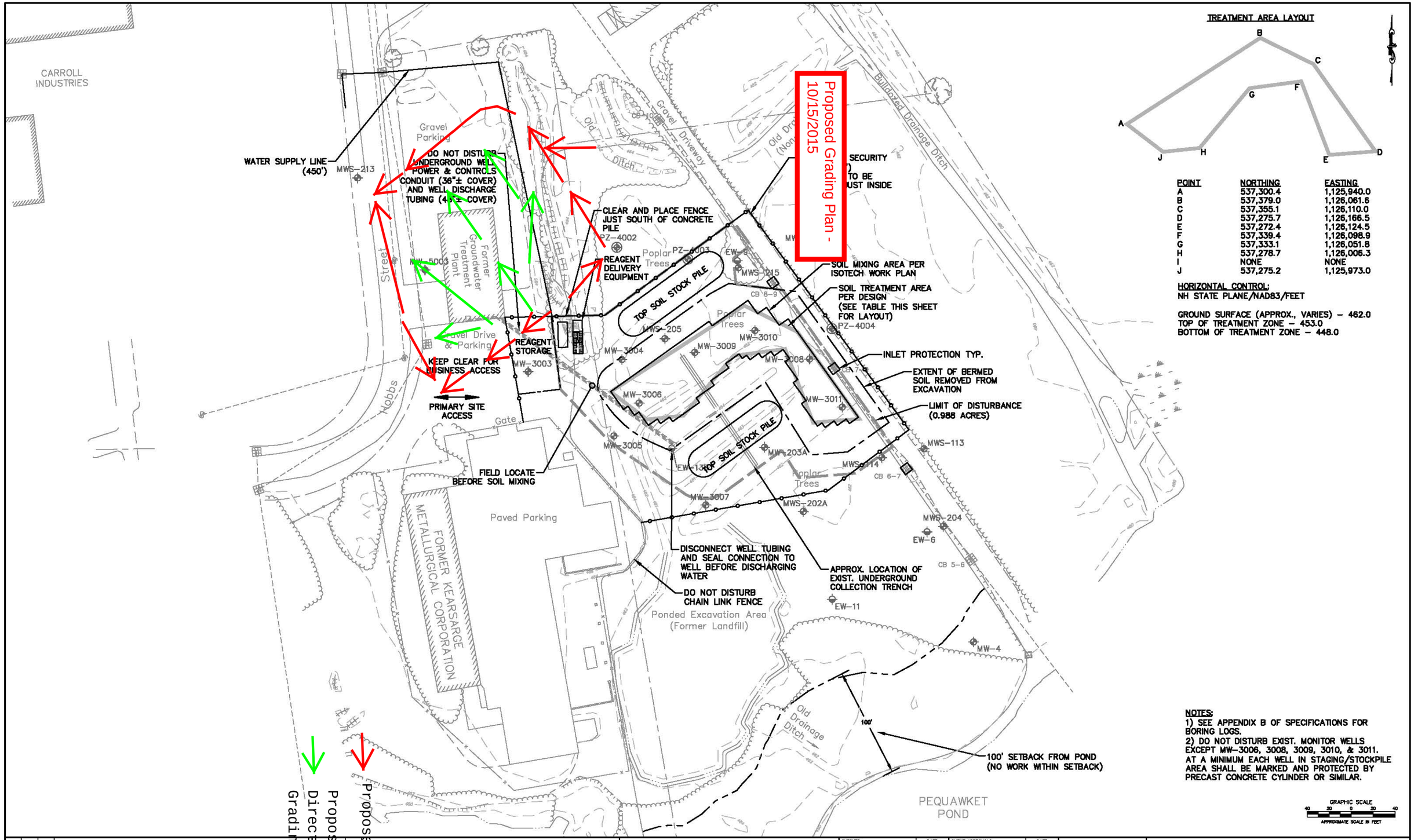
Photographs (continued)

Site conditions at 17:00. Standing on southern topsoil pile looking northwest.

Site conditions at 17:00. Standing on southern topsoil pile looking north.

Site conditions at 17:00. Standing on southern topsoil pile looking northeast.

Site conditions at 17:00. Standing on southern topsoil pile looking east.



TREATMENT AREA LAYOUT

POINT	NORTHING	EASTING
A	537,300.4	1,125,940.0
B	537,379.0	1,126,061.6
C	537,355.1	1,126,110.0
D	537,275.7	1,126,166.5
E	537,272.4	1,126,124.5
F	537,339.4	1,126,098.9
G	537,333.1	1,126,051.8
H	537,278.7	1,126,006.3
I	NONE	NONE
J	537,275.2	1,125,973.0

HORIZONTAL CONTROL:
NH STATE PLANE/NAD83/FEET

GROUND SURFACE (APPROX., VARIES) – 462.0
TOP OF TREATMENT ZONE – 453.0
BOTTOM OF TREATMENT ZONE – 448.0

NOTES:
1) SEE APPENDIX B OF SPECIFICATIONS FOR BORING LOGS.
2) DO NOT DISTURB EXIST. MONITOR WELLS EXCEPT MW-3006, 3008, 3009, 3010, & 3011. AT A MINIMUM EACH WELL IN STAGING/STOCKPILE AREA SHALL BE MARKED AND PROTECTED BY PRECAST CONCRETE CYLINDER OR SIMILAR.

GRAPHIC SCALE
40 20 0 20 40
APPROXIMATE SCALE IN FEET

NO.	DATE	APPR.	REVISION

IN SITU SOIL TREATMENT
KEARSARGE METALLURGICAL CORP. SUPERFUND SITE
CONWAY, NEW HAMPSHIRE

WESTON SOLUTIONS CONCORD NEW HAMPSHIRE
NEW HAMPSHIRE DEPARTMENT OF Environmental Services

CHECKED	DATE	CLIENT APPROVALS	DATE
DES. ENG.			
PROJ. ENG.			
PROJ. MGR.			
APPROVED			
APPROVED		ISSUED FOR	DATE

SOIL TREATMENT SITE PLAN

DRAWN	DATE	FIGURE NO.	REV. NO.
BEG	AUG 2015	3	
SCALE	W.O. NO.	SHT. ___ OF ___	
AS SHOWN	20118.015.003		

M:\Design\DWG\KRSARGE\2015\Work Plan\FIG 3.dwg, Layout1, 9/4/2015 11:31:57 AM, girardab, 1:2

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.*: 26**
***Date* : Mon 10/19/15**

Prepared By:
Erik Hall

Weather:
Sunny, 31-42°F

Site Hours:
0700-1630

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours:*
Weston Solutions	Lee Baronas	Technical Manager	Construction Oversite	7
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversite	3
Active Environmental	Jason Richards	Operator	Site Restoration	9.5
Active Environmental	Mike Nardone	Site Foreman	Site Restoration	9.5
Active Environmental	Brian Way	Laborer	Site Restoration	9.5
Active Environmental	Jacob Siletti	Laborer	Site Restoration	7.5

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (2) personally owned vehicle (POV) and (1) Chevy Express Cargo Van
- **Active** – (2) Ford F350 pickup trucks with various project tools and supplies, (1) John Deere 700J Bulldozer, (1) Volvo EC160C Excavator (off rent), (1) John Deere 200D Excavator, (1) skid steer, (1) hydroseeder, (1) hay blower, (1) POV

DEVIATIONS FROM PROPOSED SCHEDULE

- Restoration is behind schedule due to the nature of silty material created during soil mixing.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Active delivered the hay blower to the site.
- Weston's rental van was demobilized.

TEST DATA

(List type and location of tests performed and results)

- None.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures. All controls are in good shape.
- Shot elevations along eastern swale along access road.

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Finished rough grading of the site with the bulldozer. See attached photos below for more details.
- Install swale along access road on eastern side of site.
- Begin spreading topsoil.
- Removed concrete rings around the protected monitoring wells and catch basin CB7-8.
- Removed dewatering hay bale/geotextile structures and stockpiles for disposal.
- Removed silt fence along the eastern perimeter of the site to allow for rough grading.
- Removed, cleaned and reinstalled silt sack in CB7-8. Silt sack in CB8-9 did not need to be cleaned.
- Received hay blower.

AGREEMENTS

(Company Name – task description)

- Lee Baronas spoke with Jon Hurteau regarding placement of concrete rings along the northwest corner of the site near the concrete pile.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Removing silt fence on the eastern edge of the site

Continued rough grading the site

Removing the geotextile dewatering structure.

Temporarily staged concrete rings that were protecting monitoring wells and catch basin CB7-8.

Photographs (continued)

Excavating topsoil to be spread by the bulldozer.

Spreading topsoil

Site conditions at 16:30. Standing on at the former location of the northern topsoil pile looking southeast.

Site conditions at 16:30. Standing on southern topsoil pile looking north.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.*: 27**
***Date* : Tues 10/20/15**

Prepared By:
Erik Hall

Weather:
Sunny, 42-62°F

Site Hours:
0700-1700

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversite	10
Active Environmental	Jason Richards	Operator	Site Restoration	10
Active Environmental	Mike Nardone	Site Foreman	Site Restoration	10
Active Environmental	Brian Way	Laborer	Site Restoration	10
Active Environmental	Jacob Siletti	Laborer	Site Restoration	10

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) personally owned vehicle (POV)
- **Active** – (2) pickup truck with various project tools and supplies, (1) John Deere 700J Bulldozer, (1) Volvo EC160C Excavator (off rent), (1) John Deere 200D Excavator, (1) hydroseeder, (1) hay blower,(1) POV

DEVIATIONS FROM PROPOSED SCHEDULE

- Restoration is behind schedule due to the nature of silty material created during soil mixing.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Active demobilized the hay blower.
- The Volvo EC160C Excavator was demobilized by the rental company.
- (1) 30-yd roll-off was delivered prior to 07:00 today. It was demobilized before noon.

TEST DATA

(List type and location of tests performed and results)

- None.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures. All controls are in good shape. Installed additional silt fence along the north and south edges of the site in preparation for demobilization.
- Shot elevations along western swale along access road.

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Finished spreading topsoil. See attached photos below for more details.
- Install swale along access road on eastern side of site.
- Seeded, fertilized, hay mulched and hydro mulched the disturbed portions of the site.
- Removed concrete rings around the protected monitoring wells and catch basin CB7-8.
- Placed site trash in roll-off for disposal.
- Extended silt fence along the northeast and southeast corners of the site.
- Demobilized the hay blower.

AGREEMENTS

(Company Name – task description)

- Jon Hurteau requested placement of concrete rings along the eastern edge of his parking lot to minimize trespassers'' vehicles from driving onto the site after the security fence is removed.
- Erik Hall and Jon Hurteau discussed final grading. Mr. Hurteau preferred leaving a low spot at the existing wetland to the north of the site rather than have a swale with a 2 foot cut along the western edge of the site.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Rough grading of the site

Installing the swale on the western side of the site

Spreading the seed

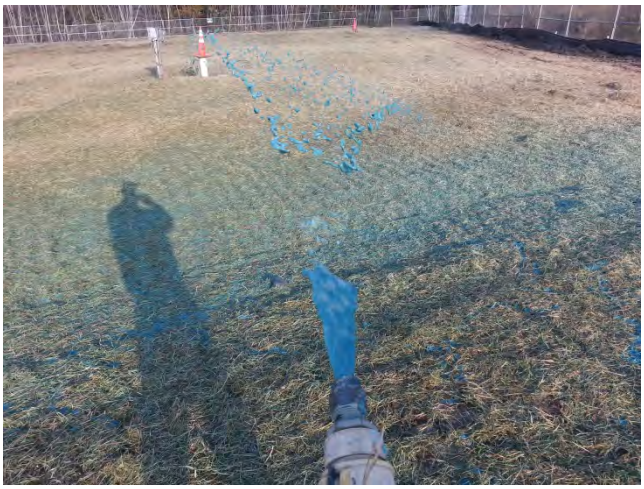
Spreading seed on the topsoil

Photographs (continued)

Access road along the eastern edge of the site.

Catch Basin CB7-8 with silt sack

Blowing hay after seeding and fertilizing



Site conditions at 16:30. Standing on southern topsoil pile looking north.

Photographs (continued)

Hay mulched and hydromulched. Standing at location of the former north topsoil looking east.

Hay mulched and hydromulched. Standing at location of the former north topsoil looking southeast.

Site conditions at 16:00. Looking south along western edge of the site.

Site conditions at 16:30. Looking south along western edge of the site.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.*: 28**
***Date* : Weds 10/21/15**

Prepared By:
Erik Hall

Weather:
Sunny, 40-51°F

Site Hours:
0700-1200

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours*
Weston Solutions	Erik Hall	Site Superintendent	Construction Oversite	5
Active Environmental	Jason Richards	Operator	Site Restoration	5
Active Environmental	Mike Nardone	Site Foreman	Site Restoration	5
Active Environmental	Brian Way	Laborer	Site Restoration	5
Active Environmental	Jacob Siletti	Laborer	Site Restoration	5

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) personally owned vehicle (POV)
- **Active** – (2) pickup trucks with various project tools and supplies, (1) John Deere 700J Bulldozer, (1) John Deere 200D Excavator, (1) hydroseeder, (1) POV

DEVIATIONS FROM PROPOSED SCHEDULE

- Restoration was completed today.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- Active demobilized (2) pickup trucks with various project tools and supplies, (1) hydroseeder, and (1) POV.

TEST DATA

(List type and location of tests performed and results)

- None.

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None

WORK COMPLETED- BY WESTON

- Construction oversight.
- Photo document activities and site conditions.
- Inspect erosion control measures. All controls are in good shape.
- Relocated western edge of the temporary site security fence to allow Hurteau Enterprises access to the eastern edge of their security fence.
- Video documentation of site conditions at demobilization.

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- Decontaminated the excavator and bulldozer. Bulldozer and excavator were left on site to be demobilized by the rental company.
- Relocated portable toilet to the southeast corner of the former water treatment plant.
- Seeded and hay mulched area on western edge of the site where equipment was stored yesterday.
- Relocated concrete rings formerly used to protect monitoring wells and catch basin CB7-8 to minimize vehicular traffic on the site after the temporary security fence is removed.
- Relocated western edge of the temporary site security fence to allow Hurteau Enterprise's access to the eastern edge of their security fence.
- Demobilized (2) pickup trucks with various project tools and supplies, (1) hydroseeder, and (1) POV.

AGREEMENTS

(Company Name – task description)

- None.

Notes:
Active = Active Environmental Technologies. Inc.

Photographs

Decontaminating equipment

Site conditions standing in the center of the site looking northwest.

Site conditions standing in the center of the site looking north.

Site conditions standing in the center of the site looking northeast.

Photographs (continued)

Site conditions standing in the center of the site looking east.

Site conditions standing in the center of the site looking southeast.

Site conditions standing in the center of the site looking south.

Site conditions standing in the center of the site looking west.

Photographs (continued)

Relocated portable toilet to the southeast corner of the former water treatment plant.

Relocated temporary security fence along the the western edge of the site.

Steel plate found in the exacvation during soil mixing was left on site per request of Hurteau Enterprises

Placement of the concrete rings formerly used to procte the monitoring well along the eastern edge of Hurteau Enterprises' parking lot.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

***Report No.*: 29**
***Date* : Thurs 11/5/15**

Prepared By:
Erik Hall

Weather:
Sunny, 40-51°F

Site Hours:
0900-1200

PROJECT PERSONNEL

Employer:	*Employee:*	*Trade:*	*Work Description:*	*Hours*
NHDES	Andrew Hoffman	Project Manager	Site Walk	2
Weston Solutions	Erik Hall	Site Superintendent	Site Walk/Fence Removal	3
B-Quip Temp Fence	Mike Guild	Foreman	Fence Removal	2
B-Quip Temp Fence	Todd Nalette	Foreman	Fence Removal	2

PROJECT EQUIPMENT

(Company Name – Description)

- **WESTON** – (1) Fleet pickup (POV)
- **BQuip** – (1) Flat bed truck and trailer

DEVIATIONS FROM PROPOSED SCHEDULE

- None.

EQUIPMENT/MATERIALS DELIVERED/PICKED-UP

- B-Quip demobilized temporary fence.

TEST DATA

(List type and location of tests performed and results)

- None.

SAFETY COMMENTS/VIOLATIONS

- All work conducted in a safe manner.

CONSTRUCTION / REMEDIATION DAILY REPORT

Former Kearsarge Metallurgical Corp Superfund Site
123 Hobbs Street
Restoration of In-Situ Chemical Oxidation via Soil Mixing
***NHDES Site No.* 198708002**

RECOMMENDED CORRECTIVE ACTIONS

(Company Name – task description)

- None

WORK COMPLETED- BY WESTON

- Site Walk with NHDES.
- Photo document activities and site conditions.
- Inspect erosion control measures. All controls are in good shape.
- Helped demobilize temporary fence.

WORK COMPLETED- BY ACTIVE & SUBCONTRACTORS

- B-Quip Temporary Fence demobilized temporary security fence

AGREEMENTS

(Company Name – task description)

- None.

Photographs

Site conditions upon arriving at the site

Site conditions upon arriving at the site

Ponded area along northern edge of the site

Grass started to grow

APPENDIX C

CEMENT KILN DUST AND LIME KILN DUST TRUCK SLIPS

GRAYMONT

Graymont (QC) Inc.
Usine de Bedford
1015 Chemin de la Carriere
C.P. 1290
Bedford QC J0J 1A0

VENDU A / SOLD TO
Shepherd Materials Management LLC
56 Central Avenue
Ravena NY 12143

EXPEDIE A / SHIP TO 215877
Shepherd Materials Management LLC
123 Hobbs Street
North Conway NH

Non negociable - Not negotiable

Client/Cust #:	700325	B/L NO:	4060728 Page: 1
Comm/Cust PO:		Date Exp/Ship:	08-Oct-2015
Ref Graymont:	867914 SO	Int/Broker #:	158914 FCA-COLLECT
Ref-2 Graymont:		Inter/Broker:	Transport Chalut 2000 Inc
Comm/Ord:	08-Oct-2015	Zone:	.....
Terms:	Net 30	Livraison/Del:	09-Oct-2015
Exp/Ship#:	57625407	CTQ/NIR:	

158914

Brut:	35360 kg 17:29	Balance/Scale ID:	26001
Tare:	18820 kg 17:29	Veh#:	03C1057
Net:	16540 kg	Trans/Carrier:	Transport Chalut 2000 Inc
		MTC/Max Weight:	57500 KG

Item	Qte/Qty		Description
3524	18.232	TN	Graysol Plus 0 x 1.25 mm High Calcium LKD

EMERGENCY TEL. NO.: (800) 424-9300 CHEMTREC (US)
(613) 996-6666 CANUTEC (CANADA)

Instructions:
IRS# 27-3592584

Expediteur/Shipper:

Transporteur/Carrier:

Client/Consignee:

B/L NO: 4060728

OFFICE COPY

Pro-Bill

Groupe Chalut

MALO TRANSPORT (1971) INC. **Intermédiaire** NI: 5-Q-30641 i
23 St-Jacques, C.P. 322 Joliette Québec J6E 3Z6
Tél.: 450-756-8008 • Fax: 450-756-8337

L. BRETON TRANSPORT LTÉE **Intermédiaire** NI: 3-Q-30642 i
115 route 255, Marbleton Québec J0B 2L0
Tél.: 819-887-6773 • Fax: 819-887-6394

[X] TRANSPORT CHALUT 2000 INC. **Intermédiaire** NI: 1-Q-30643 i
1065 chemin de la Carrière, Bedford Québec J0J 1A0
Tél.: 450-248-4422 • Fax: 450-248-7846

NO. PRO-BILL:
00000247497
NO. EXP. / SHIP:
57625423
NO. B/L:
NO. COMMANDE:

EXPÉDITEUR: DATE CHARGEMENT: 08/10/2015

GRAYMONT (QC) INC.
USINE DE BEDFORD
1015 CH.DE LA CARRIERE
BEDFORD, PQ
J0J 1A0 003169

CONSIGNATAIRE: DATE LIVRAISON: 09/10/2015

SHEPHERD MATERIALS
MANAGEMENT LLC
123 HOBBS STREET
NORTH CONWAY, NH
03860 003281

QTÉ	UNITÉ	CODE	DESCRIPTION	POIDS	CHAUFFEUR
		643	GRAYSOL PLUS 0X1.25MM		000009 TRANSPORT CHA

CAMION	REMORQUE
1562	C-1056

ERIK HALL: 6038606434

EXPLOITANT OU TRANSPORTEUR SUCCESSIF NO.: NIR: NIR 508972-8

LIVRÉ PAR:

GRAYMONT

Graymont (QC) Inc.
Usine de Bedford
1015 Chemin de la Carriere
C.P. 1290
Bedford QC J0J 1A0

VENDU A / SOLD TO
Shepherd Materials Management LLC
56 Central Avenue
Ravena NY 12143

EXPEDIE A / SHIP TO 215877
Shepherd Materials Management LLC
123 Hobbs Street
North Conway NH

Non negociable - Not negotiable

Client/Cust #:	700325	B/L NO:	4060802 Page: 1
Comm/Cust PO:		Date Exp/Ship:	08-Oct-2015
Ref Graymont:	867914 SO	Int/Broker #:	158914 FCA-COLLECT
Ref-2 Graymont:		Inter/Broker:	Transport Chalut 2000 Inc
Comm/Ord:	08-Oct-2015	Zone:	.....
Terms:	Net 30	Livraison/Del:	09-Oct-2015
Exp/Ship#:	57625423	CTQ/NIR:	

158914

Brut:	35070 kg 19:36	Balance/Scale ID:	26001
Tare:	18910 kg 19:36	Veh#:	03C1056
Net:	16160 kg	Trans/Carrier:	Transport Chalut 2000 Inc
		MTC/Max Weight:	57500 KG

Item	Qte/Qty		Description
3524	17.813	TN	Graysol Plus 0 x 1.25 mm High Calcium LKD

EMERGENCY TEL. NO.: (800) 424-9300 CHEMTREC (US)
(613) 996-6666 CANUTEC (CANADA)

Instructions:
IRS# 27-3592584

Expediteur/Shipper: Transporteur/Carrier: Client/Consignee:

B/L NO: 4060802

SHIPPING NOTICE - AVIS D'EXPÉDITION

Pro-Bill

Groupe Chalut

MALO TRANSPORT (1971) INC. **Intermédiaire** NI: 5-Q-30641 i
23 St-Jacques, C.P. 322 Joliette Québec J6E 3Z6
Tél.: 450-756-8008 • Fax: 450-756-8337

L. BRETON TRANSPORT LTÉE **Intermédiaire** NI: 3-Q-30642 i
115 route 255, Marbleton Québec J0B 2L0
Tél.: 819-887-6773 • Fax: 819-887-6394

X TRANSPORT CHALUT 2000 INC. **Intermédiaire** NI: 1-Q-30643 i
1065 chemin de la Carrière, Bedford Québec J0J 1A0
Tél.: 450-248-4422 • Fax: 450-248-7846

NO. PRO-BILL:
00000247496
NO. EXP. / SHIP:
57625407
NO. B/L:
NO. COMMANDE:

EXPÉDITEUR: DATE CHARGEMENT: 08/10/2015

GRAYMONT (QC) INC.
USINE DE BEDFORD
1015 CH.DE LA CARRIERE
BEDFORD, PQ
J0J 1A0 003169

CONSIGNATAIRE: DATE LIVRAISON: 09/10/2015

SHEPHERD MATERIALS
MANAGEMENT LLC
123 HOBBS STREET
NORTH CONWAY, NH
03860 003281

QTÉ	UNITÉ	CODE	DESCRIPTION	POIDS	CHAUFFEUR
		643	GRAYSOL PLUS 0X1.25MM		000009 TRANSPORT CHA

CAMION	REMORQUE
1561	C-1057

Erik Hall 6038606434.

EXPLOITANT OU TRANSPORTEUR SUCCESSIF NO.: NIR: NIR 508972-8

LIVRÉ PAR:

GRAYMONT

Graymont (QC) Inc.
Usine de Marbleton
303 Principale Ouest
Marbleton QC J0B 2L0

VENDU A / SOLD TO
Shepherd Materials Management LLC
56 Central Avenue
Ravena NY 12143

EXPEDIE A / SHIP TO 215877
Shepherd Materials Management LLC
123 Hobbs Street
North Conway NH

Non negociable - Not negotiable

Client/Cust #:	700325	B/L NO:	4062131 Page: 1
Comm/Cust PO:		Date Exp/Ship:	10-Oct-2015
Ref Graymont:	868195 SO	Int/Broker #:	157800 FCA-COLLECT
Ref-2 Graymont:		Inter/Broker:	L. Breton Transport Ltee
Comm/Ord:	10-Oct-2015	Zone:	.....
Terms:	Net 30	Livraison/Del:	13-Oct-2015
Exp/Ship#:	57662110	CTQ/NIR:	

157800

Brut:	35800 kg 8:12	Balance/Scale ID:	
Tare:	19000 kg 8:12	Veh#:	02B651
Net:	16800 kg PDS MAN	Trans/Carrier:	L. Breton Transport Ltee
		MTC/Max Weight:	57500 KG

Item	Qte/Qty		Description
3524	18.519	TN	Graysol Plus 0 x 1.25 mm High Calcium LKD

EMERGENCY TEL. NO.: (800) 424-9300 CHEMTREC (US)
(613) 996-6666 CANUTEC (CANADA)

Instructions:
IRS# 27-3592584

Expediteur/Shipper: Transporteur/Carrier: Client/Consignee:

B/L NO: 4062131

SHIPPING NOTICE - AVIS D'EXPÉDITION

Pro-Bill

Groupe Chalut

NO. PRO-BILL:	00001064867
NO. EXP. / SHIP:	57662110
NO. B/L:	4062131
NO. COMMANDE:	

☐ MALO TRANSPORT (1971) INC. **Intermédiaire** NI: 5-Q-30641 i
23 St-Jacques, C.P. 322 Joliette Québec J6E 3Z6
Tél.: 450-756-8008 • Fax: 450-756-8337

☒ L. BRETON TRANSPORT LTÉE **Intermédiaire** NI: 3-Q-30642 i
115 route 255, Marbleton Québec J0B 2L0
Tél.: 819-887-6773 • Fax: 819-887-6394

☐ TRANSPORT CHALUT 2000 INC. **Intermédiaire** NI: 1-Q-30643 i
1065 chemin de la Carrière, Bedford Québec J0J 1A0
Tél.: 450-248-4422 • Fax: 450-248-7846

EXPÉDITEUR: DATE CHARGEMENT: 10/10/2015

GRAYMONT (QC) INC.
R.R. 1

MARBLETON, PQ
J0B 2L0 000009

CONSIGNATAIRE: DATE LIVRAISON: 13/10/2015

SHEPHERD MATERIALS
MANAGEMENT LLC
123 HOBBS STREET
NORTH CONWAY, NH
03860 000302

QTÉ	UNITÉ	CODE	DESCRIPTION	POIDS	CHAUFFEUR
		036	3524 REJET FOUR 2	18,519	001000 L. BRETON TRAN F. Hebert

CAMION	REMORQUE
12230	B651

EXPLOITANT OU TRANSPORTEUR SUCCESSIF

NO: NIP: NIP 501955-0

LIVRÉ PAR:

GRAYMONT

Graymont (QC) Inc.
Usine de Marbleton
303 Principale Ouest
Marbleton QC J0B 2L0

VENDU A / SOLD TO
Shepherd Materials Management LLC
56 Central Avenue
Ravena NY 12143

EXPEDIE A / SHIP TO 215877
Shepherd Materials Management LLC
123 Hobbs Street
North Conway NH

Non negociable - Not negotiable

Client/Cust #:	700325	B/L NO:	4061841 Page: 1
Comm/Cust PO:		Date Exp/Ship:	09-Oct-2015
Ref Graymont:	868193 SO	Int/Broker #:	157800 FCA-COLLECT
Ref-2 Graymont:		Inter/Broker:	L. Breton Transport Ltee
Comm/Ord:	09-Oct-2015	Zone:	.....
Terms:	Net 30	Livraison/Del:	13-Oct-2015
Exp/Ship#:	57662101	CTQ/NIR:	

157800

Brut:	36270 kg 15:27	Balance/Scale ID:	
Tare:	19680 kg 15:27	Veh#:	02M436
Net:	16590 kg PDS MAN	Trans/Carrier:	L. Breton Transport Ltee
		MTC/Max Weight:	57500 KG

Item	Qte/Qty		Description
3524	18.287	TN	Graysol Plus 0 x 1.25 mm High Calcium LKD

EMERGENCY TEL. NO.: (800) 424-9300 CHEMTREC (US)
(613) 996-6666 CANUTEC (CANADA)

Instructions:
IRS# 27-3592584

Expediteur/Shipper: Transporteur/Carrier: Client/Consignee:

B/L NO: 4061841

SHIPPING NOTICE - AVIS D'EXPÉDITION

Pro-Bill

Groupe Chalut

NO. PRO-BILL:
00001064838
NO. EXP. / SHIP:
57662101
NO. B/L:
NO. COMMANDE:

☐ MALO TRANSPORT (1971) INC. **Intermédiaire** NI: 5-Q-30641 i
23 St-Jacques, C.P. 322 Joliette Québec J6E 3Z6
Tél.: 450-756-8008 • Fax: 450-756-8337

☒ L. BRETON TRANSPORT LTÉE **Intermédiaire** NI: 3-Q-30642 i
115 route 255, Marbleton Québec J0B 2L0
Tél.: 819-887-6773 • Fax: 819-887-6394

☐ TRANSPORT CHALUT 2000 INC. **Intermédiaire** NI: 1-Q-30643 i
1065 chemin de la Carrière, Bedford Québec J0J 1A0
Tél.: 450-248-4422 • Fax: 450-248-7846

EXPÉDITEUR: DATE CHARGEMENT: 09/10/2015

GRAYMONT (QC) INC.
R.R. 1

MARBLETON, PQ
J0B 2L0 000009

CONSIGNATAIRE: DATE LIVRAISON: 13/10/2015

SHEPHERD MATERIALS
MANAGEMENT LLC
123 HOBBS STREET
NORTH CONWAY, NH
03860 000302

QTÉ	UNITÉ	CODE	DESCRIPTION	POIDS	CHAUFFEUR
		036	3524 REJET FOUR 2		001000 L. BRETON TRAN M.O. Poulin

CAMION	REMORQUE
15259	M436

EXPLOITANT OU TRANSPORTEUR SUCCESSIF NO: NIP: NIP 501955-0

LIVRÉ PAR:

GRAYMONT

Graymont (QC) Inc.
Usine de Marbleton
303 Principale Ouest
Marbleton QC J0B 2L0

VENDU A / SOLD TO
Shepherd Materials Management LLC
56 Central Avenue
Ravena NY 12143

EXPEDIE A / SHIP TO 215877
Shepherd Materials Management LLC
123 Hobbs Street
North Conway NH

Non negociable - Not negotiable

Client/Cust #:	700325	B/L NO:	4064714 Page: 1
Comm/Cust PO:		Date Exp/Ship:	13-Oct-2015
Ref Graymont:	868425 SO	Int/Broker #:	157800 FCA-COLLECT
Ref-2 Graymont:		Inter/Broker:	L. Breton Transport Ltee
Comm/Ord:	13-Oct-2015	Zone:	.....
Terms:	Net 30	Livraison/Del:	14-Oct-2015
Exp/Ship#:	57707251	CTQ/NIR:	

157800

Brut:	36090 kg 15:01	Balance/Scale ID:	
Tare:	19610 kg 15:01	Veh#:	02B651
Net:	16480 kg PDS MAN	Trans/Carrier:	L. Breton Transport Ltee
		MTC/Max Weight:	57500 KG

Item	Qte/Qty		Description
3524	18.166	TN	Graysol Plus 0 x 1.25 mm High Calcium LKD

EMERGENCY TEL. NO.: (800) 424-9300 CHEMTREC (US)
(613) 996-6666 CANUTEC (CANADA)

Instructions:
IRS# 27-3592584

Expediteur/Shipper: Transporteur/Carrier: Client/Consignee:

B/L NO: 4064714

SHIPPING NOTICE - AVIS D'EXPÉDITION

Pro-Bill

Groupe Chalut

☐	MALO TRANSPORT (1971) INC. **Intermédiaire** NI: 5-Q-30641 i 23 St-Jacques, C.P. 322 Joliette Québec J6E 3Z6 Tél.: 450-756-8008 • Fax: 450-756-8337	
☒	L. BRETON TRANSPORT LTÉE **Intermédiaire** NI: 3-Q-30642 i 115 route 255, Marbleton Québec J0B 2L0 Tél.: 819-887-6773 • Fax: 819-887-6394	
☐	TRANSPORT CHALUT 2000 INC. **Intermédiaire** NI: 1-Q-30643 i 1065 chemin de la Carrière, Bedford Québec J0J 1A0 Tél.: 450-248-4422 • Fax: 450-248-7846	

NO. PRO-BILL:	00001065014
NO. EXP. / SHIP:	57707251
NO. B/L:	4064714
NO. COMMANDE:	

EXPÉDITEUR: DATE CHARGEMENT: 13/10/2015

GRAYMONT (QC) INC.
R.R. 1

MARBLETON, PQ
J0B 2L0 000009

CONSIGNATAIRE: DATE LIVRAISON: 14/10/2015

SHEPHERD MATERIALS
MANAGEMENT LLC
123 HOBBS STREET
NORTH CONWAY, NH
03860 000302

QTÉ	UNITÉ	CODE	DESCRIPTION	POIDS	CHAUFFEUR
		036	3524 REJET FOUR 2	18,166 II	001000 L. BRETON TRAN T. Lacking

CAMION	REMORQUE
12228	B651

EXPLOITANT OU TRANSPORTEUR SUCCESSIF NO: NIR:

LIVRÉ PAR:

GRAYMONT

Graymont (QC) Inc.
Usine de Marbleton
303 Principale Ouest
Marbleton QC J0B 2L0

VENDU A / SOLD TO
Shepherd Materials Management LLC
56 Central Avenue
Ravena NY 12143

EXPEDIE A / SHIP TO 215877
Shepherd Materials Management LLC
123 Hobbs Street
North Conway NH

Non negociable - Not negotiable

Client/Cust #:	700325	B/L NO:	4064597 Page: 1
Comm/Cust PO:		Date Exp/Ship:	13-Oct-2015
Ref Graymont:	868332 SO	Int/Broker #:	157800 FCA-COLLECT
Ref-2 Graymont:		Inter/Broker:	L. Breton Transport Ltee
Comm/Ord:	13-Oct-2015	Zone:	.....
Terms:	Net 30	Livraison/Del:	14-Oct-2015
Exp/Ship#:	57700403	CTQ/NIR:	

157800

Brut:	36020 kg 14:05	Balance/Scale ID:	
Tare:	19430 kg 14:05	Veh#:	02M436
Net:	16590 kg PDS MAN	Trans/Carrier:	L. Breton Transport Ltee
		MTC/Max Weight:	57500 KG

Item	Qte/Qty		Description
3524	18.287	TN	Graysol Plus 0 x 1.25 mm High Calcium LKD

EMERGENCY TEL. NO.: (800) 424-9300 CHEMTREC (US)
(613) 996-6666 CANUTEC (CANADA)

Instructions:
IRS# 27-3592584

Expediteur/Shipper: Transporteur/Carrier: Client/Consignee:

B/L NO: 4064597

SHIPPING NOTICE - AVIS D'EXPÉDITION

Pro-Bill

Groupe Chalut

MALO TRANSPORT (1971) INC. **Intermédiaire** NI: 5-Q-30641 i
23 St-Jacques, C.P. 322 Joliette Québec J6E 3Z6
Tél.: 450-756-8008 • Fax: 450-756-8337

[X] L. BRETON TRANSPORT LTÉE **Intermédiaire** NI: 3-Q-30642 i
115 route 255, Marbleton Québec J0B 2L0
Tél.: 819-887-6773 • Fax: 819-887-6394

TRANSPORT CHALUT 2000 INC. **Intermédiaire** NI: 1-Q-30643 i
1065 chemin de la Carrière, Bedford Québec J0J 1A0
Tél.: 450-248-4422 • Fax: 450-248-7846

NO. PRO-BILL:
00001064995
NO. EXP. / SHIP:
57700403
NO. B/L:
4064597
NO. COMMANDE:

EXPÉDITEUR: DATE CHARGEMENT: 13/10/2015

GRAYMONT (QC) INC.
R.R. 1

MARBLETON, PQ
J0B 2L0 000009

CONSIGNATAIRE: DATE LIVRAISON: 14/10/2015

SHEPHERD MATERIALS
MANAGEMENT LLC
123 HOBBS STREET
NORTH CONWAY, NH
03860 000302

QTÉ	UNITÉ	CODE	DESCRIPTION	POIDS	CHAUFFEUR
		036	3524 REJET FOUR 2	18,287 TI	001000 L. BRETON TRAN S. Poulin

CAMION	REMORQUE
14250	M436

EXPLOITANT OU TRANSPORTEUR SUCCESSIF

NO: NIR: NIR 501955 0

LIVRÉ PAR:

GRAYMONT

Graymont (QC) Inc.
Usine de Marbleton
303 Principale Ouest
Marbleton QC J0B 2L0

VENDU A / SOLD TO
Shepherd Materials Management LLC
56 Central Avenue
Ravena NY 12143

EXPEDIE A / SHIP TO 215877
Shepherd Materials Management LLC
123 Hobbs Street
North Conway NH

Non negociable - Not negotiable

Client/Cust #:	700325	B/L NO:	4064345 Page: 1
Comm/Cust PO:		Date Exp/Ship:	13-Oct-2015
Ref Graymont:	868332 SO	Int/Broker #:	157800 FCA-COLLECT
Ref-2 Graymont:		Inter/Broker:	L. Breton Transport Ltee
Comm/Ord:	13-Oct-2015	Zone:	.....
Terms:	Net 30	Livraison/Del:	14-Oct-2015
Exp/Ship#:	57700497	CTQ/NIR:	

157800

Brut:	36120 kg 12:02	Balance/Scale ID:	
Tare:	18760 kg 12:01	Veh#:	02B672
Net:	17360 kg PDS MAN	Trans/Carrier:	L. Breton Transport Ltee
		MTC/Max Weight:	57500 KG

Item	Qte/Qty		Description
3524	19.136	TN	Graysol Plus 0 x 1.25 mm High Calcium LKD

EMERGENCY TEL. NO.: (800) 424-9300 CHEMTREC (US)
(613) 996-6666 CANUTEC (CANADA)

Instructions:
IRS# 27-3592584

Expediteur/Shipper: Transporteur/Carrier: Client/Consignee:

B/L NO: 4064345

SHIPPING NOTICE - AVIS D'EXPÉDITION

Pro-Bill

Groupe Chalut

MALO TRANSPORT (1971) INC. **Intermédiaire** NI: 5-Q-30641 i
23 St-Jacques, C.P. 322 Joliette Québec J6E 3Z6
Tél.: 450-756-8008 • Fax: 450-756-8337

[X] L. BRETON TRANSPORT LTÉE **Intermédiaire** NI: 3-Q-30642 i
115 route 255, Marbleton Québec J0B 2L0
Tél.: 819-887-6773 • Fax: 819-887-6394

TRANSPORT CHALUT 2000 INC. **Intermédiaire** NI: 1-Q-30643 i
1065 chemin de la Carrière, Bedford Québec J0J 1A0
Tél.: 450-248-4422 • Fax: 450-248-7846

NO. PRO-BILL:
00001064994
NO. EXP. / SHIP:
57700497
NO. B/L:
4064345
NO. COMMANDE:

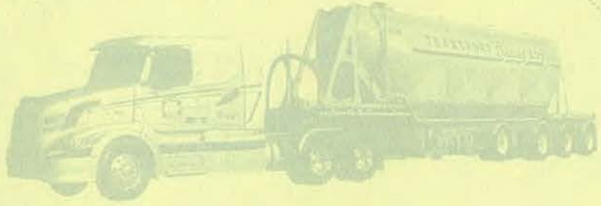
EXPÉDITEUR: DATE CHARGEMENT: 13/10/2015

Q209 DERBY / 2158
GRAYMONT (QC) INC.
R.R. 1
2503144 / RC1062W 10-14-15
MARBLETON, PQ
J0B 2L0 000009

CONSIGNATAIRE: DATE LIVRAISON: 14/10/2015

SHEPHERD MATERIALS
MANAGEMENT LLC
123 HOBBS STREET
NORTH CONWAY, NH
03860 000302

QTÉ	UNITÉ	CODE	DESCRIPTION	POIDS	CHAUFFEUR
		036	3524 REJET FOUR 2	19.136	001000 L. BRETON TRAN F. Hervey



CAMION	REMORQUE
12230	B672

EXPLOITANT OU TRANSPORTEUR SUCCESSIF NO: NIP:

LIVRÉ PAR:

DRAGON PRODUCTS COMPANY 10138

RECEIVED FROM

NAME: Weston Solutions

ADDRESS:

10/8/15

97,200
-41,900
55,300

27.65 Tons

(CHECK [✓] APPROPRIATE BOX)

- [ ] SAND
- [ ] STONE
- [ ] CEMENT
- [ ] SLAG
- [✓] OTHER Kiln Dust

DRIVER'S SIGNATURE

GREENFORD GROUP INC.

P.O. BOX 449
MILFORD, ME 04461
TEL. 207-827-6000

GG- 6780

DATE 10-8-15 TIME

PRODUCT ~~Cement~~ Kiln Dust

PRODUCER Dragon Cement SLIP NO. 10138

TOWN Thomaston Me

DESTINATION Weston Solutions SLIP NO.

TOWN Conway NH

YARDS

WEIGHT (Gross) (Tare)

NET WEIGHT 27.65 Tons

ADDITIONAL INFORMATION

TRUCKER KB 106-75

DRIVER

RECEIVED BY

DRAGON PRODUCTS COMPANY 10136

RECEIVED FROM

NAME: Western Solutions

ADDRESS:

10/8/15

79800
35600
44200

22.107N

(CHECK [✓] APPROPRIATE BOX)

- [ ] SAND
- [ ] STONE
- [ ] CEMENT
- [ ] SLAG
- [x] OTHER Kiln Dust

Cozy Cust

DRIVER'S SIGNATURE

APPENDIX D

WETLAND AND UPLAND SEED MIXTURES

Upland Seed Mixture

Pure Seed		Germination
38.80%	CREEPING RED	85%
38.80%	PERENNIAL RYEGRASS	90%
6.59%	BIRDSFOOT TREFOIL	79%+11% hard seed
6.59%	ALSIKE CLOVER	85%
6.38%	RED TOP	85%
0.10%	Other Crop Seed	
4.27%	Inert Matter	Lot Number 28008
0.07%	Weed Seed	Test Date 1-15

Jersey Seed 18B Jules Lane New Brunswick NJ 08901

WETLAND RESTORATION MIXTURE

PURE SEED		GERMINATION
19..60%	VIRGINIA WILD RYE	89%
19.40%	CREEPING RED FESCUE	85%
11.25%	LITTLE BLUESTEM	62%+33% DORMANT
9.86%	SWITCHGRASS	87%
9.67%	FOX SEDGE	26%+54% DORMANT
8.08%	BIG BLUESTEM	74%+21% DORMANT
4.92%	BLUE VERVAIN	1%+90% DORMANT
1.97%	GREEN BULRUSH	0%+90% DORMANT
1.97%	SOFT RUSH	1%+90% DORMANT
1.79%	ROUGH BENTGRASS	91%
0.98%	WOOLGRASS	3%+91% DORMANT
0.95%	NEW ENGLAND ASTER	83%+9% DORMANT
0.84%	BONESET	25%+52% DORMANT
0.68%	GRASS LEAVED GOLDENROD	29%+66% DORMANT
0.15%	OTHER CROP SEED	
7.80%	INERT MATTER	LOT NUMBER 28009
0.09%	WEED SEED	TEST DATE 12/14

JERSEY SEED 18B JULES LANE NEW BRUNSWICK NJ 08901

APPENDIX E

SOIL TREATMENT ANALYTICAL DATA PACKAGES

APPENDIX F

SOIL TREATMENT ANALYTICAL DATA PACKAGES

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Vinnie DellaRusso
Weston Solutions,Inc.
45 Constitution Ave
Suite 100
Concord, NH 03301

PO Number: 0089493
Job ID: 34278
Date Received: 9/15/15

Project: Kearsarge Metallurgical Superfund Site NHDES198708002

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 9/25/2015
Total number of pages: 17

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Lab ID: 34278

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
E17S14-091515-1	Solid	9/15/2015 9:45	34278-001	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
CB5-6-091415-1	Water	9/14/2015 8:15	34278-002	
				VOCs 8021 Halocarbons in water by 8260
E17S13-091515-1	Solid	9/15/2015 10:40	34278-003	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
E17S11-091515-1	Solid	9/15/2015 11:00	34278-004	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
Trip Blank	Water	9/15/2015 0:00	34278-005	
				VOCs 8021 Halocarbons in water by 8260

Absolute Resource associates

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34278

Sample#: 34278-001

Sample ID: E17S14-091515-1

Matrix: Solid Percent Dry: 75.4% Results expressed on a dry weight basis.

Sampled: 9/15/15 9:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
chloromethane	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
vinyl chloride	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
chloroethane	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
trichlorofluoromethane	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
trans-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
1,1-dichloroethane	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
cis-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
chloroform	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
carbon tetrachloride	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
1,2-dichloroethane	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
trichloroethene	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
1,2-dichloropropane	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
bromodichloromethane	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
cis-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
trans-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
1,1,2-trichloroethane	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
tetrachloroethene	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
dibromochloromethane	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
chlorobenzene	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
bromoform	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
1,3-dichlorobenzene	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
1,4-dichlorobenzene	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
1,2-dichlorobenzene	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
1,2,4-trichlorobenzene	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
1,2,3-trichlorobenzene	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	92	78-114	%	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
toluene-D8 SUR	107	88-110	%	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
4-bromofluorobenzene SUR	102	86-115	%	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C
a,a,a-trifluorotoluene SUR	99	70-130	%	1	LMM	9/15/15	14:47	8167	9/15/15	23:22	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34278

Sample#: 34278-003

Sample ID: E17S13-091515-1

Matrix: Solid Percent Dry: 77.2% Results expressed on a dry weight basis.

Sampled: 9/15/15 10:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
bromomethane	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
1,1-dichloroethene	U	0.02	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
methylene chloride	U	0.2	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
1,1,1-trichloroethane	U	0.05	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	88	78-114	%	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
toluene-D8 SUR	103	88-110	%	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
4-bromofluorobenzene SUR	94	86-115	%	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C
a,a,a-trifluorotoluene SUR	94	70-130	%	1	LMM	9/15/15	14:47	8167	9/15/15	23:52	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34278

Sample#: 34278-004

Sample ID: E17S11-091515-1

Matrix: Solid Percent Dry: 77% Results expressed on a dry weight basis.

Sampled: 9/15/15 11:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	89	78-114	%	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
toluene-D8 SUR	104	88-110	%	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
4-bromofluorobenzene SUR	101	86-115	%	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C
a,a,a-trifluorotoluene SUR	99	70-130	%	1	LMM	9/15/15	14:47	8167	9/16/15	0:21	SW5035A8260C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 34278

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 5 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

No exceptions noted.

Laboratory Control Sample Results

VOC: The MLCS/D8167 did not meet the acceptance criteria for chloroethane. This compound showed high recovery. There is no impact to the data as this analyte was not detected in the associated samples.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

Data Qualifiers

U = This compound was analyzed for, but not detected above half the reporting limit.
J = The analytical result was below the instrument calibration range, but above half the reporting limit, regardless of detectability. The reported concentration is an estimate.

- QC Association Table -

Analysis	QC Number	Field ID	Lab ID
VOCs 8021 Halocarbons SW5030C8260C			
	1502623	CB5-6-091415-1	34278-002
		Trip Blank	34278-005
VOCs 8021 Halocarbons SW5035A8260C			
	8167	E17S14-091515-1	34278-001
		E17S13-091515-1	34278-003
		E17S11-091515-1	34278-004

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	BLK1502623	dichlorodifluoromethane		<	2	ug/L						
		chloromethane		<	2	ug/L						
		vinyl chloride		<	2	ug/L						
		bromomethane		<	2	ug/L						
		chloroethane		<	2	ug/L						
		trichlorofluoromethane		<	2	ug/L						
		1,1-dichloroethene		<	1	ug/L						
		methylene chloride		<	5	ug/L						
		trans-1,2-dichloroethene		<	2	ug/L						
		1,1-dichloroethane		<	2	ug/L						
		cis-1,2-dichloroethene		<	2	ug/L						
		chloroform		<	2	ug/L						
		1,1,1-trichloroethane		<	2	ug/L						
		carbon tetrachloride		<	2	ug/L						
		1,2-dichloroethane		<	2	ug/L						
		trichloroethene		<	2	ug/L						
		1,2-dichloropropane		<	2	ug/L						
		bromodichloromethane		<	0.6	ug/L						
		cis-1,3-dichloropropene		<	2	ug/L						
		trans-1,3-dichloropropene		<	2	ug/L						
		1,1,2-trichloroethane		<	2	ug/L						
		tetrachloroethene		J	2	ug/L						
		dibromochloromethane		<	2	ug/L						
		chlorobenzene		<	2	ug/L						
		1,1,1,2-tetrachloroethane		<	2	ug/L						
		bromoform		<	2	ug/L						
		1,1,2,2-tetrachloroethane		<	2	ug/L						
		1,3-dichlorobenzene		<	2	ug/L						
		1,4-dichlorobenzene		<	2	ug/L						
		1,2-dichlorobenzene		<	2	ug/L						
		1,2,4-trichlorobenzene		<	2	ug/L						
		1,2,3-trichlorobenzene		<	2	ug/L						
		dibromofluoromethane SUR			93	%			78	114		
		toluene-D8 SUR			104	%			88	110		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCS1502623	dichlorodifluoromethane		20	ug/L	20	100	70	130		
		chloromethane		22	ug/L	20	112	70	130		
		vinyl chloride		22	ug/L	20	109	70	130		
		bromomethane		15	ug/L	20	77	70	130		
		chloroethane		22	ug/L	20	112	70	130		
		trichlorofluoromethane		21	ug/L	20	107	70	130		
		1,1-dichloroethene		20	ug/L	20	98	70	130		
		methylene chloride		21	ug/L	20	105	70	130		
		trans-1,2-dichloroethene		21	ug/L	20	107	70	130		
		1,1-dichloroethane		21	ug/L	20	104	70	130		
		cis-1,2-dichloroethene		20	ug/L	20	98	70	130		
		chloroform		21	ug/L	20	103	70	130		
		1,1,1-trichloroethane		22	ug/L	20	108	70	130		
		carbon tetrachloride		20	ug/L	20	100	70	130		
		1,2-dichloroethane		23	ug/L	20	117	70	130		
		trichloroethene		22	ug/L	20	108	70	130		
		1,2-dichloropropane		22	ug/L	20	109	70	130		
		bromodichloromethane		21	ug/L	20	105	70	130		
		cis-1,3-dichloropropene		20	ug/L	20	102	70	130		
		trans-1,3-dichloropropene		21	ug/L	20	104	70	130		
		1,1,2-trichloroethane		20	ug/L	20	101	70	130		
		tetrachloroethene		19	ug/L	20	96	70	130		
		dibromochloromethane		17	ug/L	20	83	70	130		
		chlorobenzene		18	ug/L	20	90	70	130		
		1,1,1,2-tetrachloroethane		18	ug/L	20	92	70	130		
		bromoform		17	ug/L	20	83	70	130		
		1,1,2,2-tetrachloroethane		23	ug/L	20	115	70	130		
		1,3-dichlorobenzene		19	ug/L	20	95	70	130		
		1,4-dichlorobenzene		19	ug/L	20	95	70	130		
		1,2-dichlorobenzene		19	ug/L	20	96	70	130		
		1,2,4-trichlorobenzene		18	ug/L	20	92	70	130		
		1,2,3-trichlorobenzene		19	ug/L	20	94	70	130		
		dibromofluoromethane SUR		102	%			78	114		
		toluene-D8 SUR		104	%			88	110		
		4-bromofluorobenzene SUR		102	%			86	115		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCSD1502623	dichlorodifluoromethane		20	ug/L	20	102	70	130	2	20
		chloromethane		22	ug/L	20	112	70	130	0	20
		vinyl chloride		22	ug/L	20	109	70	130	0	20
		bromomethane		17	ug/L	20	85	70	130	10	20
		chloroethane		23	ug/L	20	113	70	130	1	20
		trichlorofluoromethane		22	ug/L	20	110	70	130	3	20
		1,1-dichloroethene		20	ug/L	20	99	70	130	1	20
		methylene chloride		21	ug/L	20	105	70	130	0	20
		trans-1,2-dichloroethene		21	ug/L	20	107	70	130	1	20
		1,1-dichloroethane		21	ug/L	20	106	70	130	2	20
		cis-1,2-dichloroethene		20	ug/L	20	101	70	130	3	20
		chloroform		21	ug/L	20	105	70	130	2	20
		1,1,1-trichloroethane		23	ug/L	20	113	70	130	4	20
		carbon tetrachloride		20	ug/L	20	102	70	130	2	20
		1,2-dichloroethane		23	ug/L	20	116	70	130	1	20
		trichloroethene		21	ug/L	20	106	70	130	1	20
		1,2-dichloropropane		22	ug/L	20	110	70	130	1	20
		bromodichloromethane		22	ug/L	20	108	70	130	3	20
		cis-1,3-dichloropropene		21	ug/L	20	106	70	130	3	20
		trans-1,3-dichloropropene		21	ug/L	20	107	70	130	4	20
		1,1,2-trichloroethane		21	ug/L	20	105	70	130	4	20
		tetrachloroethene		18	ug/L	20	91	70	130	5	20
		dibromochloromethane		17	ug/L	20	84	70	130	1	20
		chlorobenzene		18	ug/L	20	88	70	130	3	20
		1,1,1,2-tetrachloroethane		18	ug/L	20	89	70	130	3	20
		bromoform		17	ug/L	20	86	70	130	3	20
		1,1,2,2-tetrachloroethane		22	ug/L	20	112	70	130	3	20
		1,3-dichlorobenzene		19	ug/L	20	93	70	130	2	20
		1,4-dichlorobenzene		18	ug/L	20	92	70	130	3	20
		1,2-dichlorobenzene		19	ug/L	20	95	70	130	1	20
		1,2,4-trichlorobenzene		18	ug/L	20	89	70	130	3	20
		1,2,3-trichlorobenzene		19	ug/L	20	94	70	130	1	20
		dibromofluoromethane SUR		100	%			78	114		
		toluene-D8 SUR		103	%			88	110		
		4-bromofluorobenzene SUR		102	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260C	MB8167	dichlorodifluoromethane		<	0.1	ug/g						
		chloromethane		<	0.1	ug/g						
		vinyl chloride		<	0.1	ug/g						
		bromomethane		<	0.2	ug/g						
		chloroethane		<	0.1	ug/g						
		trichlorofluoromethane		<	0.1	ug/g						
		1,1-dichloroethene		<	0.02	ug/g						
		methylene chloride		<	0.2	ug/g						
		trans-1,2-dichloroethene		<	0.1	ug/g						
		1,1-dichloroethane		<	0.1	ug/g						
		cis-1,2-dichloroethene		<	0.1	ug/g						
		chloroform		<	0.1	ug/g						
		1,1,1-trichloroethane		<	0.1	ug/g						
		carbon tetrachloride		<	0.1	ug/g						
		1,2-dichloroethane		<	0.1	ug/g						
		trichloroethene		<	0.1	ug/g						
		1,2-dichloropropane		<	0.1	ug/g						
		bromodichloromethane		<	0.1	ug/g						
		cis-1,3-dichloropropene		<	0.1	ug/g						
		trans-1,3-dichloropropene		<	0.1	ug/g						
		1,1,2-trichloroethane		<	0.1	ug/g						
		tetrachloroethene		<	0.1	ug/g						
		dibromochloromethane		<	0.1	ug/g						
		chlorobenzene		<	0.1	ug/g						
		1,1,1,2-tetrachloroethane		<	0.1	ug/g						
		bromoform		<	0.1	ug/g						
		1,1,2,2-tetrachloroethane		<	0.1	ug/g						
		1,3-dichlorobenzene		<	0.1	ug/g						
		1,4-dichlorobenzene		<	0.1	ug/g						
		1,2-dichlorobenzene		<	0.1	ug/g						
		1,2,4-trichlorobenzene		<	0.1	ug/g						
		1,2,3-trichlorobenzene		<	0.1	ug/g						
		dibromofluoromethane SUR			84	%			78	114		
		toluene-D8 SUR			100	%			88	110		
		4-bromofluorobenzene SUR			100	%			86	115		
		a,a,a-trifluorotoluene SUR			100	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCS8167	dichlorodifluoromethane		1.0	ug/g	1	97		70	130		
		chloromethane		0.8	ug/g	1	83		70	130		
		vinyl chloride		1.1	ug/g	1	112		70	130		
		bromomethane		1.1	ug/g	1	106		70	130		
		chloroethane		2.1	ug/g	1	208	*	70	130		
		trichlorofluoromethane		1.1	ug/g	1	112		70	130		
		1,1-dichloroethene		1.0	ug/g	1	97		70	130		
		methylene chloride		1.1	ug/g	1	112		70	130		
		trans-1,2-dichloroethene		1.0	ug/g	1	104		70	130		
		1,1-dichloroethane		1.0	ug/g	1	102		70	130		
		cis-1,2-dichloroethene		1.0	ug/g	1	100		70	130		
		chloroform		1.0	ug/g	1	102		70	130		
		1,1,1-trichloroethane		1.0	ug/g	1	104		70	130		
		carbon tetrachloride		0.9	ug/g	1	94		70	130		
		1,2-dichloroethane		1.1	ug/g	1	109		70	130		
		trichloroethene		1.1	ug/g	1	107		70	130		
		1,2-dichloropropane		1.0	ug/g	1	103		70	130		
		bromodichloromethane		1.0	ug/g	1	99		70	130		
		cis-1,3-dichloropropene		1.0	ug/g	1	99		70	130		
		trans-1,3-dichloropropene		1.0	ug/g	1	99		70	130		
		1,1,2-trichloroethane		1.0	ug/g	1	99		70	130		
		tetrachloroethene		1.0	ug/g	1	100		70	130		
		dibromochloromethane		0.8	ug/g	1	83		70	130		
		chlorobenzene		1.0	ug/g	1	96		70	130		
		1,1,1,2-tetrachloroethane		1.0	ug/g	1	99		70	130		
		bromoform		0.8	ug/g	1	81		70	130		
		1,1,2,2-tetrachloroethane		1.1	ug/g	1	109		70	130		
		1,3-dichlorobenzene		1.0	ug/g	1	104		70	130		
		1,4-dichlorobenzene		1.0	ug/g	1	101		70	130		
		1,2-dichlorobenzene		1.0	ug/g	1	102		70	130		
		1,2,4-trichlorobenzene		1.0	ug/g	1	104		70	130		
		1,2,3-trichlorobenzene		1.1	ug/g	1	111		70	130		
		dibromofluoromethane SUR		94	%				78	114		
		toluene-D8 SUR		102	%				88	110		
		4-bromofluorobenzene SUR		101	%				86	115		
		a,a,a-trifluorotoluene SUR		96	%				70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCSD8167	dichlorodifluoromethane		1.0	ug/g	1	98		70	130	0	30
		chloromethane		0.8	ug/g	1	84		70	130	2	30
		vinyl chloride		1.1	ug/g	1	110		70	130	2	30
		bromomethane		1.1	ug/g	1	110		70	130	5	30
		chloroethane		1.8	ug/g	1	183	*	70	130	13	30
		trichlorofluoromethane		1.1	ug/g	1	111		70	130	1	30
		1,1-dichloroethene		1.0	ug/g	1	97		70	130	0	30
		methylene chloride		1.1	ug/g	1	108		70	130	4	30
		trans-1,2-dichloroethene		1.0	ug/g	1	104		70	130	0	30
		1,1-dichloroethane		1.0	ug/g	1	101		70	130	2	30
		cis-1,2-dichloroethene		1.0	ug/g	1	98		70	130	2	30
		chloroform		1.0	ug/g	1	102		70	130	0	30
		1,1,1-trichloroethane		1.0	ug/g	1	102		70	130	1	30
		carbon tetrachloride		0.9	ug/g	1	92		70	130	2	30
		1,2-dichloroethane		1.1	ug/g	1	109		70	130	0	30
		trichloroethene		1.0	ug/g	1	101		70	130	6	30
		1,2-dichloropropane		1.0	ug/g	1	103		70	130	0	30
		bromodichloromethane		0.9	ug/g	1	93		70	130	6	30
		cis-1,3-dichloropropene		1.0	ug/g	1	98		70	130	1	30
		trans-1,3-dichloropropene		1.0	ug/g	1	98		70	130	1	30
		1,1,2-trichloroethane		1.0	ug/g	1	98		70	130	0	30
		tetrachloroethene		1.0	ug/g	1	99		70	130	2	30
		dibromochloromethane		0.8	ug/g	1	80		70	130	3	30
		chlorobenzene		1.0	ug/g	1	96		70	130	0	30
		1,1,1,2-tetrachloroethane		0.9	ug/g	1	94		70	130	6	30
		bromoform		0.8	ug/g	1	79		70	130	3	30
		1,1,2,2-tetrachloroethane		1.1	ug/g	1	106		70	130	2	30
		1,3-dichlorobenzene		1.0	ug/g	1	98		70	130	6	30
		1,4-dichlorobenzene		1.0	ug/g	1	99		70	130	3	30
		1,2-dichlorobenzene		1.0	ug/g	1	99		70	130	4	30
		1,2,4-trichlorobenzene		1.0	ug/g	1	104		70	130	0	30
		1,2,3-trichlorobenzene		1.1	ug/g	1	105		70	130	5	30
		dibromofluoromethane SUR		97	%				78	114		
		toluene-D8 SUR		104	%				88	110		
		4-bromofluorobenzene SUR		102	%				86	115		
		a,a,a-trifluorotoluene SUR		97	%				70	130		

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34278

Company Name: WestonSolutions

Company Address: 43 North Mainstreet Concord NH 03301

Report To: Vinnie DelloRusso

Phone #: 603 656 5467

Invoice to Email: Vincent.DelloRusso@WestonSolutions.com

☐ Hard Copy Invoice Required

Project Name: Keysarge Metallurgical Superfund site

Project #: NHDES 19870802

Project Location: NH MA ME VT NY Other

Protocol: RCRA MCP SDWA NHDES NPDES OTHER

Reporting Limits: QAPP EPA DW GW-1 Other Project goal S-1

Quote # 6943 ☐ NH Reimbursement Pricing

PO # PO 6443

ANALYSIS REQUEST

☐ VOC 8260 MADEP ☐ VOC 8260 NHDES ☐ VOC 8260 ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT ☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List: ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint ☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB ☐ O&G 1664 ☐ Mineral O&G SM5520F ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness ☐ Total Metals-list: ☐ Dissolved Metals-list: ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	ANALYSIS REQUEST
34278-01	E17514-091515-1	1		X						X	9/15/15	0945	EH	X
-02	CBS-6-091415-1	2	X			X					9/14/15	0815	EH	X
-03	E17513-091515-1	1		X						X	9/15/15	1040	EH	X
-04	E17511-091515-1	1		X						X	9/15/15	1100	EH	X
-05	trip blank AD													

TAT REQUESTED

Priority (24 hr)* ☒
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 9/16

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS: Email PDF Results to: Vinnie.DelloRusso@WestonSolutions.com + Erik.Hall@WestonSolutions.com

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) Erik.Hall@WestonSolutions.com

☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☑ YES ☐ NO

TEMPERATURE 5 °C

CUSTODY RECORD

QSD-01 Revision 01/09/15

Relinquished by Sampler:	Date	Time	Received by:	Date	Time
	9/15/15	1245		9/15/15	12:15
Relinquished by:	9/15/15	14:10	Received by:	Date	Time
Relinquished by:	Date	Time	Received by Laboratory:	9/15/15	14:10

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Vinnie DellaRusso
Weston Solutions,Inc.
45 Constitution Ave
Suite 100
Concord, NH 03301

PO Number: 0089493
Job ID: 34303
Date Received: 9/16/15

Project: Kearsarge Metallurgical Superfund Site NHDES198708002

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 9/25/2015
Total number of pages: 31

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Lab ID: 34303

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
E17S09-091515-1	Solid	9/15/2015 11:20	34303-001	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E17S07-091515-1	Solid	9/15/2015 11:40	34303-002	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E17S06-091515-1	Solid	9/15/2015 11:50	34303-003	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E17S05-091515-1	Solid	9/15/2015 12:20	34303-004	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E14S01-091515-1	Solid	9/15/2015 12:30	34303-005	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E15S02-091515	Solid	9/15/2015 12:50	34303-006	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E13S02-091515-1	Solid	9/15/2015 13:00	34303-007	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
Trip Blank	Solid	9/15/2015 0:00	34303-008	VOCs 8021 Halocarbons in solid by 8260
E13S02-091515-2	Solid	9/15/2015 13:00	34303-009	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E11S02-091615-1	Solid	9/16/2015 8:10	34303-010	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E09S02-091615-1	Solid	9/16/2015 8:30	34303-011	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E06S02-091615-1	Solid	9/16/2015 8:25	34303-012	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E05S02-091615-1	Solid	9/16/2015 8:45	34303-013	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E05S02-091615-2	Solid	9/16/2015 8:45	34303-014	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E03S02-091615-1	Solid	9/16/2015 8:40	34303-015	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E10S01-091615-1	Solid	9/16/2015 8:20	34303-016	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E08S01-091615-1	Solid	9/16/2015 8:50	34303-017	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E07S01-091615-1	Solid	9/16/2015 8:15	34303-018	Percent Dry Matter for Sample Calc by SM2540B,G

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Lab ID: 34303

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
E07S01-091615-1	Solid	9/16/2015 8:15	34303-018	
				VOCs 8021 Halocarbons in solid by 8260
E05S01-091615-1	Solid	9/16/2015 8:55	34303-019	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
E03S01-091615-1	Solid	9/16/2015 8:35	34303-020	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-001

Sample ID: E17S09-091515-1

Matrix: Solid Percent Dry: 73.3% Results expressed on a dry weight basis.

Sampled: 9/15/15 11:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
chloromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
vinyl chloride	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
chloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
trichlorofluoromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
trans-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
1,1-dichloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
cis-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
chloroform	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
carbon tetrachloride	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
1,2-dichloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
trichloroethene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
1,2-dichloropropane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
bromodichloromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
cis-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
trans-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
1,1,2-trichloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
tetrachloroethene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
dibromochloromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
chlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
bromoform	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
1,3-dichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
1,4-dichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
1,2-dichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
1,2,4-trichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
1,2,3-trichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	83	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
toluene-D8 SUR	102	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
4-bromofluorobenzene SUR	95	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C
a,a,a-trifluorotoluene SUR	100	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	15:34	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-002

Sample ID: E17S07-091515-1

Matrix: Solid Percent Dry: 76.1% Results expressed on a dry weight basis.

Sampled: 9/15/15 11:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	85	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
toluene-D8 SUR	104	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
4-bromofluorobenzene SUR	94	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C
a,a,a-trifluorotoluene SUR	101	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	16:03	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-003

Sample ID: E17S06-091515-1

Matrix: Solid Percent Dry: 75.3% Results expressed on a dry weight basis.

Sampled: 9/15/15 11:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	83	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
toluene-D8 SUR	103	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
4-bromofluorobenzene SUR	95	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C
a,a,a-trifluorotoluene SUR	96	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	16:32	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-004

Sample ID: E17S05-091515-1

Matrix: Solid Percent Dry: 73.8% Results expressed on a dry weight basis.

Sampled: 9/15/15 12:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
chloromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
vinyl chloride	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
chloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
trichlorofluoromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
trans-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
1,1-dichloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
cis-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
chloroform	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
carbon tetrachloride	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
1,2-dichloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
trichloroethene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
1,2-dichloropropane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
bromodichloromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
cis-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
trans-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
1,1,2-trichloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
tetrachloroethene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
dibromochloromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
chlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
bromoform	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
1,3-dichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
1,4-dichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
1,2-dichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
1,2,4-trichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
1,2,3-trichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	86	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
toluene-D8 SUR	104	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
4-bromofluorobenzene SUR	98	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C
a,a,a-trifluorotoluene SUR	107	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	17:01	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-005

Sample ID: E14S01-091515-1

Matrix: Solid Percent Dry: 77% Results expressed on a dry weight basis.

Sampled: 9/15/15 12:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
chloromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
vinyl chloride	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
chloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
trichlorofluoromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
1,1-dichloroethene	0.16	0.04	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
trans-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
1,1-dichloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
cis-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
chloroform	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
carbon tetrachloride	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
1,2-dichloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
trichloroethene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
1,2-dichloropropane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
bromodichloromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
cis-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
trans-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
1,1,2-trichloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
tetrachloroethene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
dibromochloromethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
chlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
bromoform	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
1,3-dichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
1,4-dichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
1,2-dichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
1,2,4-trichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
1,2,3-trichlorobenzene	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	84	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
toluene-D8 SUR	107	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
4-bromofluorobenzene SUR	88	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C
a,a,a-trifluorotoluene SUR	102	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	17:30	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-006

Sample ID: E15S02-091515

Matrix: Solid Percent Dry: 75.8% Results expressed on a dry weight basis.

Sampled: 9/15/15 12:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
1,1-dichloroethene	0.05	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
1,1-dichloroethane	0.08 J	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	82	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
toluene-D8 SUR	107	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
4-bromofluorobenzene SUR	95	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C
a,a,a-trifluorotoluene SUR	104	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	17:59	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-007

Sample ID: E13S02-091515-1

Matrix: Solid Percent Dry: 73.7% Results expressed on a dry weight basis.

Sampled: 9/15/15 13:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
1,1-dichloroethene	0.04	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
1,1,1-trichloroethane	0.06 J	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	84	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
toluene-D8 SUR	103	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
4-bromofluorobenzene SUR	102	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C
a,a,a-trifluorotoluene SUR	98	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	18:28	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34303
Sample#: 34303-008
Sample ID: Trip Blank
Matrix: Solid
Sampled: 9/15/15 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
bromomethane	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
1,1-dichloroethene	U	0.02	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
methylene chloride	U	0.2	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	87	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
toluene-D8 SUR	106	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
4-bromofluorobenzene SUR	96	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C
a,a,a-trifluorotoluene SUR	103	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	15:05	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-009

Sample ID: E13S02-091515-2

Matrix: Solid Percent Dry: 74.9% Results expressed on a dry weight basis.

Sampled: 9/15/15 13:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
1,1-dichloroethene	0.11	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
1,1,1-trichloroethane	0.2	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	79	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
toluene-D8 SUR	103	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
4-bromofluorobenzene SUR	95	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C
a,a,a-trifluorotoluene SUR	99	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	18:56	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-010

Sample ID: E11S02-091615-1

Matrix: Solid Percent Dry: 72.8% Results expressed on a dry weight basis.

Sampled: 9/16/15 8:10

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
1,1-dichloroethene	0.06	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
1,1,1-trichloroethane	0.1	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	83	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
toluene-D8 SUR	103	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
4-bromofluorobenzene SUR	102	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C
a,a,a-trifluorotoluene SUR	100	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	19:25	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-011

Sample ID: E09S02-091615-1

Matrix: Solid Percent Dry: 74% Results expressed on a dry weight basis.

Sampled: 9/16/15 8:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
1,1-dichloroethene	0.05	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
1,1,1-trichloroethane	0.1	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	83	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
toluene-D8 SUR	106	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
4-bromofluorobenzene SUR	98	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C
a,a,a-trifluorotoluene SUR	102	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	19:54	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-012

Sample ID: E06S02-091615-1

Matrix: Solid Percent Dry: 73.5% Results expressed on a dry weight basis.

Sampled: 9/16/15 8:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
1,1-dichloroethene	0.03 J	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
1,1,1-trichloroethane	0.1	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	81	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
toluene-D8 SUR	102	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
4-bromofluorobenzene SUR	102	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C
a,a,a-trifluorotoluene SUR	96	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	20:23	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-013

Sample ID: E05S02-091615-1

Matrix: Solid Percent Dry: 75.3% Results expressed on a dry weight basis.

Sampled: 9/16/15 8:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
1,1-dichloroethene	0.02 J	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
1,1,1-trichloroethane	0.05 J	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	82	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
toluene-D8 SUR	106	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
4-bromofluorobenzene SUR	97	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C
a,a,a-trifluorotoluene SUR	101	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	20:52	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-014

Sample ID: E05S02-091615-2

Matrix: Solid Percent Dry: 75.6% Results expressed on a dry weight basis.

Sampled: 9/16/15 8:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
1,1-dichloroethene	0.03 J	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
1,1,1-trichloroethane	0.05 J	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	83	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
toluene-D8 SUR	106	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
4-bromofluorobenzene SUR	102	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C
a,a,a-trifluorotoluene SUR	100	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	21:22	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-015

Sample ID: E03S02-091615-1

Matrix: Solid Percent Dry: 73.4% Results expressed on a dry weight basis.

Sampled: 9/16/15 8:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	83	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
toluene-D8 SUR	105	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
4-bromofluorobenzene SUR	97	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C
a,a,a-trifluorotoluene SUR	102	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	21:51	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-016

Sample ID: E10S01-091615-1

Matrix: Solid Percent Dry: 73.2% Results expressed on a dry weight basis.

Sampled: 9/16/15 8:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
1,1-dichloroethene	0.03	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
1,1,1-trichloroethane	0.1	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	84	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
toluene-D8 SUR	102	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
4-bromofluorobenzene SUR	95	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C
a,a,a-trifluorotoluene SUR	99	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	22:20	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-017

Sample ID: E08S01-091615-1

Matrix: Solid Percent Dry: 74.9% Results expressed on a dry weight basis.

Sampled: 9/16/15 8:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
1,1-dichloroethene	0.06	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
1,1-dichloroethane	0.06 J	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
1,1,1-trichloroethane	0.1	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	84	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
toluene-D8 SUR	103	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
4-bromofluorobenzene SUR	98	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C
a,a,a-trifluorotoluene SUR	100	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	22:49	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-018

Sample ID: E07S01-091615-1

Matrix: Solid Percent Dry: 75.8% Results expressed on a dry weight basis.

Sampled: 9/16/15 8:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
1,1-dichloroethene	0.03	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
1,1,1-trichloroethane	0.1	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	83	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
toluene-D8 SUR	105	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
4-bromofluorobenzene SUR	101	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C
a,a,a-trifluorotoluene SUR	99	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	23:18	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-019

Sample ID: E05S01-091615-1

Matrix: Solid Percent Dry: 74.6% Results expressed on a dry weight basis.

Sampled: 9/16/15 8:55

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
1,1-dichloroethene	0.03	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
1,1,1-trichloroethane	0.1	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	81	78-114	%	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
toluene-D8 SUR	103	88-110	%	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
4-bromofluorobenzene SUR	101	86-115	%	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C
a,a,a-trifluorotoluene SUR	100	70-130	%	1	LMM	9/16/15	14:15	8189	9/16/15	23:47	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34303

Sample#: 34303-020

Sample ID: E03S01-091615-1

Matrix: Solid Percent Dry: 72.8% Results expressed on a dry weight basis.

Sampled: 9/16/15 8:35

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	82	78-114	%	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
toluene-D8 SUR	100	88-110	%	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
4-bromofluorobenzene SUR	102	86-115	%	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C
a,a,a-trifluorotoluene SUR	95	70-130	%	1	LMM	9/16/15	14:15	8189	9/17/15	0:16	SW5035A8260C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 34303

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 4 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

No exceptions noted.

Laboratory Control Sample Results

VOC: The MLCS/D8189 did not meet the acceptance criteria for chloroethane. This compound showed high recovery. There is no impact to the data as this analyte was not detected in the associated samples.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

Data Qualifiers

U = This compound was analyzed for, but not detected above half the reporting limit.
J = The analytical result was below the instrument calibration range, but above half the reporting limit, regardless of detectability. The reported concentration is an estimate.

- QC Association Table -

Analysis	QC Number	Field ID	Lab ID
VOCs 8021 Halocarbons SW5035A8260C			
	8189	E17S09-091515-1	34303-001
		E17S07-091515-1	34303-002
		E17S06-091515-1	34303-003
		E17S05-091515-1	34303-004
		E14S01-091515-1	34303-005
		E15S02-091515	34303-006
		E13S02-091515-1	34303-007
		Trip Blank	34303-008
		E13S02-091515-2	34303-009
		E11S02-091615-1	34303-010
		E09S02-091615-1	34303-011
		E06S02-091615-1	34303-012
		E05S02-091615-1	34303-013
		E05S02-091615-2	34303-014
		E03S02-091615-1	34303-015
		E10S01-091615-1	34303-016
		E08S01-091615-1	34303-017
		E07S01-091615-1	34303-018
		E05S01-091615-1	34303-019
		E03S01-091615-1	34303-020

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260C	MB8189	dichlorodifluoromethane		<	0.1	ug/g						
		chloromethane		<	0.1	ug/g						
		vinyl chloride		<	0.1	ug/g						
		bromomethane		<	0.2	ug/g						
		chloroethane		<	0.1	ug/g						
		trichlorofluoromethane		<	0.1	ug/g						
		1,1-dichloroethene		<	0.02	ug/g						
		methylene chloride		<	0.2	ug/g						
		trans-1,2-dichloroethene		<	0.1	ug/g						
		1,1-dichloroethane		<	0.1	ug/g						
		cis-1,2-dichloroethene		<	0.1	ug/g						
		chloroform		<	0.1	ug/g						
		1,1,1-trichloroethane		<	0.1	ug/g						
		carbon tetrachloride		<	0.1	ug/g						
		1,2-dichloroethane		<	0.1	ug/g						
		trichloroethene		<	0.1	ug/g						
		1,2-dichloropropane		<	0.1	ug/g						
		bromodichloromethane		<	0.1	ug/g						
		cis-1,3-dichloropropene		<	0.1	ug/g						
		trans-1,3-dichloropropene		<	0.1	ug/g						
		1,1,2-trichloroethane		<	0.1	ug/g						
		tetrachloroethene		<	0.1	ug/g						
		dibromochloromethane		<	0.1	ug/g						
		chlorobenzene		<	0.1	ug/g						
		1,1,1,2-tetrachloroethane		<	0.1	ug/g						
		bromoform		<	0.1	ug/g						
		1,1,2,2-tetrachloroethane		<	0.1	ug/g						
		1,3-dichlorobenzene		<	0.1	ug/g						
		1,4-dichlorobenzene		<	0.1	ug/g						
		1,2-dichlorobenzene		<	0.1	ug/g						
		1,2,4-trichlorobenzene		<	0.1	ug/g						
		1,2,3-trichlorobenzene		<	0.1	ug/g						
		dibromofluoromethane SUR			80	%			78	114		
		toluene-D8 SUR			102	%			88	110		
		4-bromofluorobenzene SUR			99	%			86	115		
		a,a,a-trifluorotoluene SUR			103	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCS8189	dichlorodifluoromethane		1.0	ug/g	1	96		70	130		
		chloromethane		0.9	ug/g	1	87		70	130		
		vinyl chloride		1.3	ug/g	1	126		70	130		
		bromomethane		0.8	ug/g	1	83		70	130		
		chloroethane		2.5	ug/g	1	253	*	70	130		
		trichlorofluoromethane		1.2	ug/g	1	120		70	130		
		1,1-dichloroethene		1.0	ug/g	1	100		70	130		
		methylene chloride		1.2	ug/g	1	116		70	130		
		trans-1,2-dichloroethene		1.1	ug/g	1	108		70	130		
		1,1-dichloroethane		1.1	ug/g	1	110		70	130		
		cis-1,2-dichloroethene		1.1	ug/g	1	107		70	130		
		chloroform		1.1	ug/g	1	109		70	130		
		1,1,1-trichloroethane		1.1	ug/g	1	111		70	130		
		carbon tetrachloride		0.9	ug/g	1	95		70	130		
		1,2-dichloroethane		1.3	ug/g	1	126		70	130		
		trichloroethene		1.2	ug/g	1	119		70	130		
		1,2-dichloropropane		1.2	ug/g	1	119		70	130		
		bromodichloromethane		1.0	ug/g	1	101		70	130		
		cis-1,3-dichloropropene		1.1	ug/g	1	108		70	130		
		trans-1,3-dichloropropene		1.0	ug/g	1	105		70	130		
		1,1,2-trichloroethane		1.1	ug/g	1	109		70	130		
		tetrachloroethene		1.0	ug/g	1	96		70	130		
		dibromochloromethane		0.8	ug/g	1	79		70	130		
		chlorobenzene		0.9	ug/g	1	94		70	130		
		1,1,1,2-tetrachloroethane		0.9	ug/g	1	93		70	130		
		bromoform		0.8	ug/g	1	79		70	130		
		1,1,2,2-tetrachloroethane		1.1	ug/g	1	106		70	130		
		1,3-dichlorobenzene		1.0	ug/g	1	101		70	130		
		1,4-dichlorobenzene		1.0	ug/g	1	101		70	130		
		1,2-dichlorobenzene		1.0	ug/g	1	100		70	130		
		1,2,4-trichlorobenzene		1.1	ug/g	1	107		70	130		
		1,2,3-trichlorobenzene		1.1	ug/g	1	110		70	130		
		dibromofluoromethane SUR		99	%				78	114		
		toluene-D8 SUR		105	%				88	110		
		4-bromofluorobenzene SUR		107	%				86	115		
		a,a,a-trifluorotoluene SUR		104	%				70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCSD8189	dichlorodifluoromethane		0.9	ug/g	1	85		70	130	12	30
		chloromethane		0.8	ug/g	1	79		70	130	9	30
		vinyl chloride		1.1	ug/g	1	111		70	130	12	30
		bromomethane		0.8	ug/g	1	83		70	130	1	30
		chloroethane		2.2	ug/g	1	216	*	70	130	16	30
		trichlorofluoromethane		1.1	ug/g	1	106		70	130	12	30
		1,1-dichloroethene		0.9	ug/g	1	93		70	130	8	30
		methylene chloride		1.1	ug/g	1	113		70	130	3	30
		trans-1,2-dichloroethene		1.0	ug/g	1	101		70	130	6	30
		1,1-dichloroethane		1.0	ug/g	1	104		70	130	6	30
		cis-1,2-dichloroethene		1.0	ug/g	1	98		70	130	8	30
		chloroform		1.0	ug/g	1	101		70	130	7	30
		1,1,1-trichloroethane		1.0	ug/g	1	104		70	130	7	30
		carbon tetrachloride		0.9	ug/g	1	91		70	130	4	30
		1,2-dichloroethane		1.1	ug/g	1	113		70	130	11	30
		trichloroethene		1.1	ug/g	1	111		70	130	6	30
		1,2-dichloropropane		1.1	ug/g	1	109		70	130	9	30
		bromodichloromethane		0.9	ug/g	1	94		70	130	7	30
		cis-1,3-dichloropropene		1.0	ug/g	1	98		70	130	10	30
		trans-1,3-dichloropropene		1.0	ug/g	1	99		70	130	5	30
		1,1,2-trichloroethane		1.0	ug/g	1	101		70	130	7	30
		tetrachloroethene		0.9	ug/g	1	91		70	130	6	30
		dibromochloromethane		0.7	ug/g	1	72		70	130	9	30
		chlorobenzene		0.9	ug/g	1	89		70	130	5	30
		1,1,1,2-tetrachloroethane		0.9	ug/g	1	88		70	130	6	30
		bromoform		0.7	ug/g	1	71		70	130	11	30
		1,1,2,2-tetrachloroethane		0.9	ug/g	1	94		70	130	12	30
		1,3-dichlorobenzene		0.9	ug/g	1	94		70	130	8	30
		1,4-dichlorobenzene		0.9	ug/g	1	92		70	130	10	30
		1,2-dichlorobenzene		0.9	ug/g	1	94		70	130	6	30
		1,2,4-trichlorobenzene		1.0	ug/g	1	96		70	130	11	30
		1,2,3-trichlorobenzene		1.0	ug/g	1	97		70	130	13	30
		dibromofluoromethane SUR		95	%				78	114		
		toluene-D8 SUR		104	%				88	110		
		4-bromofluorobenzene SUR		103	%				86	115		
		a,a,a-trifluorotoluene SUR		97	%				70	130		

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34303

Company Name: Weston Solutions

Company Address: 43 North Main St. Concord, NH 03301

Report To: Vinnie DelloRusso

Phone #: 603 656 5467

Invoice to Email: Vincent.DelloRusso@westonsolutions.com

☐ Hard Copy Invoice Required

Project Name: kearsarge metallurgical Superfund site

Project #: NHDES 198708002

Project Location: (NH) MA ME VT NY Other

Protocol: RCRA SDWA NPDES MCP (NHDES) OTHER

Reporting Limits: QAPP GW-1 S-1 EPA DW Other project goal

Quote # 6943 ☐ NH Reimbursement Pricing

PO # 0089493

ANALYSIS REQUEST

☐ VOC 8260 (X) ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT ☐ VPH MADEP ☐ MEGRO ☐ GRO 3015 ☐ 1,4-Dioxane ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List: ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint ☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB ☐ O&G 1664 ☐ Mineral O&G SM5520F ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness ☐ Total Metals-list: ☐ Dissolved Metals-list: ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde ☐ Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	
34303-01	E17509-091515-1	1		X						X	09/15/15	1120	EH	X
-02	E17501-091515-1	1		X						X	9/15/15	1140	EH	X
-03	E17506-091515-1	1		X						X	9/15/15	1150	EH	X
-04	E17505-091515-1	1		X						X	9/15/15	1220	AB	X
-05	E14501-091515-1	1		X						X	9/15/15	1230	AB	X
-06	E15502-091515	1		X						X	9/15/15	1250	AB	X
-07	E13502-091515-1	1		X						X	9/15/15	1300	AB	X
-08	TRIP BLANK													
-09	E11502-091515-2	1		X						X	9/15/15	1300	AB	X
-10	E11502-091615-1	1		X						X	9/16/15	0810	AB	X
-11	E09502-091615-1	1		X						X	9/16/15	0830	AB	X

TAT REQUESTED

Priority (24 hr)* ☒
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 9/17/15

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS: Email PDF results to vincent.dellorusso@westonsolutions.com & erik.hall@westonsolutions.com

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) erik.hall@westonsolutions.com ☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☒ YES ☐ NO TEMPERATURE 4 °C

CUSTODY RECORD
QSD-01 Revision 01/09/15

	Relinquished by Sampler:	Date	Time	Received by:	Date	Time
1	Allie Baltz	9/16/15	1115		9/16/15	1103
2		9/16/15	1251			
3				Received by Laboratory:	9/16/15	1250

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34303

Company Name: Weston Solutions, Inc.
Company Address: 43 North Main St. Concord, NH 03301
Report To: Vinnie DelloRusso
Phone #: 603-656-5467
Invoice to Email: vincent.dellorusso@westonsolutions.com
☐ Hard Copy Invoice Required

Project Name: Kearsarge Metallurgical Superfund Site
Project #: NHDES 198708002
Project Location: (NH) MA ME VT NY Other
Protocol: RCRA SDWA NPDES MCP (NHDES) OTHER
Reporting Limits: QAPP GW-1 S-1 EPA DW Other project goal
Quote # 6943 ☐ NH Reimbursement Pricing
PO # 0089493

ANALYSIS REQUEST

☒ VOC 8260 NHDES ☐ VOC 8260 MADEP ☐ VOC 8260 B ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT ☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List: ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint ☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB ☐ O&G 1664 ☐ Mineral O&G SM5520F ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness ☐ Total Metals-list: ☐ Dissolved Metals-list: ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	Grab (G) or Composite (C)
34303-12	E06502-091615-1	1		X						X	9/16/15	8:25	AB	X
-13	E05502-091615-1	1		X						X	9/16/15	8:45	AB	X
-14	E05502-091615-2	1		X						X	9/16/15	8:45	AB	X
-15	E03502-091615-1	1		X						X	9/16/15	08:40	AB	X
-16	E10501-091615-1	1		X						X	9/16/15	08:20	AB	X
-17	E05501-091615-1	1		X						X	9/16/15	08:50	AB	X
-18	E07501-091615-1	1		X						X	9/16/15	08:15	AB	X
-19	E05501-091615-1	1		X						X	9/16/15	08:55	AB	X
-20	E03501-091615-1	1		X						X	9/16/15	08:35	AB	X
						9/16/15								
						a Test								

TAT REQUESTED
Priority (24 hr)* ☒
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 9/17/15

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
Email PDF results to vincent.dellorusso@westonsolutions.com & erik.hall@westonsolutions.com

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) vincent.dellorusso@westonsolutions.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☑ YES ☐ NO
TEMPERATURE 4 °C

CUSTODY RECORD
QSD-01 Revision 01/09/15

	Relinquished by Sampler:	Date	Time	Received by:	Date	Time
1	Allie Balter	9/16/15	1103		9/16/15	1103
2	Relinquished by:	Date	Time	Received by:	Date	Time
		9/16/15	1250			
3	Relinquished by:	Date	Time	Received by Laboratory:	Date	Time
					9/16/15	1250

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Vinnie DellaRusso
Weston Solutions,Inc.
45 Constitution Ave
Suite 100
Concord, NH 03301

PO Number: 0089493
Job ID: 34321
Date Received: 9/17/15

Project: Kearsarge Metallurgical Superfund Site NHDES198708002

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 9/25/2015
Total number of pages: 18

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Lab ID: 34321

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
Trip Blank	Solid	9/17/2015 0:00	34321-001	
				VOCs 8021 Halocarbons in solid by 8260
E16S14-091715-1	Solid	9/17/2015 8:30	34321-002	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
E05S03-091715-1	Solid	9/17/2015 8:15	34321-003	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
E04S03-091715-1	Solid	9/17/2015 8:00	34321-004	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
E16S06-091715-1	Solid	9/17/2015 8:45	34321-005	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
E16S09-091715-1	Solid	9/17/2015 8:40	34321-006	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
E16S11-091715-1	Solid	9/17/2015 8:35	34321-007	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
E16S03-091715-1	Solid	9/17/2015 8:50	34321-008	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
E01S02-091715-1	Solid	9/17/2015 8:55	34321-009	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260

Absolute Resource associates

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34321
Sample#: 34321-001
Sample ID: Trip Blank
Matrix: Solid
Sampled: 9/17/15 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
bromomethane	U	0.2	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
1,1-dichloroethene	U	0.02	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
methylene chloride	U	0.2	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	85	78-114	%	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
toluene-D8 SUR	106	88-110	%	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
4-bromofluorobenzene SUR	99	86-115	%	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C
a,a,a-trifluorotoluene SUR	103	70-130	%	1	LMM	9/17/15	14:00	8190	9/17/15	16:58	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34321

Sample#: 34321-002

Sample ID: E16S14-091715-1

Matrix: Solid Percent Dry: 75.2% Results expressed on a dry weight basis.

Sampled: 9/17/15 8:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	87	78-114	%	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
toluene-D8 SUR	106	88-110	%	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
4-bromofluorobenzene SUR	103	86-115	%	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C
a,a,a-trifluorotoluene SUR	105	70-130	%	1	LMM	9/17/15	14:00	8190	9/17/15	17:27	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34321

Sample#: 34321-003

Sample ID: E05S03-091715-1

Matrix: Solid Percent Dry: 74.1% Results expressed on a dry weight basis.

Sampled: 9/17/15 8:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	80	78-114	%	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
toluene-D8 SUR	104	88-110	%	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
4-bromofluorobenzene SUR	99	86-115	%	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C
a,a,a-trifluorotoluene SUR	102	70-130	%	1	LMM	9/17/15	14:00	8190	9/17/15	17:57	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34321

Sample#: 34321-004

Sample ID: E04S03-091715-1

Matrix: Solid Percent Dry: 74.9% Results expressed on a dry weight basis.

Sampled: 9/17/15 8:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
1,1-dichloroethene	0.04	0.03	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
1,1-dichloroethane	0.05 J	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
1,1,1-trichloroethane	0.1	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	85	78-114	%	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
toluene-D8 SUR	103	88-110	%	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
4-bromofluorobenzene SUR	99	86-115	%	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C
a,a,a-trifluorotoluene SUR	102	70-130	%	1	LMM	9/17/15	14:00	8190	9/17/15	18:27	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34321

Sample#: 34321-005

Sample ID: E16S06-091715-1

Matrix: Solid Percent Dry: 74.4% Results expressed on a dry weight basis.

Sampled: 9/17/15 8:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	86	78-114	%	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
toluene-D8 SUR	105	88-110	%	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
4-bromofluorobenzene SUR	101	86-115	%	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C
a,a,a-trifluorotoluene SUR	99	70-130	%	1	LMM	9/17/15	14:00	8190	9/17/15	18:56	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34321

Sample#: 34321-006

Sample ID: E16S09-091715-1

Matrix: Solid Percent Dry: 73.9% Results expressed on a dry weight basis.

Sampled: 9/17/15 8:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	83	78-114	%	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
toluene-D8 SUR	105	88-110	%	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
4-bromofluorobenzene SUR	100	86-115	%	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C
a,a,a-trifluorotoluene SUR	104	70-130	%	1	LMM	9/17/15	14:00	8190	9/17/15	19:26	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34321

Sample#: 34321-007

Sample ID: E16S11-091715-1

Matrix: Solid Percent Dry: 75.5% Results expressed on a dry weight basis.

Sampled: 9/17/15 8:35

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	85	78-114	%	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
toluene-D8 SUR	106	88-110	%	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
4-bromofluorobenzene SUR	99	86-115	%	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C
a,a,a-trifluorotoluene SUR	105	70-130	%	1	LMM	9/17/15	14:00	8190	9/17/15	19:55	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34321

Sample#: 34321-008

Sample ID: E16S03-091715-1

Matrix: Solid Percent Dry: 73.3% Results expressed on a dry weight basis.

Sampled: 9/17/15 8:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	85	78-114	%	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
toluene-D8 SUR	105	88-110	%	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
4-bromofluorobenzene SUR	100	86-115	%	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C
a,a,a-trifluorotoluene SUR	109	70-130	%	1	LMM	9/17/15	14:00	8190	9/17/15	20:24	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34321

Sample#: 34321-009

Sample ID: E01S02-091715-1

Matrix: Solid Percent Dry: 77.5% Results expressed on a dry weight basis.

Sampled: 9/17/15 8:55

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	85	78-114	%	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
toluene-D8 SUR	106	88-110	%	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
4-bromofluorobenzene SUR	98	86-115	%	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C
a,a,a-trifluorotoluene SUR	102	70-130	%	1	LMM	9/17/15	14:00	8190	9/17/15	20:53	SW5035A8260C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 34321

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 2 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

No exceptions noted.

Laboratory Control Sample Results

VOC: The MLCS/D8190 did not meet the acceptance criteria for chloroethane. This compound showed high recovery. There is no impact to the data as this analyte was not detected in the associated samples. The MLCS8190 did not meet the acceptance criteria for dibromochloromethane and bromoform. The recoveries were acceptable in the MLCSD, no impact to samples suspected.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

Data Qualifiers

U = This compound was analyzed for, but not detected above half the reporting limit.
J = The analytical result was below the instrument calibration range, but above half the reporting limit, regardless of detectability. The reported concentration is an estimate.

- QC Association Table -

Analysis	QC Number	Field ID	Lab ID
VOCs 8021 Halocarbons SW5035A8260C			
	8190	Trip Blank	34321-001
		E16S14-091715-1	34321-002
		E05S03-091715-1	34321-003
		E04S03-091715-1	34321-004
		E16S06-091715-1	34321-005
		E16S09-091715-1	34321-006
		E16S11-091715-1	34321-007
		E16S03-091715-1	34321-008
		E01S02-091715-1	34321-009

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260C	MB8190	dichlorodifluoromethane		<	0.1	ug/g						
		chloromethane		<	0.1	ug/g						
		vinyl chloride		<	0.1	ug/g						
		bromomethane		<	0.2	ug/g						
		chloroethane		<	0.1	ug/g						
		trichlorofluoromethane		<	0.1	ug/g						
		1,1-dichloroethene		<	0.02	ug/g						
		methylene chloride		<	0.2	ug/g						
		trans-1,2-dichloroethene		<	0.1	ug/g						
		1,1-dichloroethane		<	0.1	ug/g						
		cis-1,2-dichloroethene		<	0.1	ug/g						
		chloroform		<	0.1	ug/g						
		1,1,1-trichloroethane		<	0.1	ug/g						
		carbon tetrachloride		<	0.1	ug/g						
		1,2-dichloroethane		<	0.1	ug/g						
		trichloroethene		<	0.1	ug/g						
		1,2-dichloropropane		<	0.1	ug/g						
		bromodichloromethane		<	0.1	ug/g						
		cis-1,3-dichloropropene		<	0.1	ug/g						
		trans-1,3-dichloropropene		<	0.1	ug/g						
		1,1,2-trichloroethane		<	0.1	ug/g						
		tetrachloroethene		<	0.1	ug/g						
		dibromochloromethane		<	0.1	ug/g						
		chlorobenzene		<	0.1	ug/g						
		1,1,1,2-tetrachloroethane		<	0.1	ug/g						
		bromoform		<	0.1	ug/g						
		1,1,2,2-tetrachloroethane		<	0.1	ug/g						
		1,3-dichlorobenzene		<	0.1	ug/g						
		1,4-dichlorobenzene		<	0.1	ug/g						
		1,2-dichlorobenzene		<	0.1	ug/g						
		1,2,4-trichlorobenzene		<	0.1	ug/g						
		1,2,3-trichlorobenzene		<	0.1	ug/g						
		dibromofluoromethane SUR			84	%			78	114		
		toluene-D8 SUR			100	%			88	110		
		4-bromofluorobenzene SUR			104	%			86	115		
		a,a,a-trifluorotoluene SUR			97	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCS8190	dichlorodifluoromethane		0.8	ug/g	1	78		70	130		
		chloromethane		0.8	ug/g	1	83		70	130		
		vinyl chloride		1.2	ug/g	1	118		70	130		
		bromomethane		0.7	ug/g	1	75		70	130		
		chloroethane		2.0	ug/g	1	202	*	70	130		
		trichlorofluoromethane		1.1	ug/g	1	106		70	130		
		1,1-dichloroethene		0.9	ug/g	1	92		70	130		
		methylene chloride		1.2	ug/g	1	117		70	130		
		trans-1,2-dichloroethene		1.0	ug/g	1	100		70	130		
		1,1-dichloroethane		1.0	ug/g	1	103		70	130		
		cis-1,2-dichloroethene		1.0	ug/g	1	96		70	130		
		chloroform		1.0	ug/g	1	102		70	130		
		1,1,1-trichloroethane		1.0	ug/g	1	96		70	130		
		carbon tetrachloride		0.8	ug/g	1	82		70	130		
		1,2-dichloroethane		1.2	ug/g	1	119		70	130		
		trichloroethene		1.1	ug/g	1	107		70	130		
		1,2-dichloropropane		1.1	ug/g	1	111		70	130		
		bromodichloromethane		0.9	ug/g	1	89		70	130		
		cis-1,3-dichloropropene		0.9	ug/g	1	95		70	130		
		trans-1,3-dichloropropene		0.9	ug/g	1	95		70	130		
		1,1,2-trichloroethane		1.0	ug/g	1	104		70	130		
		tetrachloroethene		0.9	ug/g	1	85		70	130		
		dibromochloromethane		0.6	ug/g	1	65	*	70	130		
		chlorobenzene		0.9	ug/g	1	89		70	130		
		1,1,1,2-tetrachloroethane		0.8	ug/g	1	83		70	130		
		bromoform		0.7	ug/g	1	67	*	70	130		
		1,1,2,2-tetrachloroethane		1.0	ug/g	1	101		70	130		
		1,3-dichlorobenzene		0.9	ug/g	1	93		70	130		
		1,4-dichlorobenzene		0.9	ug/g	1	93		70	130		
		1,2-dichlorobenzene		0.9	ug/g	1	94		70	130		
		1,2,4-trichlorobenzene		1.0	ug/g	1	95		70	130		
		1,2,3-trichlorobenzene		1.0	ug/g	1	99		70	130		
		dibromofluoromethane SUR		94	%				78	114		
		toluene-D8 SUR		107	%				88	110		
		4-bromofluorobenzene SUR		106	%				86	115		
		a,a,a-trifluorotoluene SUR		95	%				70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCSD8190	dichlorodifluoromethane		0.8	ug/g	1	83		70	130	5	30
		chloromethane		0.8	ug/g	1	82		70	130	0	30
		vinyl chloride		1.2	ug/g	1	117		70	130	1	30
		bromomethane		0.8	ug/g	1	79		70	130	6	30
		chloroethane		2.1	ug/g	1	210	*	70	130	4	30
		trichlorofluoromethane		1.1	ug/g	1	110		70	130	3	30
		1,1-dichloroethene		0.9	ug/g	1	94		70	130	2	30
		methylene chloride		1.2	ug/g	1	118		70	130	1	30
		trans-1,2-dichloroethene		1.0	ug/g	1	102		70	130	3	30
		1,1-dichloroethane		1.0	ug/g	1	104		70	130	1	30
		cis-1,2-dichloroethene		1.0	ug/g	1	99		70	130	3	30
		chloroform		1.0	ug/g	1	103		70	130	2	30
		1,1,1-trichloroethane		1.0	ug/g	1	100		70	130	3	30
		carbon tetrachloride		0.9	ug/g	1	87		70	130	6	30
		1,2-dichloroethane		1.2	ug/g	1	118		70	130	0	30
		trichloroethene		1.0	ug/g	1	104		70	130	3	30
		1,2-dichloropropane		1.1	ug/g	1	110		70	130	0	30
		bromodichloromethane		0.9	ug/g	1	94		70	130	6	30
		cis-1,3-dichloropropene		1.0	ug/g	1	98		70	130	3	30
		trans-1,3-dichloropropene		1.0	ug/g	1	100		70	130	6	30
		1,1,2-trichloroethane		1.1	ug/g	1	107		70	130	3	30
		tetrachloroethene		0.9	ug/g	1	87		70	130	2	30
		dibromochloromethane		0.7	ug/g	1	73		70	130	12	30
		chlorobenzene		0.9	ug/g	1	90		70	130	2	30
		1,1,1,2-tetrachloroethane		0.8	ug/g	1	84		70	130	2	30
		bromoform		0.7	ug/g	1	71		70	130	7	30
		1,1,2,2-tetrachloroethane		1.1	ug/g	1	106		70	130	5	30
		1,3-dichlorobenzene		0.9	ug/g	1	94		70	130	1	30
		1,4-dichlorobenzene		0.9	ug/g	1	95		70	130	2	30
		1,2-dichlorobenzene		1.0	ug/g	1	97		70	130	3	30
		1,2,4-trichlorobenzene		1.0	ug/g	1	96		70	130	1	30
		1,2,3-trichlorobenzene		1.0	ug/g	1	100		70	130	1	30
		dibromofluoromethane SUR		96	%				78	114		
		toluene-D8 SUR		104	%				88	110		
		4-bromofluorobenzene SUR		106	%				86	115		
		a,a,a-trifluorotoluene SUR		95	%				70	130		

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34321

Company Name: Weston Solutions, Inc.
Company Address: 43 North Main Street Concord, NH 03301
Report To: Vinnie DelloRusso
Phone #: 603-656-5467
Invoice to Email: vincent.dellorusso@westonsolutions.com
☐ Hard Copy Invoice Required

Project Name: Kearsarge Metallurgical Superfund Site
Project #: NHDES 198708002
Project Location: (NH) MA ME VT NY Other
Protocol: RCRA SDWA NPDES MCP (NHDES) OTHER
Reporting Limits: QAPP GW-1 S-1 EPA DW Other projectQAL
Quote # 6943 ☐ NH Reimbursement Pricing
PO # 0099493

ANALYSIS REQUEST

☒ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP
☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT
☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane
☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:
☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint
☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB
☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB
☐ O&G 1664 ☐ Mineral O&G SM5520F
☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity
☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity
☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness
☐ Total Metals-list:
☐ Dissolved Metals-list:
☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC
☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN
☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P
☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride
☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP
☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide
Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde
Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	VOC 8260
34321-01	TRIP BLANK													
-02	E16514-091715-1	1		X						X	09/17/15	8:30	AB	X
-03	E05503-091715-1	1		X						X	9/17/15	8:15	AB	X
-04	E04503-091715-1	1		X						X	9/17/15	8:00	AB	X
MS	E09503-091715-1	1		X						X	9/17/15		AB	X
MSD	E14503-091715-1	1		X						X	9/17/15		AB	X
-05	E16506-091715-1	1		X						X	9/17/15	8:45	AB	X
-06	E16509-091715-1	1		X						X	9/17/15	8:40	AB	X
-07	E16511-091715-1	1		X						X	9/17/15	8:35	AB	X
-08	E16503-091715-1	1		X						X	9/17/15	8:50	AB	X
-09	E01502-091715-1	1		X						X	9/17/15	8:55	AB	X

TAT REQUESTED
Priority (24 hr)* ☒
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 9/18/15

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
Email PDF results to vincent.dellorusso@westonsolutions.com & erik.hall@westonsolutions.com

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) erik.hall@westonsolutions.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 2 °C

CUSTODY RECORD
QSD-01 Revision 01/09/15

	Relinquished by	Date	Time	Received by	Date	Time
1	Allie Batten	9/17/15	1030	[illegible]	9/17/15	1030
2	[illegible]	9/17/15	1215			
3				Received by Laboratory: [illegible]	9/17/15	12:15

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Vinnie DellaRusso
Weston Solutions,Inc.
45 Constitution Ave
Suite 100
Concord, NH 03301

PO Number: 0089493
Job ID: 34357
Date Received: 9/18/15

Project: Kearsarge Metallurgical Superfund Site NHDES198708002

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 9/25/2015
Total number of pages: 26

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Lab ID: 34357

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
E10S03-091815-1	Solid	9/18/2015 8:15	34357-001	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E14S03-091815-1	Solid	9/18/2015 8:20	34357-002	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E15S03-091815-1	Solid	9/18/2015 8:25	34357-003	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E15S08-091815-1	Solid	9/18/2015 8:19	34357-004	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E15S10-091815-1	Solid	9/18/2015 8:40	34357-005	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E14S12-091815-1	Solid	9/18/2015 8:27	34357-006	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E15S14-091815-1	Solid	9/18/2015 8:32	34357-007	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E15S14-091815-2	Solid	9/18/2015 8:32	34357-008	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E12S01-091815-1	Solid	9/18/2015 9:45	34357-009	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E12S02-091815-1	Solid	9/18/2015 9:46	34357-010	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E13S01-091815-1	Solid	9/18/2015 9:42	34357-011	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E13S02-091815-1	Solid	9/18/2015 9:40	34357-012	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E14S01-091815-1	Solid	9/18/2015 9:30	34357-013	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E14S02-091815-1	Solid	9/18/2015 9:35	34357-014	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
Trip Blank	Solid	9/18/2015 0:00	34357-015	VOCs 8021 Halocarbons in solid by 8260
E13S03-091815-1	Solid	9/18/2015 8:10	34357-016	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34357

Sample#: 34357-001

Sample ID: E10S03-091815-1

Matrix: Solid Percent Dry: 73.8% Results expressed on a dry weight basis.

Sampled: 9/18/15 8:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
1,1-dichloroethene	0.03 J	0.03	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
1,1,1-trichloroethane	0.1	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	82	78-114	%	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
toluene-D8 SUR	95	88-110	%	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
4-bromofluorobenzene SUR	94	86-115	%	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C
a,a,a-trifluorotoluene SUR	85	70-130	%	1	LMM	9/18/15	14:34	8194	9/19/15	21:08	SW5035A8260C

Absolute Resource associates

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34357

Sample#: 34357-002

Sample ID: E14S03-091815-1

Matrix: Solid Percent Dry: 71.6% Results expressed on a dry weight basis.

Sampled: 9/18/15 8:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
chloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
vinyl chloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
chloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
trichlorofluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
trans-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
1,1-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
cis-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
chloroform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
carbon tetrachloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
1,2-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
trichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
1,2-dichloropropane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
bromodichloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
cis-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
trans-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
1,1,2-trichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
tetrachloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
dibromochloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
chlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
bromoform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
1,3-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
1,4-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
1,2-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
1,2,4-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
1,2,3-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	82	78-114	%	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
toluene-D8 SUR	97	88-110	%	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
4-bromofluorobenzene SUR	94	86-115	%	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C
a,a,a-trifluorotoluene SUR	83	70-130	%	1	LMM	9/18/15	14:34	8194	9/19/15	21:37	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34357
Sample#: 34357-003
Sample ID: E15S03-091815-1
Matrix: Solid Percent Dry: 73.3% Results expressed on a dry weight basis.
Sampled: 9/18/15 8:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
chloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
vinyl chloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
bromomethane	U	0.5	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
chloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
trichlorofluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
1,1-dichloroethene	U	0.05	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
methylene chloride	U	0.5	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
trans-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
1,1-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
cis-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
chloroform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
carbon tetrachloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
1,2-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
trichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
1,2-dichloropropane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
bromodichloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
cis-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
trans-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
1,1,2-trichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
tetrachloroethene	0.1 J B	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
dibromochloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
chlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
bromoform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
1,3-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
1,4-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
1,2-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
1,2,4-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
1,2,3-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	78	78-114	%	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
toluene-D8 SUR	96	88-110	%	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
4-bromofluorobenzene SUR	90	86-115	%	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C
a,a,a-trifluorotoluene SUR	80	70-130	%	1	LMM	9/18/15	14:34	8194	9/18/15	17:39	SW5035A8260C

B = The reported concentration is due to carryover from the previous analysis.

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34357
Sample#: 34357-004
Sample ID: E15S08-091815-1
Matrix: Solid Percent Dry: 74.8% Results expressed on a dry weight basis.
Sampled: 9/18/15 8:19

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
tetrachloroethene	0.09 J B	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	84	78-114	%	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
toluene-D8 SUR	98	88-110	%	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
4-bromofluorobenzene SUR	90	86-115	%	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C
a,a,a-trifluorotoluene SUR	84	70-130	%	1	LMM	9/18/15	14:34	8194	9/18/15	18:08	SW5035A8260C

B = The reported concentration is due to carryover from the previous analysis.

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34357

Sample#: 34357-005

Sample ID: E15S10-091815-1

Matrix: Solid Percent Dry: 74.5% Results expressed on a dry weight basis.

Sampled: 9/18/15 8:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
chloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
vinyl chloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
chloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
trichlorofluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
trans-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
1,1-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
cis-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
chloroform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
carbon tetrachloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
1,2-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
trichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
1,2-dichloropropane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
bromodichloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
cis-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
trans-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
1,1,2-trichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
tetrachloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
dibromochloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
chlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
bromoform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
1,3-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
1,4-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
1,2-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
1,2,4-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
1,2,3-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	78	78-114	%	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
toluene-D8 SUR	96	88-110	%	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
4-bromofluorobenzene SUR	95	86-115	%	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C
a,a,a-trifluorotoluene SUR	88	70-130	%	1	LMM	9/18/15	14:34	8194	9/18/15	18:38	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34357

Sample#: 34357-006

Sample ID: E14S12-091815-1

Matrix: Solid Percent Dry: 73.4% Results expressed on a dry weight basis.

Sampled: 9/18/15 8:27

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	80	78-114	%	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
toluene-D8 SUR	98	88-110	%	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
4-bromofluorobenzene SUR	96	86-115	%	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C
a,a,a-trifluorotoluene SUR	82	70-130	%	1	LMM	9/18/15	14:34	8194	9/19/15	22:06	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34357

Sample#: 34357-007

Sample ID: E15S14-091815-1

Matrix: Solid Percent Dry: 78.8% Results expressed on a dry weight basis.

Sampled: 9/18/15 8:32

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	80	78-114	%	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
toluene-D8 SUR	97	88-110	%	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
4-bromofluorobenzene SUR	96	86-115	%	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C
a,a,a-trifluorotoluene SUR	86	70-130	%	1	LMM	9/18/15	14:34	8194	9/18/15	19:38	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34357

Sample#: 34357-008

Sample ID: E15S14-091815-2

Matrix: Solid Percent Dry: 79.4% Results expressed on a dry weight basis.

Sampled: 9/18/15 8:32

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	82	78-114	%	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
toluene-D8 SUR	95	88-110	%	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
4-bromofluorobenzene SUR	88	86-115	%	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C
a,a,a-trifluorotoluene SUR	86	70-130	%	1	LMM	9/18/15	14:34	8194	9/18/15	20:08	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34357

Sample#: 34357-009

Sample ID: E12S01-091815-1

Matrix: Solid Percent Dry: 71.8% Results expressed on a dry weight basis.

Sampled: 9/18/15 9:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
chloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
vinyl chloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
chloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
trichlorofluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
trans-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
1,1-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
cis-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
chloroform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
carbon tetrachloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
1,2-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
trichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
1,2-dichloropropane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
bromodichloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
cis-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
trans-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
1,1,2-trichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
tetrachloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
dibromochloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
chlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
bromoform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
1,3-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
1,4-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
1,2-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
1,2,4-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
1,2,3-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	78	78-114	%	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
toluene-D8 SUR	92	88-110	%	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
4-bromofluorobenzene SUR	95	86-115	%	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C
a,a,a-trifluorotoluene SUR	85	70-130	%	1	LMM	9/18/15	14:34	8194	9/18/15	20:38	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34357

Sample#: 34357-010

Sample ID: E12S02-091815-1

Matrix: Solid Percent Dry: 73.4% Results expressed on a dry weight basis.

Sampled: 9/18/15 9:46

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
chloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
vinyl chloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
chloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
trichlorofluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
trans-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
1,1-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
cis-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
chloroform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
carbon tetrachloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
1,2-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
trichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
1,2-dichloropropane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
bromodichloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
cis-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
trans-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
1,1,2-trichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
tetrachloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
dibromochloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
chlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
bromoform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
1,3-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
1,4-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
1,2-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
1,2,4-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
1,2,3-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	81	78-114	%	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
toluene-D8 SUR	99	88-110	%	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
4-bromofluorobenzene SUR	91	86-115	%	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C
a,a,a-trifluorotoluene SUR	87	70-130	%	1	LMM	9/18/15	14:34	8194	9/18/15	21:07	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34357

Sample#: 34357-011

Sample ID: E13S01-091815-1

Matrix: Solid Percent Dry: 70.5% Results expressed on a dry weight basis.

Sampled: 9/18/15 9:42

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
chloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
vinyl chloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
chloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
trichlorofluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
trans-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
1,1-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
cis-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
chloroform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
carbon tetrachloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
1,2-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
trichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
1,2-dichloropropane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
bromodichloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
cis-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
trans-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
1,1,2-trichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
tetrachloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
dibromochloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
chlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
bromoform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
1,3-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
1,4-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
1,2-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
1,2,4-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
1,2,3-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	81	78-114	%	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
toluene-D8 SUR	97	88-110	%	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
4-bromofluorobenzene SUR	89	86-115	%	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C
a,a,a-trifluorotoluene SUR	82	70-130	%	1	LMM	9/18/15	14:34	8194	9/19/15	22:35	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34357

Sample#: 34357-012

Sample ID: E13S02-091815-1

Matrix: Solid Percent Dry: 70.5% Results expressed on a dry weight basis.

Sampled: 9/18/15 9:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
chloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
vinyl chloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
chloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
trichlorofluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
trans-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
1,1-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
cis-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
chloroform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
carbon tetrachloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
1,2-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
trichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
1,2-dichloropropane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
bromodichloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
cis-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
trans-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
1,1,2-trichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
tetrachloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
dibromochloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
chlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
bromoform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
1,3-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
1,4-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
1,2-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
1,2,4-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
1,2,3-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	81	78-114	%	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
toluene-D8 SUR	97	88-110	%	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
4-bromofluorobenzene SUR	94	86-115	%	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C
a,a,a-trifluorotoluene SUR	86	70-130	%	1	LMM	9/18/15	14:34	8194	9/18/15	22:05	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34357

Sample#: 34357-013

Sample ID: E14S01-091815-1

Matrix: Solid Percent Dry: 71.7% Results expressed on a dry weight basis.

Sampled: 9/18/15 9:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	78	78-114	%	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
toluene-D8 SUR	96	88-110	%	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
4-bromofluorobenzene SUR	94	86-115	%	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C
a,a,a-trifluorotoluene SUR	85	70-130	%	1	LMM	9/18/15	14:34	8194	9/18/15	22:34	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34357
Sample#: 34357-014
Sample ID: E14S02-091815-1
Matrix: Solid Percent Dry: 73.1% Results expressed on a dry weight basis.
Sampled: 9/18/15 9:35

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
chloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
vinyl chloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
chloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
trichlorofluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
trans-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
1,1-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
cis-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
chloroform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
carbon tetrachloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
1,2-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
trichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
1,2-dichloropropane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
bromodichloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
cis-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
trans-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
1,1,2-trichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
tetrachloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
dibromochloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
chlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
bromoform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
1,3-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
1,4-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
1,2-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
1,2,4-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
1,2,3-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	75 *	78-114	%	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
toluene-D8 SUR	97	88-110	%	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
4-bromofluorobenzene SUR	97	86-115	%	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C
a,a,a-trifluorotoluene SUR	83	70-130	%	1	LMM	9/18/15	14:34	8194	9/18/15	23:03	SW5035A8260C

**** The surrogate showed recovery outside the acceptance limits. Reanalysis of the sample showed similar results.***

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34357
Sample#: 34357-015
Sample ID: Trip Blank
Matrix: Solid
Sampled: 9/18/15 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
bromomethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
1,1-dichloroethene	U	0.02	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
methylene chloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	88	78-114	%	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
toluene-D8 SUR	97	88-110	%	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
4-bromofluorobenzene SUR	95	86-115	%	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C
a,a,a-trifluorotoluene SUR	87	70-130	%	1	LMM	9/18/15	14:34	8194	9/18/15	15:12	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34357

Sample#: 34357-016

Sample ID: E13S03-091815-1

Matrix: Solid Percent Dry: 74.3% Results expressed on a dry weight basis.

Sampled: 9/18/15 8:10

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
chloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
vinyl chloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
chloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
trichlorofluoromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
1,1-dichloroethene	0.04 J	0.04	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
trans-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
1,1-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
cis-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
chloroform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
carbon tetrachloride	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
1,2-dichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
trichloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
1,2-dichloropropane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
bromodichloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
cis-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
trans-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
1,1,2-trichloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
tetrachloroethene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
dibromochloromethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
chlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
bromoform	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
1,3-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
1,4-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
1,2-dichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
1,2,4-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
1,2,3-trichlorobenzene	U	0.2	ug/g	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	78	78-114	%	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
toluene-D8 SUR	96	88-110	%	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
4-bromofluorobenzene SUR	92	86-115	%	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C
a,a,a-trifluorotoluene SUR	84	70-130	%	1	LMM	9/18/15	14:34	8194	9/18/15	23:32	SW5035A8260C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 34357

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 4 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

VOC: The percent recovery for the surrogate dibromofluoromethane in sample 34357-014 was below the acceptance criteria. Re-analysis showed similar results. Matrix interference suspected.

Laboratory Control Sample Results

VOC: The MLCS/D8194 did not meet the acceptance criteria for chloroethane. This compound showed high recovery. There is no impact to the data as this analyte was not detected in the associated samples. The MLCS8194 did not meet the acceptance criteria for dibromochloromethane. The recovery was acceptable in the MLCSD, no impact to samples suspected.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

Data Qualifiers

U = This compound was analyzed for, but not detected above half the reporting limit.
J = The analytical result was below the instrument calibration range, but above half the reporting limit, regardless of detectability. The reported concentration is an estimate.

- QC Association Table -

Analysis	QC Number	Field ID	Lab ID
VOCs 8021 Halocarbons SW5035A8260C			
	8194	E10S03-091815-1	34357-001
		E14S03-091815-1	34357-002
		E15S03-091815-1	34357-003
		E15S08-091815-1	34357-004
		E15S10-091815-1	34357-005
		E14S12-091815-1	34357-006
		E15S14-091815-1	34357-007
		E15S14-091815-2	34357-008
		E12S01-091815-1	34357-009
		E12S02-091815-1	34357-010
		E13S01-091815-1	34357-011
		E13S02-091815-1	34357-012
		E14S01-091815-1	34357-013
		E14S02-091815-1	34357-014
		Trip Blank	34357-015
		E13S03-091815-1	34357-016

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260C	MB8194	dichlorodifluoromethane		<	0.1	ug/g						
		chloromethane		<	0.1	ug/g						
		vinyl chloride		<	0.1	ug/g						
		bromomethane		<	0.2	ug/g						
		chloroethane		<	0.1	ug/g						
		trichlorofluoromethane		<	0.1	ug/g						
		1,1-dichloroethene		<	0.02	ug/g						
		methylene chloride		<	0.2	ug/g						
		trans-1,2-dichloroethene		<	0.1	ug/g						
		1,1-dichloroethane		<	0.1	ug/g						
		cis-1,2-dichloroethene		<	0.1	ug/g						
		chloroform		<	0.1	ug/g						
		1,1,1-trichloroethane		<	0.1	ug/g						
		carbon tetrachloride		<	0.1	ug/g						
		1,2-dichloroethane		<	0.1	ug/g						
		trichloroethene		<	0.1	ug/g						
		1,2-dichloropropane		<	0.1	ug/g						
		bromodichloromethane		<	0.1	ug/g						
		cis-1,3-dichloropropene		<	0.1	ug/g						
		trans-1,3-dichloropropene		<	0.1	ug/g						
		1,1,2-trichloroethane		<	0.1	ug/g						
		tetrachloroethene		<	0.1	ug/g						
		dibromochloromethane		<	0.1	ug/g						
		chlorobenzene		<	0.1	ug/g						
		1,1,1,2-tetrachloroethane		<	0.1	ug/g						
		bromoform		<	0.1	ug/g						
		1,1,2,2-tetrachloroethane		<	0.1	ug/g						
		1,3-dichlorobenzene		<	0.1	ug/g						
		1,4-dichlorobenzene		<	0.1	ug/g						
		1,2-dichlorobenzene		<	0.1	ug/g						
		1,2,4-trichlorobenzene		<	0.1	ug/g						
		1,2,3-trichlorobenzene		<	0.1	ug/g						
		dibromofluoromethane SUR			81	%			78	114		
		toluene-D8 SUR			98	%			88	110		
		4-bromofluorobenzene SUR			102	%			86	115		
		a,a,a-trifluorotoluene SUR			88	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCS8194	dichlorodifluoromethane		0.7	ug/g	1	66	*	70	130		
		chloromethane		0.7	ug/g	1	73		70	130		
		vinyl chloride		1.0	ug/g	1	105		70	130		
		bromomethane		0.9	ug/g	1	89		70	130		
		chloroethane		2.1	ug/g	1	206	*	70	130		
		trichlorofluoromethane		0.9	ug/g	1	94		70	130		
		1,1-dichloroethene		0.9	ug/g	1	86		70	130		
		methylene chloride		1.0	ug/g	1	102		70	130		
		trans-1,2-dichloroethene		0.9	ug/g	1	90		70	130		
		1,1-dichloroethane		1.0	ug/g	1	96		70	130		
		cis-1,2-dichloroethene		0.9	ug/g	1	86		70	130		
		chloroform		0.9	ug/g	1	92		70	130		
		1,1,1-trichloroethane		0.9	ug/g	1	88		70	130		
		carbon tetrachloride		0.8	ug/g	1	77		70	130		
		1,2-dichloroethane		1.0	ug/g	1	103		70	130		
		trichloroethene		1.0	ug/g	1	101		70	130		
		1,2-dichloropropane		1.0	ug/g	1	96		70	130		
		bromodichloromethane		0.8	ug/g	1	84		70	130		
		cis-1,3-dichloropropene		0.9	ug/g	1	87		70	130		
		trans-1,3-dichloropropene		0.8	ug/g	1	84		70	130		
		1,1,2-trichloroethane		0.9	ug/g	1	89		70	130		
		tetrachloroethene		0.9	ug/g	1	93		70	130		
		dibromochloromethane		0.7	ug/g	1	73		70	130		
		chlorobenzene		0.9	ug/g	1	90		70	130		
		1,1,1,2-tetrachloroethane		0.9	ug/g	1	88		70	130		
		bromoform		0.7	ug/g	1	72		70	130		
		1,1,2,2-tetrachloroethane		1.0	ug/g	1	97		70	130		
		1,3-dichlorobenzene		1.0	ug/g	1	99		70	130		
		1,4-dichlorobenzene		1.0	ug/g	1	99		70	130		
		1,2-dichlorobenzene		1.0	ug/g	1	99		70	130		
		1,2,4-trichlorobenzene		1.0	ug/g	1	104		70	130		
		1,2,3-trichlorobenzene		1.1	ug/g	1	105		70	130		
		dibromofluoromethane SUR		93	%				78	114		
		toluene-D8 SUR		97	%				88	110		
		4-bromofluorobenzene SUR		99	%				86	115		
		a,a,a-trifluorotoluene SUR		81	%				70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCSD8194	dichlorodifluoromethane		0.8	ug/g	1	77		70	130	15	30
		chloromethane		0.8	ug/g	1	75		70	130	3	30
		vinyl chloride		1.1	ug/g	1	106		70	130	1	30
		bromomethane		0.9	ug/g	1	95		70	130	7	30
		chloroethane		2.1	ug/g	1	209	*	70	130	1	30
		trichlorofluoromethane		1.1	ug/g	1	105		70	130	11	30
		1,1-dichloroethene		0.9	ug/g	1	92		70	130	6	30
		methylene chloride		1.0	ug/g	1	103		70	130	1	30
		trans-1,2-dichloroethene		0.9	ug/g	1	94		70	130	4	30
		1,1-dichloroethane		1.0	ug/g	1	98		70	130	2	30
		cis-1,2-dichloroethene		0.9	ug/g	1	92		70	130	7	30
		chloroform		0.9	ug/g	1	94		70	130	3	30
		1,1,1-trichloroethane		0.9	ug/g	1	94		70	130	7	30
		carbon tetrachloride		0.8	ug/g	1	83		70	130	7	30
		1,2-dichloroethane		1.1	ug/g	1	108		70	130	5	30
		trichloroethene		1.0	ug/g	1	100		70	130	0	30
		1,2-dichloropropane		1.0	ug/g	1	99		70	130	3	30
		bromodichloromethane		0.9	ug/g	1	86		70	130	2	30
		cis-1,3-dichloropropene		0.9	ug/g	1	90		70	130	3	30
		trans-1,3-dichloropropene		0.9	ug/g	1	91		70	130	8	30
		1,1,2-trichloroethane		0.9	ug/g	1	92		70	130	4	30
		tetrachloroethene		1.0	ug/g	1	101		70	130	9	30
		dibromochloromethane		0.8	ug/g	1	77		70	130	5	30
		chlorobenzene		1.0	ug/g	1	98		70	130	8	30
		1,1,1,2-tetrachloroethane		1.0	ug/g	1	95		70	130	8	30
		bromoform		0.8	ug/g	1	79		70	130	9	30
		1,1,2,2-tetrachloroethane		1.1	ug/g	1	107		70	130	10	30
		1,3-dichlorobenzene		1.0	ug/g	1	102		70	130	3	30
		1,4-dichlorobenzene		1.0	ug/g	1	101		70	130	2	30
		1,2-dichlorobenzene		1.0	ug/g	1	100		70	130	1	30
		1,2,4-trichlorobenzene		1.0	ug/g	1	102		70	130	2	30
		1,2,3-trichlorobenzene		1.1	ug/g	1	108		70	130	3	30
		dibromofluoromethane SUR		92	%				78	114		
		toluene-D8 SUR		95	%				88	110		
		4-bromofluorobenzene SUR		104	%				86	115		
		a,a,a-trifluorotoluene SUR		84	%				70	130		

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34357

Company Name: Weston Solutions, Inc.
Company Address: 43 North Main St. Concord, NH 03301
Report To: Vinnie DelloRusso
Phone #: 603-656-5467
Invoice to Email: vincent.dellorusso@westonsolutions.com
☐ Hard Copy Invoice Required

Project Name: Kearsarge Metallurgical Superfund Site
Project #: NHDES 198708002
Project Location: (NH) MA ME VT NY Other
Protocol: RCRA SDWA NPDES MCP (NHDES) OTHER
Reporting Limits: QAPP GW-1 S-1 EPA DW Other Project goal
Quote # 6943 ☐ NH Reimbursement Pricing
PO # 00899493

ANALYSIS REQUEST

☒ VOC 8260 NHDES ☐ VOC 8260 MADEP ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT ☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List: ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint ☐ 8270PAH ☐ 8270DABN ☐ 625 ☐ EDB ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB ☐ 08G 1664 ☐ Mineral 08G SM5520F ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness ☐ Total Metals-list: ☐ Dissolved Metals-list: ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	VOC 8260 NHDES
34357-01	E10503-091815-1	1		X						X	9/18/15	0815	AB	X
-02	E14503-091815-1	1		X						X	9/18/15	0820	AB	X
-03	E15503-091815-1	1		X						X	9/18/15	0825	AB	X
-04	E15508-091815-1	1		X						X	9/18/15	0819	AB	X
-05	E15510-091815-1	1		X						X	9/18/15	0840	AB	X
-06	E14512-091815-1	1		X						X	9/18/15	0827	AB	X
-07	E15514-091815-1	1		X						X	9/18/15	0832	AB	X
-08 (AB)	~~E15~~ E15514-091815-2	1		X						X	9/18/15	0832	AB	X
-09	E12501-091815-1	1		X						X	9/18/15	0945	AB	X
-10	E12502-091815-1	1		X						X	9/18/15	0946	AB	X
-11	E13501-091815-1	1		X						X	9/18/15	0942	AB	X

TAT REQUESTED
Priority (24 hr)* ☒
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 9/19/15

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
Email PDF to vincent.dellorusso@westonsolutions.com & erik.hall@westonsolutions.com

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) vincent.dellorusso@westonsolutions.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☑ YES ☐ NO
TEMPERATURE 4 °C

CUSTODY RECORD
QSD-01 Revision 01/09/15

	Date	Time
Relinquished by Sampler:	9/18/15	1030
Relinquished by:	9/18/15	1435
Relinquished by:		
Received by:		
Received by:		
Received by Laboratory:	9/19/15	1225

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34357

Company Name:

Company Address:

Report To:

Phone #:

Invoice to Email:

☐ Hard Copy Invoice Required

Project Name:

Project #:

Project Location: NH MA ME VT NY Other

Protocol: RCRA MCP SDWA NHDES NPDES OTHER

Reporting Limits: QAPP EPA DW GW-1 S-1 Other

Quote # ☐ NH Reimbursement Pricing

PO #

ANALYSIS REQUEST

☐ VOC 8260 ☒ VOC 8260 NHDES ☐ VOC 8260 MADEP
☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT
☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane
☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:
☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint
☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB
☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB
☐ O&G 1664 ☐ Mineral O&G SM5520F
☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity
☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity
☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness
☐ Total Metals-list:
☐ Dissolved Metals-list:
☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC
☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN
☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P
☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride
☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP
☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide
Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde
Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER
34357-12	E13S02-091815-1	1		X						X	9/18/15	0940	AB
-13	E14S01-091815-1	1		X						X	9/18/15	0930	AB
-14	E14S02-091815-1	1		X						X	9/18/15	0935	AB
-15	TRIP BLANK												
-16	E13S03-091815-1	1		X						X	9/18/15	0810	EH

9/18/15

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS

REPORTING INSTRUCTIONS ☐ PDF (e-mail address)
☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 4 °C

CUSTODY RECORD
QSD-01 Revision 01/09/15

	Date	Time		Date	Time
Relinquished by Sampler:	9/18/15	1030	Received by:	9/18/15	1030
Relinquished by:	9/18/15	1235	Received by:		
Relinquished by:			Received by Laboratory:	9/19/15	1225

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Vinnie DellaRusso
Weston Solutions,Inc.
45 Constitution Ave
Suite 100
Concord, NH 03301

PO Number: 0089493
Job ID: 34364
Date Received: 9/19/15

Project: Kearsarge Metallurgical Superfund Site NHDES198708002

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 9/25/2015
Total number of pages: 28

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Lab ID: 34364

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
CB5-6-091915-1	Water	9/19/2015 9:17	34364-002	VOCs 8021 Halocarbons in water by 8260
E02S04-091915-1	Solid	9/19/2015 8:05	34364-003	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E04S04-091915-1	Solid	9/19/2015 8:10	34364-004	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E05S04-091915-1	Solid	9/19/2015 8:13	34364-005	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E07S04-091915-1	Solid	9/19/2015 8:17	34364-006	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E10S04-091915-1	Solid	9/19/2015 8:20	34364-007	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E11S04-091915-1	Solid	9/19/2015 8:25	34364-008	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E13S04-091915-1	Solid	9/19/2015 8:30	34364-009	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E14S04-091915-1	Solid	9/19/2015 8:33	34364-010	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E15S04-091915-1	Solid	9/19/2015 8:38	34364-011	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E03S05-091915-1	Solid	9/19/2015 8:42	34364-012	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E03S05-091915-2	Solid	9/19/2015 8:42	34364-013	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E04S05-091915-1	Solid	9/19/2015 8:51	34364-014	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E05S05-091915-1	Solid	9/19/2015 8:55	34364-015	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
Trip Blank	Water	9/19/2015 0:00	34364-016	VOCs 8021 Halocarbons in water by 8260

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34364

Sample#: 34364-003

Sample ID: E02S04-091915-1

Matrix: Solid Percent Dry: 77.8% Results expressed on a dry weight basis.

Sampled: 9/19/15 8:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
bromomethane	U	0.2	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
1,1-dichloroethene	U	0.02	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
methylene chloride	U	0.2	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	84	78-114	%	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
toluene-D8 SUR	95	88-110	%	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
4-bromofluorobenzene SUR	93	86-115	%	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C
a,a,a-trifluorotoluene SUR	84	70-130	%	1	LMM	9/19/15	12:28	8195	9/19/15	14:51	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34364

Sample#: 34364-004

Sample ID: E04S04-091915-1

Matrix: Solid Percent Dry: 76.3% Results expressed on a dry weight basis.

Sampled: 9/19/15 8:10

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	81	78-114	%	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
toluene-D8 SUR	91	88-110	%	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
4-bromofluorobenzene SUR	90	86-115	%	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C
a,a,a-trifluorotoluene SUR	84	70-130	%	1	LMM	9/19/15	12:28	8195	9/19/15	15:20	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34364

Sample#: 34364-005

Sample ID: E05S04-091915-1

Matrix: Solid Percent Dry: 75.2% Results expressed on a dry weight basis.

Sampled: 9/19/15 8:13

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
bromomethane	U	0.2	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
1,1-dichloroethene	U	0.02	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
methylene chloride	U	0.2	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	83	78-114	%	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
toluene-D8 SUR	96	88-110	%	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
4-bromofluorobenzene SUR	97	86-115	%	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C
a,a,a-trifluorotoluene SUR	88	70-130	%	1	LMM	9/19/15	12:28	8195	9/19/15	15:49	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34364

Sample#: 34364-006

Sample ID: E07S04-091915-1

Matrix: Solid Percent Dry: 73.9% Results expressed on a dry weight basis.

Sampled: 9/19/15 8:17

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	78	78-114	%	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
toluene-D8 SUR	95	88-110	%	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
4-bromofluorobenzene SUR	94	86-115	%	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C
a,a,a-trifluorotoluene SUR	86	70-130	%	1	LMM	9/19/15	12:28	8195	9/19/15	16:18	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34364

Sample#: 34364-007

Sample ID: E10S04-091915-1

Matrix: Solid Percent Dry: 75% Results expressed on a dry weight basis.

Sampled: 9/19/15 8:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	84	78-114	%	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
toluene-D8 SUR	97	88-110	%	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
4-bromofluorobenzene SUR	90	86-115	%	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C
a,a,a-trifluorotoluene SUR	88	70-130	%	1	LMM	9/19/15	12:28	8195	9/19/15	16:47	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34364

Sample#: 34364-008

Sample ID: E11S04-091915-1

Matrix: Solid Percent Dry: 74.4% Results expressed on a dry weight basis.

Sampled: 9/19/15 8:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	78	78-114	%	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
toluene-D8 SUR	92	88-110	%	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
4-bromofluorobenzene SUR	94	86-115	%	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C
a,a,a-trifluorotoluene SUR	83	70-130	%	1	LMM	9/19/15	12:28	8195	9/19/15	17:16	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34364

Sample#: 34364-009

Sample ID: E13S04-091915-1

Matrix: Solid Percent Dry: 72.4% Results expressed on a dry weight basis.

Sampled: 9/19/15 8:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
1,1-dichloroethene	0.08	0.03	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
1,1-dichloroethane	0.08 J	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	79	78-114	%	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
toluene-D8 SUR	100	88-110	%	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
4-bromofluorobenzene SUR	98	86-115	%	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C
a,a,a-trifluorotoluene SUR	89	70-130	%	1	LMM	9/19/15	12:28	8195	9/19/15	17:45	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34364

Sample#: 34364-010

Sample ID: E14S04-091915-1

Matrix: Solid Percent Dry: 73.2% Results expressed on a dry weight basis.

Sampled: 9/19/15 8:33

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	81	78-114	%	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
toluene-D8 SUR	97	88-110	%	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
4-bromofluorobenzene SUR	94	86-115	%	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C
a,a,a-trifluorotoluene SUR	86	70-130	%	1	LMM	9/19/15	12:28	8195	9/19/15	18:14	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34364

Sample#: 34364-011

Sample ID: E15S04-091915-1

Matrix: Solid Percent Dry: 72.5% Results expressed on a dry weight basis.

Sampled: 9/19/15 8:38

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	78	78-114	%	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
toluene-D8 SUR	95	88-110	%	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
4-bromofluorobenzene SUR	90	86-115	%	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C
a,a,a-trifluorotoluene SUR	85	70-130	%	1	LMM	9/19/15	12:28	8195	9/19/15	18:43	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34364

Sample#: 34364-012

Sample ID: E03S05-091915-1

Matrix: Solid Percent Dry: 76.7% Results expressed on a dry weight basis.

Sampled: 9/19/15 8:42

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
bromomethane	U	0.2	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
1,1-dichloroethene	U	0.02	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
methylene chloride	U	0.2	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	81	78-114	%	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
toluene-D8 SUR	99	88-110	%	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
4-bromofluorobenzene SUR	91	86-115	%	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C
a,a,a-trifluorotoluene SUR	85	70-130	%	1	LMM	9/19/15	12:28	8195	9/19/15	19:12	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34364

Sample#: 34364-013

Sample ID: E03S05-091915-2

Matrix: Solid Percent Dry: 76.8% Results expressed on a dry weight basis.

Sampled: 9/19/15 8:42

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
bromomethane	U	0.2	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
1,1-dichloroethene	0.02 J	0.02	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
methylene chloride	U	0.2	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	79	78-114	%	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
toluene-D8 SUR	95	88-110	%	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
4-bromofluorobenzene SUR	99	86-115	%	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C
a,a,a-trifluorotoluene SUR	88	70-130	%	1	LMM	9/19/15	12:28	8195	9/19/15	19:41	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34364

Sample#: 34364-014

Sample ID: E04S05-091915-1

Matrix: Solid Percent Dry: 77.4% Results expressed on a dry weight basis.

Sampled: 9/19/15 8:51

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	79	78-114	%	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
toluene-D8 SUR	94	88-110	%	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
4-bromofluorobenzene SUR	95	86-115	%	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C
a,a,a-trifluorotoluene SUR	83	70-130	%	1	LMM	9/19/15	12:28	8195	9/19/15	20:10	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34364

Sample#: 34364-015

Sample ID: E05S05-091915-1

Matrix: Solid Percent Dry: 76.1% Results expressed on a dry weight basis.

Sampled: 9/19/15 8:55

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
1,1-dichloroethene	0.03 J	0.03	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	81	78-114	%	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
toluene-D8 SUR	97	88-110	%	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
4-bromofluorobenzene SUR	90	86-115	%	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C
a,a,a-trifluorotoluene SUR	89	70-130	%	1	LMM	9/19/15	12:28	8195	9/21/15	16:25	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34364
Sample#: 34364-016
Sample ID: Trip Blank
Matrix: Water
Sampled: 9/19/15 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
chloromethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
vinyl chloride	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
bromomethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
chloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
trichlorofluoromethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,1-dichloroethene	U	1	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
methylene chloride	U	5	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
trans-1,2-dichloroethene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,1-dichloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
cis-1,2-dichloroethene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
chloroform	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,1,1-trichloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
carbon tetrachloride	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,2-dichloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
trichloroethene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,2-dichloropropane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
bromodichloromethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
cis-1,3-dichloropropene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
trans-1,3-dichloropropene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,1,2-trichloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
tetrachloroethene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
dibromochloromethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
chlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,1,1,2-tetrachloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
bromoform	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,1,2,2-tetrachloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,3-dichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,4-dichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,2-dichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,2,4-trichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,2,3-trichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	94	78-114	%	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
toluene-D8 SUR	98	88-110	%	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
4-bromofluorobenzene SUR	92	86-115	%	1	LMM			1502690	9/19/15	13:53	SW5030C8260C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 34364

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 2 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

No exceptions noted.

Laboratory Control Sample Results

VOC: The relative percent difference between the LCS and LCSD1502690 was outside the acceptance criteria for chloroethane. The percent recovery for this analyte in each QC parameter was within the acceptance criteria. No impact to the data suspected.
VOC: The MLCS/D8195 did not meet the acceptance criteria for chloroethane. This compound showed high recovery. There is no impact to the data as this analyte was not detected in the associated samples.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

Data Qualifiers

U = This compound was analyzed for, but not detected above half the reporting limit.
J = The analytical result was below the instrument calibration range, but above half the reporting limit, regardless of detectability. The reported concentration is an estimate.

- QC Association Table -

Analysis	QC Number	Field ID	Lab ID
VOCs 8021 Halocarbons SW5030C8260C			
	1502690	CB5-6-091915-1	34364-002
		Trip Blank	34364-016
VOCs 8021 Halocarbons SW5035A8260C			
	8195	E02S04-091915-1	34364-003
		E04S04-091915-1	34364-004
		E05S04-091915-1	34364-005
		E07S04-091915-1	34364-006
		E10S04-091915-1	34364-007
		E11S04-091915-1	34364-008
		E13S04-091915-1	34364-009
		E14S04-091915-1	34364-010
		E15S04-091915-1	34364-011
		E03S05-091915-1	34364-012
		E03S05-091915-2	34364-013
		E04S05-091915-1	34364-014
		E05S05-091915-1	34364-015

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	BLK1502690	dichlorodifluoromethane		<	2	ug/L						
		chloromethane		<	2	ug/L						
		vinyl chloride		<	2	ug/L						
		bromomethane		<	2	ug/L						
		chloroethane		<	2	ug/L						
		trichlorofluoromethane		<	2	ug/L						
		1,1-dichloroethene		<	1	ug/L						
		methylene chloride		<	5	ug/L						
		trans-1,2-dichloroethene		<	2	ug/L						
		1,1-dichloroethane		<	2	ug/L						
		cis-1,2-dichloroethene		<	2	ug/L						
		chloroform		<	2	ug/L						
		1,1,1-trichloroethane		<	2	ug/L						
		carbon tetrachloride		<	2	ug/L						
		1,2-dichloroethane		<	2	ug/L						
		trichloroethene		<	2	ug/L						
		1,2-dichloropropane		<	2	ug/L						
		bromodichloromethane		<	0.6	ug/L						
		cis-1,3-dichloropropene		<	2	ug/L						
		trans-1,3-dichloropropene		<	2	ug/L						
		1,1,2-trichloroethane		<	2	ug/L						
		tetrachloroethene		<	2	ug/L						
		dibromochloromethane		<	2	ug/L						
		chlorobenzene		<	2	ug/L						
		1,1,1,2-tetrachloroethane		<	2	ug/L						
		bromoform		<	2	ug/L						
		1,1,2,2-tetrachloroethane		<	2	ug/L						
		1,3-dichlorobenzene		<	2	ug/L						
		1,4-dichlorobenzene		<	2	ug/L						
		1,2-dichlorobenzene		<	2	ug/L						
		1,2,4-trichlorobenzene		<	2	ug/L						
		1,2,3-trichlorobenzene		<	2	ug/L						
		dibromofluoromethane SUR			92	%			78	114		
		toluene-D8 SUR			98	%			88	110		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCS1502690	dichlorodifluoromethane		19	ug/L	20	93	70	130		
		chloromethane		24	ug/L	20	118	70	130		
		vinyl chloride		23	ug/L	20	113	70	130		
		bromomethane		23	ug/L	20	113	70	130		
		chloroethane		25	ug/L	20	126	70	130		
		trichlorofluoromethane		20	ug/L	20	101	70	130		
		1,1-dichloroethene		17	ug/L	20	87	70	130		
		methylene chloride		19	ug/L	20	97	70	130		
		trans-1,2-dichloroethene		20	ug/L	20	98	70	130		
		1,1-dichloroethane		20	ug/L	20	101	70	130		
		cis-1,2-dichloroethene		18	ug/L	20	89	70	130		
		chloroform		19	ug/L	20	96	70	130		
		1,1,1-trichloroethane		20	ug/L	20	98	70	130		
		carbon tetrachloride		18	ug/L	20	91	70	130		
		1,2-dichloroethane		22	ug/L	20	111	70	130		
		trichloroethene		21	ug/L	20	103	70	130		
		1,2-dichloropropane		21	ug/L	20	105	70	130		
		bromodichloromethane		18	ug/L	20	91	70	130		
		cis-1,3-dichloropropene		19	ug/L	20	93	70	130		
		trans-1,3-dichloropropene		19	ug/L	20	94	70	130		
		1,1,2-trichloroethane		19	ug/L	20	93	70	130		
		tetrachloroethene		19	ug/L	20	95	70	130		
		dibromochloromethane		16	ug/L	20	80	70	130		
		chlorobenzene		18	ug/L	20	91	70	130		
		1,1,1,2-tetrachloroethane		18	ug/L	20	89	70	130		
		bromoform		15	ug/L	20	77	70	130		
		1,1,2,2-tetrachloroethane		23	ug/L	20	114	70	130		
		1,3-dichlorobenzene		21	ug/L	20	103	70	130		
		1,4-dichlorobenzene		20	ug/L	20	102	70	130		
		1,2-dichlorobenzene		20	ug/L	20	102	70	130		
		1,2,4-trichlorobenzene		19	ug/L	20	97	70	130		
		1,2,3-trichlorobenzene		20	ug/L	20	99	70	130		
		dibromofluoromethane SUR		98	%			78	114		
		toluene-D8 SUR		102	%			88	110		
		4-bromofluorobenzene SUR		97	%			86	115		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD		RPD Limit
SW5030C8260C	LCSD1502690	dichlorodifluoromethane		17	ug/L	20	87	70	130	6		20
		chloromethane		21	ug/L	20	107	70	130	9		20
		vinyl chloride		21	ug/L	20	103	70	130	9		20
		bromomethane		21	ug/L	20	105	70	130	7		20
		chloroethane		20	ug/L	20	100	70	130	23	*	20
		trichlorofluoromethane		20	ug/L	20	98	70	130	3		20
		1,1-dichloroethene		17	ug/L	20	86	70	130	2		20
		methylene chloride		19	ug/L	20	94	70	130	4		20
		trans-1,2-dichloroethene		19	ug/L	20	94	70	130	3		20
		1,1-dichloroethane		20	ug/L	20	98	70	130	3		20
		cis-1,2-dichloroethene		17	ug/L	20	85	70	130	5		20
		chloroform		18	ug/L	20	92	70	130	4		20
		1,1,1-trichloroethane		19	ug/L	20	97	70	130	1		20
		carbon tetrachloride		18	ug/L	20	90	70	130	1		20
		1,2-dichloroethane		21	ug/L	20	104	70	130	7		20
		trichloroethene		21	ug/L	20	103	70	130	1		20
		1,2-dichloropropane		20	ug/L	20	98	70	130	7		20
		bromodichloromethane		18	ug/L	20	92	70	130	1		20
		cis-1,3-dichloropropene		18	ug/L	20	90	70	130	3		20
		trans-1,3-dichloropropene		18	ug/L	20	91	70	130	4		20
		1,1,2-trichloroethane		18	ug/L	20	91	70	130	1		20
		tetrachloroethene		20	ug/L	20	101	70	130	6		20
		dibromochloromethane		18	ug/L	20	88	70	130	10		20
		chlorobenzene		19	ug/L	20	96	70	130	6		20
		1,1,1,2-tetrachloroethane		20	ug/L	20	98	70	130	9		20
		bromoform		17	ug/L	20	86	70	130	11		20
		1,1,2,2-tetrachloroethane		21	ug/L	20	105	70	130	8		20
		1,3-dichlorobenzene		20	ug/L	20	102	70	130	1		20
		1,4-dichlorobenzene		20	ug/L	20	100	70	130	2		20
		1,2-dichlorobenzene		20	ug/L	20	100	70	130	2		20
		1,2,4-trichlorobenzene		19	ug/L	20	95	70	130	1		20
		1,2,3-trichlorobenzene		20	ug/L	20	98	70	130	1		20
		dibromofluoromethane SUR		96	%			78	114			
		toluene-D8 SUR		96	%			88	110			
		4-bromofluorobenzene SUR		103	%			86	115			

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260C	MB8195	dichlorodifluoromethane		<	0.1	ug/g						
		chloromethane		<	0.1	ug/g						
		vinyl chloride		<	0.1	ug/g						
		bromomethane		<	0.2	ug/g						
		chloroethane		<	0.1	ug/g						
		trichlorofluoromethane		<	0.1	ug/g						
		1,1-dichloroethene		<	0.02	ug/g						
		methylene chloride		<	0.2	ug/g						
		trans-1,2-dichloroethene		<	0.1	ug/g						
		1,1-dichloroethane		<	0.1	ug/g						
		cis-1,2-dichloroethene		<	0.1	ug/g						
		chloroform		<	0.1	ug/g						
		1,1,1-trichloroethane		<	0.1	ug/g						
		carbon tetrachloride		<	0.1	ug/g						
		1,2-dichloroethane		<	0.1	ug/g						
		trichloroethene		<	0.1	ug/g						
		1,2-dichloropropane		<	0.1	ug/g						
		bromodichloromethane		<	0.1	ug/g						
		cis-1,3-dichloropropene		<	0.1	ug/g						
		trans-1,3-dichloropropene		<	0.1	ug/g						
		1,1,2-trichloroethane		<	0.1	ug/g						
		tetrachloroethene		<	0.1	ug/g						
		dibromochloromethane		<	0.1	ug/g						
		chlorobenzene		<	0.1	ug/g						
		1,1,1,2-tetrachloroethane		<	0.1	ug/g						
		bromoform		<	0.1	ug/g						
		1,1,2,2-tetrachloroethane		<	0.1	ug/g						
		1,3-dichlorobenzene		<	0.1	ug/g						
		1,4-dichlorobenzene		<	0.1	ug/g						
		1,2-dichlorobenzene		<	0.1	ug/g						
		1,2,4-trichlorobenzene		<	0.1	ug/g						
		1,2,3-trichlorobenzene		<	0.1	ug/g						
		dibromofluoromethane SUR			79	%			78	114		
		toluene-D8 SUR			97	%			88	110		
		4-bromofluorobenzene SUR			97	%			86	115		
		a,a,a-trifluorotoluene SUR			85	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCS8195	dichlorodifluoromethane		0.8	ug/g	1	75		70	130		
		chloromethane		0.8	ug/g	1	78		70	130		
		vinyl chloride		1.1	ug/g	1	113		70	130		
		bromomethane		1.0	ug/g	1	104		70	130		
		chloroethane		2.2	ug/g	1	217	*	70	130		
		trichlorofluoromethane		1.0	ug/g	1	104		70	130		
		1,1-dichloroethene		0.9	ug/g	1	91		70	130		
		methylene chloride		1.1	ug/g	1	107		70	130		
		trans-1,2-dichloroethene		1.0	ug/g	1	96		70	130		
		1,1-dichloroethane		1.0	ug/g	1	102		70	130		
		cis-1,2-dichloroethene		0.9	ug/g	1	93		70	130		
		chloroform		1.0	ug/g	1	99		70	130		
		1,1,1-trichloroethane		1.0	ug/g	1	98		70	130		
		carbon tetrachloride		0.9	ug/g	1	86		70	130		
		1,2-dichloroethane		1.1	ug/g	1	112		70	130		
		trichloroethene		1.0	ug/g	1	104		70	130		
		1,2-dichloropropane		1.1	ug/g	1	107		70	130		
		bromodichloromethane		0.9	ug/g	1	89		70	130		
		cis-1,3-dichloropropene		0.9	ug/g	1	94		70	130		
		trans-1,3-dichloropropene		0.9	ug/g	1	93		70	130		
		1,1,2-trichloroethane		1.0	ug/g	1	98		70	130		
		tetrachloroethene		0.9	ug/g	1	95		70	130		
		dibromochloromethane		0.7	ug/g	1	74		70	130		
		chlorobenzene		0.9	ug/g	1	95		70	130		
		1,1,1,2-tetrachloroethane		0.9	ug/g	1	88		70	130		
		bromoform		0.7	ug/g	1	72		70	130		
		1,1,2,2-tetrachloroethane		1.2	ug/g	1	116		70	130		
		1,3-dichlorobenzene		1.0	ug/g	1	103		70	130		
		1,4-dichlorobenzene		1.0	ug/g	1	104		70	130		
		1,2-dichlorobenzene		1.0	ug/g	1	103		70	130		
		1,2,4-trichlorobenzene		1.1	ug/g	1	107		70	130		
		1,2,3-trichlorobenzene		1.1	ug/g	1	112		70	130		
		dibromofluoromethane SUR		94	%				78	114		
		toluene-D8 SUR		97	%				88	110		
		4-bromofluorobenzene SUR		102	%				86	115		
		a,a,a-trifluorotoluene SUR		86	%				70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCSD8195	dichlorodifluoromethane		0.8	ug/g	1	76		70	130	0	30
		chloromethane		0.8	ug/g	1	75		70	130	4	30
		vinyl chloride		1.1	ug/g	1	111		70	130	2	30
		bromomethane		1.0	ug/g	1	100		70	130	4	30
		chloroethane		2.3	ug/g	1	228	*	70	130	5	30
		trichlorofluoromethane		1.0	ug/g	1	105		70	130	1	30
		1,1-dichloroethene		0.9	ug/g	1	90		70	130	1	30
		methylene chloride		1.1	ug/g	1	106		70	130	1	30
		trans-1,2-dichloroethene		1.0	ug/g	1	96		70	130	1	30
		1,1-dichloroethane		1.0	ug/g	1	99		70	130	2	30
		cis-1,2-dichloroethene		0.9	ug/g	1	94		70	130	1	30
		chloroform		1.0	ug/g	1	96		70	130	4	30
		1,1,1-trichloroethane		1.0	ug/g	1	98		70	130	1	30
		carbon tetrachloride		0.8	ug/g	1	85		70	130	1	30
		1,2-dichloroethane		1.1	ug/g	1	110		70	130	2	30
		trichloroethene		1.0	ug/g	1	102		70	130	2	30
		1,2-dichloropropane		1.0	ug/g	1	103		70	130	4	30
		bromodichloromethane		0.9	ug/g	1	88		70	130	1	30
		cis-1,3-dichloropropene		0.9	ug/g	1	94		70	130	0	30
		trans-1,3-dichloropropene		1.0	ug/g	1	96		70	130	3	30
		1,1,2-trichloroethane		1.0	ug/g	1	98		70	130	0	30
		tetrachloroethene		1.0	ug/g	1	102		70	130	7	30
		dibromochloromethane		0.8	ug/g	1	80		70	130	8	30
		chlorobenzene		1.0	ug/g	1	103		70	130	8	30
		1,1,1,2-tetrachloroethane		1.0	ug/g	1	100		70	130	12	30
		bromoform		0.8	ug/g	1	79		70	130	8	30
		1,1,2,2-tetrachloroethane		1.2	ug/g	1	122		70	130	5	30
		1,3-dichlorobenzene		1.1	ug/g	1	106		70	130	3	30
		1,4-dichlorobenzene		1.1	ug/g	1	107		70	130	3	30
		1,2-dichlorobenzene		1.1	ug/g	1	106		70	130	3	30
		1,2,4-trichlorobenzene		1.1	ug/g	1	109		70	130	2	30
		1,2,3-trichlorobenzene		1.1	ug/g	1	113		70	130	1	30
		dibromofluoromethane SUR		90	%				78	114		
		toluene-D8 SUR		97	%				88	110		
		4-bromofluorobenzene SUR		105	%				86	115		
		a,a,a-trifluorotoluene SUR		89	%				70	130		

PAGE 1 OF 2

Absolute Resource associates

124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34364

Company Name: Weston Solutions, Inc.
Company Address: 43 North Main St. Concord, NH 03301
Report To: Vinnie DelloRusso
Phone #: 603 656 5467
Invoice to Email: Vincent.dellorusso@westonsolution.com
☐ Hard Copy Invoice Required

Project Name: Kearsarge Metallurgical Superfund Site
Project #: NHDES 198708002
Project Location: (NH) MA ME VT NY ___ Other
Protocol: RCRA SDWA NPDES MCP (NHDES) OTHER
Reporting Limits: QAPP GW-1 S-1 EPA DW Other project goal
Quote # 6943 ☐ NH Reimbursement Pricing
PO # 0089493

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	VOC 8260 NHDES
~~34364-01~~	~~TRIP BLANK~~			~~X~~						~~X~~		~~0917~~		~~X~~ not rec'd -jd
-02	CB5-6-091915-1	1	X			X					9/19/15	~~0800~~	AB	X
-03	E02S04-091915-1	1		X						X	9/19/15	0805	AB	X
-04	E04S04-091915-1	1		X						X	9/19/15	0810	AB	X
-05	E05S04-091915-1	1		X						X	9/19/15	0813	AB	X
-06	E07S04-091915-1	1		X						X	9/19/15	0817	AB	X
-07	E10S04-091915-1	1		X						X	9/19/15	0820	AB	X
-08	E11S04-091915-1	1		X						X	9/19/15	0825	AB	X
-09	E13S04-091915-1	1		X						X	9/19/15	0830	AB	X
-10	E04S04-091915-1	1		X						X	9/19/15	0833	AB	X
-11	E15S04-091915-1	1		X						X	9/19/15	0838	AB	X

ANALYSIS REQUEST

☐ VOC 8260 ☒ VOC 8260 NHDES ☐ VOC 8260 MADEP
☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT
☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane
☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:
☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint
☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB
☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB
☐ O&G 1664 ☐ Mineral O&G SM5520F
☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity
☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity
☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness
☐ Total Metals-list:
☐ Dissolved Metals-list:
☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC
☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN
☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P
☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride
☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP
☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide
Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde
Grab (G) or Composite (C)

TAT REQUESTED
Priority (24 hr)* ☒
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 9/21/15

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
email PDF to Vincent.dellorusso@westonsolutions.com and erik.hall@westonsolutions.com

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) Vincent.dellorusso@westonsolutions.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 2 °C

CUSTODY RECORD

Relinquished by	Date	Time	Received by	Date	Time
Relinquished by Sampler: [signature]	09/19/15	1000	Received by: [signature]	9/19/15	1000
Relinquished by: [signature]	9/19/15	1200	Received by:		
Relinquished by:			Received by Laboratory: [signature]	9/19/15	1200

QSD-01 Revision 01/09/15

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34364

Company Name: Weston Solutions
Company Address: 43 North Main St. Concord, NH 03301
Report To: Vinnie Dellorusso
Phone #: 603 656 5467
Invoice to Email: Vincent.dellorusso@westonsolutions.com
☐ Hard Copy Invoice Required

Project Name: Keeisarge Metallurgical Superfund Site
Project #: NHDES 198708002
Project Location: (NH) MA ME VT NY Other
Protocol: RCRA SDWA NPDES MCP (NHDES) OTHER
Reporting Limits: QAPP GW-1 S-1 EPA DW Other project goal
Quote # 6943 ☐ NH Reimbursement Pricing
PO # 0089493

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	Matrix: SOLID	Matrix: OTHER	Preservation Method: HCl	Preservation Method: HNO_3	Preservation Method: H_2SO_4	Preservation Method: NaOH	Preservation Method: MeOH	Sampling: DATE	Sampling: TIME	Sampling: SAMPLER	☒ VOC 8260 NHDES
34364-12	E03S05-091915-1	1		X						X	9/19/15	0842	AB	X
-13	E03S05-091915-2	1		X						X	9/19/15	0848	AB	X
-14	E04S05-091915-1	1		X						X	9/19/15	0851	AB	X
-15	E05S05-091915-1	1		X						X	9/19/15	0855	AB	X
-16	TRIP BLANK		X			X								X

☐ VOC 8260 ☐ VOC 8260 MADEP ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT ☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gasses-List: ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint ☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB ☐ O&G 1664 ☐ Mineral O&G SM5520F ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ TSS ☐ TDS ☐ TVS ☐ Alkalinity ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness ☐ Total Metals-list: ☐ Dissolved Metals-list: ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide ☐ Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde

Grab (G) or Composite (C)

TAT REQUESTED
Priority (24 hr)* ☒
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 9/21/15

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
Email PDF to vincent.dellorusso@westonsolutions.com and erik.hall@westonsolutions.com

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) vincent.dellorusso@westonsolutions.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 2 °C

CUSTODY RECORD
QSD-01 Revision 01/09/15

	Relinquished by Sampler:	Date	Time	Received by:	Date	Time
		9/19/15	1060		9/19/15	1000
	Relinquished by:	Date	Time	Received by:	Date	Time
		9/19/15	1205			
	Relinquished by:	Date	Time	Received by Laboratory:	Date	Time
					9/19/15	1200

28

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Vinnie DellaRusso
Weston Solutions,Inc.
45 Constitution Ave
Suite 100
Concord, NH 03301

PO Number: 0089493
Job ID: 34367
Date Received: 9/21/15

Project: Kearsarge Metallurgical Superfund Site NHDES198708002

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 9/25/2015
Total number of pages: 13

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Lab ID: 34367

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
Trip Blank	Solid	9/21/2015 0:00	34367-001	
				VOCs 8021 Halocarbons in solid by 8260
E08S05-092115-1	Solid	9/21/2015 7:37	34367-002	
				Percent Dry Matter for Sample Calc by SM2540B,G
E05S06-092115-1	Solid	9/21/2015 7:28	34367-003	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
E13S05-092115-1	Solid	9/21/2015 7:42	34367-004	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
E15S06-092115-1	Solid	9/21/2015 7:44	34367-005	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34367
Sample#: 34367-001
Sample ID: Trip Blank
Matrix: Solid
Sampled: 9/21/15 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
bromomethane	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
1,1-dichloroethene	U	0.02	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
methylene chloride	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	86	78-114	%	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
toluene-D8 SUR	100	88-110	%	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
4-bromofluorobenzene SUR	98	86-115	%	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C
a,a,a-trifluorotoluene SUR	88	70-130	%	1	LMM	9/21/15	12:23	8195	9/21/15	14:29	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34367

Sample#: 34367-003

Sample ID: E05S06-092115-1

Matrix: Solid Percent Dry: 79.3% Results expressed on a dry weight basis.

Sampled: 9/21/15 7:28

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	82	78-114	%	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
toluene-D8 SUR	95	88-110	%	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
4-bromofluorobenzene SUR	88	86-115	%	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C
a,a,a-trifluorotoluene SUR	88	70-130	%	1	LMM	9/21/15	12:23	8195	9/21/15	14:58	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34367

Sample#: 34367-004

Sample ID: E13S05-092115-1

Matrix: Solid Percent Dry: 74.9% Results expressed on a dry weight basis.

Sampled: 9/21/15 7:42

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
chloromethane	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
vinyl chloride	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
chloroethane	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
trichlorofluoromethane	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
trans-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
1,1-dichloroethane	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
cis-1,2-dichloroethene	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
chloroform	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
carbon tetrachloride	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
1,2-dichloroethane	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
trichloroethene	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
1,2-dichloropropane	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
bromodichloromethane	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
cis-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
trans-1,3-dichloropropene	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
1,1,2-trichloroethane	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
tetrachloroethene	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
dibromochloromethane	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
chlorobenzene	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
bromoform	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
1,3-dichlorobenzene	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
1,4-dichlorobenzene	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
1,2-dichlorobenzene	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
1,2,4-trichlorobenzene	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
1,2,3-trichlorobenzene	U	0.2	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	83	78-114	%	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
toluene-D8 SUR	97	88-110	%	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
4-bromofluorobenzene SUR	95	86-115	%	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C
a,a,a-trifluorotoluene SUR	90	70-130	%	1	LMM	9/21/15	12:23	8195	9/21/15	15:26	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34367

Sample#: 34367-005

Sample ID: E15S06-092115-1

Matrix: Solid Percent Dry: 76.8% Results expressed on a dry weight basis.

Sampled: 9/21/15 7:44

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	86	78-114	%	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
toluene-D8 SUR	100	88-110	%	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
4-bromofluorobenzene SUR	97	86-115	%	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C
a,a,a-trifluorotoluene SUR	102	70-130	%	1	LMM	9/21/15	12:23	8195	9/21/15	15:55	SW5035A8260C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 34367

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 3 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

No exceptions noted.

Laboratory Control Sample Results

VOC: The MLCS/D8195 did not meet the acceptance criteria for chloroethane. This compound showed high recovery. There is no impact to the data as this analyte was not detected in the associated samples.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

Data Qualifiers

U = This compound was analyzed for, but not detected above half the reporting limit.
J = The analytical result was below the instrument calibration range, but above half the reporting limit, regardless of detectability. The reported concentration is an estimate.

- QC Association Table -

Analysis	QC Number	Field ID	Lab ID
VOCs 8021 Halocarbons SW5035A8260C			
	8195	Trip Blank	34367-001
		E05S06-092115-1	34367-003
		E13S05-092115-1	34367-004
		E15S06-092115-1	34367-005

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260C	MB8195	dichlorodifluoromethane		<	0.1	ug/g						
		chloromethane		<	0.1	ug/g						
		vinyl chloride		<	0.1	ug/g						
		bromomethane		<	0.2	ug/g						
		chloroethane		<	0.1	ug/g						
		trichlorofluoromethane		<	0.1	ug/g						
		1,1-dichloroethene		<	0.02	ug/g						
		methylene chloride		<	0.2	ug/g						
		trans-1,2-dichloroethene		<	0.1	ug/g						
		1,1-dichloroethane		<	0.1	ug/g						
		cis-1,2-dichloroethene		<	0.1	ug/g						
		chloroform		<	0.1	ug/g						
		1,1,1-trichloroethane		<	0.1	ug/g						
		carbon tetrachloride		<	0.1	ug/g						
		1,2-dichloroethane		<	0.1	ug/g						
		trichloroethene		<	0.1	ug/g						
		1,2-dichloropropane		<	0.1	ug/g						
		bromodichloromethane		<	0.1	ug/g						
		cis-1,3-dichloropropene		<	0.1	ug/g						
		trans-1,3-dichloropropene		<	0.1	ug/g						
		1,1,2-trichloroethane		<	0.1	ug/g						
		tetrachloroethene		<	0.1	ug/g						
		dibromochloromethane		<	0.1	ug/g						
		chlorobenzene		<	0.1	ug/g						
		1,1,1,2-tetrachloroethane		<	0.1	ug/g						
		bromoform		<	0.1	ug/g						
		1,1,2,2-tetrachloroethane		<	0.1	ug/g						
		1,3-dichlorobenzene		<	0.1	ug/g						
		1,4-dichlorobenzene		<	0.1	ug/g						
		1,2-dichlorobenzene		<	0.1	ug/g						
		1,2,4-trichlorobenzene		<	0.1	ug/g						
		1,2,3-trichlorobenzene		<	0.1	ug/g						
		dibromofluoromethane SUR			79	%			78	114		
		toluene-D8 SUR			97	%			88	110		
		4-bromofluorobenzene SUR			97	%			86	115		
		a,a,a-trifluorotoluene SUR			85	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCS8195	dichlorodifluoromethane		0.8	ug/g	1	75		70	130		
		chloromethane		0.8	ug/g	1	78		70	130		
		vinyl chloride		1.1	ug/g	1	113		70	130		
		bromomethane		1.0	ug/g	1	104		70	130		
		chloroethane		2.2	ug/g	1	217	*	70	130		
		trichlorofluoromethane		1.0	ug/g	1	104		70	130		
		1,1-dichloroethene		0.9	ug/g	1	91		70	130		
		methylene chloride		1.1	ug/g	1	107		70	130		
		trans-1,2-dichloroethene		1.0	ug/g	1	96		70	130		
		1,1-dichloroethane		1.0	ug/g	1	102		70	130		
		cis-1,2-dichloroethene		0.9	ug/g	1	93		70	130		
		chloroform		1.0	ug/g	1	99		70	130		
		1,1,1-trichloroethane		1.0	ug/g	1	98		70	130		
		carbon tetrachloride		0.9	ug/g	1	86		70	130		
		1,2-dichloroethane		1.1	ug/g	1	112		70	130		
		trichloroethene		1.0	ug/g	1	104		70	130		
		1,2-dichloropropane		1.1	ug/g	1	107		70	130		
		bromodichloromethane		0.9	ug/g	1	89		70	130		
		cis-1,3-dichloropropene		0.9	ug/g	1	94		70	130		
		trans-1,3-dichloropropene		0.9	ug/g	1	93		70	130		
		1,1,2-trichloroethane		1.0	ug/g	1	98		70	130		
		tetrachloroethene		0.9	ug/g	1	95		70	130		
		dibromochloromethane		0.7	ug/g	1	74		70	130		
		chlorobenzene		0.9	ug/g	1	95		70	130		
		1,1,1,2-tetrachloroethane		0.9	ug/g	1	88		70	130		
		bromoform		0.7	ug/g	1	72		70	130		
		1,1,2,2-tetrachloroethane		1.2	ug/g	1	116		70	130		
		1,3-dichlorobenzene		1.0	ug/g	1	103		70	130		
		1,4-dichlorobenzene		1.0	ug/g	1	104		70	130		
		1,2-dichlorobenzene		1.0	ug/g	1	103		70	130		
		1,2,4-trichlorobenzene		1.1	ug/g	1	107		70	130		
		1,2,3-trichlorobenzene		1.1	ug/g	1	112		70	130		
		dibromofluoromethane SUR		94	%				78	114		
		toluene-D8 SUR		97	%				88	110		
		4-bromofluorobenzene SUR		102	%				86	115		
		a,a,a-trifluorotoluene SUR		86	%				70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCSD8195	dichlorodifluoromethane		0.8	ug/g	1	76		70	130	0	30
		chloromethane		0.8	ug/g	1	75		70	130	4	30
		vinyl chloride		1.1	ug/g	1	111		70	130	2	30
		bromomethane		1.0	ug/g	1	100		70	130	4	30
		chloroethane		2.3	ug/g	1	228	*	70	130	5	30
		trichlorofluoromethane		1.0	ug/g	1	105		70	130	1	30
		1,1-dichloroethene		0.9	ug/g	1	90		70	130	1	30
		methylene chloride		1.1	ug/g	1	106		70	130	1	30
		trans-1,2-dichloroethene		1.0	ug/g	1	96		70	130	1	30
		1,1-dichloroethane		1.0	ug/g	1	99		70	130	2	30
		cis-1,2-dichloroethene		0.9	ug/g	1	94		70	130	1	30
		chloroform		1.0	ug/g	1	96		70	130	4	30
		1,1,1-trichloroethane		1.0	ug/g	1	98		70	130	1	30
		carbon tetrachloride		0.8	ug/g	1	85		70	130	1	30
		1,2-dichloroethane		1.1	ug/g	1	110		70	130	2	30
		trichloroethene		1.0	ug/g	1	102		70	130	2	30
		1,2-dichloropropane		1.0	ug/g	1	103		70	130	4	30
		bromodichloromethane		0.9	ug/g	1	88		70	130	1	30
		cis-1,3-dichloropropene		0.9	ug/g	1	94		70	130	0	30
		trans-1,3-dichloropropene		1.0	ug/g	1	96		70	130	3	30
		1,1,2-trichloroethane		1.0	ug/g	1	98		70	130	0	30
		tetrachloroethene		1.0	ug/g	1	102		70	130	7	30
		dibromochloromethane		0.8	ug/g	1	80		70	130	8	30
		chlorobenzene		1.0	ug/g	1	103		70	130	8	30
		1,1,1,2-tetrachloroethane		1.0	ug/g	1	100		70	130	12	30
		bromoform		0.8	ug/g	1	79		70	130	8	30
		1,1,2,2-tetrachloroethane		1.2	ug/g	1	122		70	130	5	30
		1,3-dichlorobenzene		1.1	ug/g	1	106		70	130	3	30
		1,4-dichlorobenzene		1.1	ug/g	1	107		70	130	3	30
		1,2-dichlorobenzene		1.1	ug/g	1	106		70	130	3	30
		1,2,4-trichlorobenzene		1.1	ug/g	1	109		70	130	2	30
		1,2,3-trichlorobenzene		1.1	ug/g	1	113		70	130	1	30
		dibromofluoromethane SUR		90	%				78	114		
		toluene-D8 SUR		97	%				88	110		
		4-bromofluorobenzene SUR		105	%				86	115		
		a,a,a-trifluorotoluene SUR		89	%				70	130		

PAGE 1 OF 1

Absolute Resource associates

124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34367

Company Name: Weston Solutions
Company Address: 43 North Main St. Concord NH 03301
Report To: Vinnie DelloRusso
Phone #: 603 656 5486?
Invoice to Email: Vincent.dellorusso@westonsolutions.com
☐ Hard Copy Invoice Required

Project Name: Kearsarge Metallurgical Superfund Site
Project #: NHDES 19870802
Project Location: (NH) MA ME VT NY Other
Protocol: RCRA MCP SDWA (NHDES) NPDES OTHER
Reporting Limits: QAPP EPA DW GW-1 Other Project Goals S-1
Quote # 6943 ☐ NH Reimbursement Pricing
PO # 0089493

ANALYSIS REQUEST

☐ VOC 8260 NHDES ☐ VOC 8260 ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT ☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List: ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint ☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB ☐ O&G 1664 ☐ Mineral O&G SM5520F ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness ☐ Total Metals-list: ☐ Dissolved Metals-list: ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	8260 NHDES	Analysis Request
34367-01	Trip Blank	1		X						X	9/21/15		EH	X	
-02	ERS05-092115-1	1		X						X	9/21/15	0737			Broke @ lab. gl 9/21/15
-03	ERS06-092115-1	1		X						X	9/21/15	0720			
(EH)	ERSD06-092115-1	1		X						X	9/21/15				
-04	ERSD05-092115-1	1		X						X	9/21/15	0742			
-05	ERS06-092115-1	1		X						X	9/21/15	0744			

TAT REQUESTED
Priority (24 hr)* X
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 9/22/15

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
Please email results to Erik.Hall@westonsolutions.com + Vincent.dellorusso@westonsolutions.com

REPORTING INSTRUCTIONS X PDF (e-mail address) Erik.Hall@westonsolutions.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE X YES ☐ NO
TEMPERATURE 3 °C

CUSTODY RECORD

QSD-01 Revision 01/09/15

	Date	Time
Relinquished by Sampler: EH	9/21/15	0935
Relinquished by:	9/21/15	1127
Relinquished by:		

	Date	Time
Received by:		
Received by:	9/21/15	0935
Received by Laboratory:	9/21/15	11:27

13

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Vinnie DellaRusso
Weston Solutions,Inc.
45 Constitution Ave
Suite 100
Concord, NH 03301

PO Number: 0089493
Job ID: 34377
Date Received: 9/22/15

Project: Kearsarge Metallurgical Superfund Site NHDES198708002

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 9/25/2015
Total number of pages: 12

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Lab ID: 34377

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
E08S05-092115-1	Solid	9/21/2015 16:30	34377-001	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
E13S04-092115-1	Solid	9/21/2015 16:38	34377-002	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
Trip Blank	Solid	9/21/2015 0:00	34377-003	
				VOCs 8021 Halocarbons in solid by 8260

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34377

Sample#: 34377-001

Sample ID: E08S05-092115-1

Matrix: Solid Percent Dry: 76.4% Results expressed on a dry weight basis.

Sampled: 9/21/15 16:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
bromomethane	U	0.2	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
1,1-dichloroethene	0.02 J	0.02	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
methylene chloride	U	0.2	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
1,1,1-trichloroethane	0.07 J	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	81	78-114	%	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
toluene-D8 SUR	99	88-110	%	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
4-bromofluorobenzene SUR	97	86-115	%	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C
a,a,a-trifluorotoluene SUR	89	70-130	%	1	LMM	9/22/15	9:59	8190	9/22/15	11:42	SW5035A8260C

Absolute Resource associates

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34377

Sample#: 34377-002

Sample ID: E13S04-092115-1

Matrix: Solid Percent Dry: 74.8% Results expressed on a dry weight basis.

Sampled: 9/21/15 16:38

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
bromomethane	U	0.4	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
1,1-dichloroethene	U	0.04	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
methylene chloride	U	0.4	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	80	78-114	%	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
toluene-D8 SUR	95	88-110	%	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
4-bromofluorobenzene SUR	86	86-115	%	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C
a,a,a-trifluorotoluene SUR	87	70-130	%	1	LMM	9/22/15	9:59	8190	9/22/15	12:11	SW5035A8260C

Absolute Resource associates

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34377
Sample#: 34377-003
Sample ID: Trip Blank
Matrix: Solid
Sampled: 9/21/15 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
bromomethane	U	0.2	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
1,1-dichloroethene	U	0.02	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
methylene chloride	U	0.2	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	78	78-114	%	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
toluene-D8 SUR	97	88-110	%	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
4-bromofluorobenzene SUR	97	86-115	%	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C
a,a,a-trifluorotoluene SUR	84	70-130	%	1	LMM	9/22/15	9:59	8190	9/22/15	12:40	SW5035A8260C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 34377

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 1 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

No exceptions noted.

Laboratory Control Sample Results

VOC: The MLCS/D8190 did not meet the acceptance criteria for chloroethane. This compound showed high recovery. There is no impact to the data as this analyte was not detected in the associated samples. The MLCS8190 did not meet the acceptance criteria for dibromochloromethane and bromoform. The recoveries were acceptable in the MLCSD, no impact to samples suspected.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

Data Qualifiers

U = This compound was analyzed for, but not detected above half the reporting limit.
J = The analytical result was below the instrument calibration range, but above half the reporting limit, regardless of detectability. The reported concentration is an estimate.

- QC Association Table -

Analysis	QC Number	Field ID	Lab ID
VOCs 8021 Halocarbons SW5035A8260C			
	8190	E08S05-092115-1	34377-001
		E13S04-092115-1	34377-002
		Trip Blank	34377-003

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260C	MB8190	dichlorodifluoromethane		<	0.1	ug/g						
		chloromethane		<	0.1	ug/g						
		vinyl chloride		<	0.1	ug/g						
		bromomethane		<	0.2	ug/g						
		chloroethane		<	0.1	ug/g						
		trichlorofluoromethane		<	0.1	ug/g						
		1,1-dichloroethene		<	0.02	ug/g						
		methylene chloride		<	0.2	ug/g						
		trans-1,2-dichloroethene		<	0.1	ug/g						
		1,1-dichloroethane		<	0.1	ug/g						
		cis-1,2-dichloroethene		<	0.1	ug/g						
		chloroform		<	0.1	ug/g						
		1,1,1-trichloroethane		<	0.1	ug/g						
		carbon tetrachloride		<	0.1	ug/g						
		1,2-dichloroethane		<	0.1	ug/g						
		trichloroethene		<	0.1	ug/g						
		1,2-dichloropropane		<	0.1	ug/g						
		bromodichloromethane		<	0.1	ug/g						
		cis-1,3-dichloropropene		<	0.1	ug/g						
		trans-1,3-dichloropropene		<	0.1	ug/g						
		1,1,2-trichloroethane		<	0.1	ug/g						
		tetrachloroethene		<	0.1	ug/g						
		dibromochloromethane		<	0.1	ug/g						
		chlorobenzene		<	0.1	ug/g						
		1,1,1,2-tetrachloroethane		<	0.1	ug/g						
		bromoform		<	0.1	ug/g						
		1,1,2,2-tetrachloroethane		<	0.1	ug/g						
		1,3-dichlorobenzene		<	0.1	ug/g						
		1,4-dichlorobenzene		<	0.1	ug/g						
		1,2-dichlorobenzene		<	0.1	ug/g						
		1,2,4-trichlorobenzene		<	0.1	ug/g						
		1,2,3-trichlorobenzene		<	0.1	ug/g						
		dibromofluoromethane SUR			84	%			78	114		
		toluene-D8 SUR			100	%			88	110		
		4-bromofluorobenzene SUR			104	%			86	115		
		a,a,a-trifluorotoluene SUR			97	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCS8190	dichlorodifluoromethane		0.8	ug/g	1	78		70	130		
		chloromethane		0.8	ug/g	1	83		70	130		
		vinyl chloride		1.2	ug/g	1	118		70	130		
		bromomethane		0.7	ug/g	1	75		70	130		
		chloroethane		2.0	ug/g	1	202	*	70	130		
		trichlorofluoromethane		1.1	ug/g	1	106		70	130		
		1,1-dichloroethene		0.9	ug/g	1	92		70	130		
		methylene chloride		1.2	ug/g	1	117		70	130		
		trans-1,2-dichloroethene		1.0	ug/g	1	100		70	130		
		1,1-dichloroethane		1.0	ug/g	1	103		70	130		
		cis-1,2-dichloroethene		1.0	ug/g	1	96		70	130		
		chloroform		1.0	ug/g	1	102		70	130		
		1,1,1-trichloroethane		1.0	ug/g	1	96		70	130		
		carbon tetrachloride		0.8	ug/g	1	82		70	130		
		1,2-dichloroethane		1.2	ug/g	1	119		70	130		
		trichloroethene		1.1	ug/g	1	107		70	130		
		1,2-dichloropropane		1.1	ug/g	1	111		70	130		
		bromodichloromethane		0.9	ug/g	1	89		70	130		
		cis-1,3-dichloropropene		0.9	ug/g	1	95		70	130		
		trans-1,3-dichloropropene		0.9	ug/g	1	95		70	130		
		1,1,2-trichloroethane		1.0	ug/g	1	104		70	130		
		tetrachloroethene		0.9	ug/g	1	85		70	130		
		dibromochloromethane		0.6	ug/g	1	65	*	70	130		
		chlorobenzene		0.9	ug/g	1	89		70	130		
		1,1,1,2-tetrachloroethane		0.8	ug/g	1	83		70	130		
		bromoform		0.7	ug/g	1	67	*	70	130		
		1,1,2,2-tetrachloroethane		1.0	ug/g	1	101		70	130		
		1,3-dichlorobenzene		0.9	ug/g	1	93		70	130		
		1,4-dichlorobenzene		0.9	ug/g	1	93		70	130		
		1,2-dichlorobenzene		0.9	ug/g	1	94		70	130		
		1,2,4-trichlorobenzene		1.0	ug/g	1	95		70	130		
		1,2,3-trichlorobenzene		1.0	ug/g	1	99		70	130		
		dibromofluoromethane SUR		94	%				78	114		
		toluene-D8 SUR		107	%				88	110		
		4-bromofluorobenzene SUR		106	%				86	115		
		a,a,a-trifluorotoluene SUR		95	%				70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCSD8190	dichlorodifluoromethane		0.8	ug/g	1	83		70	130	5	30
		chloromethane		0.8	ug/g	1	82		70	130	0	30
		vinyl chloride		1.2	ug/g	1	117		70	130	1	30
		bromomethane		0.8	ug/g	1	79		70	130	6	30
		chloroethane		2.1	ug/g	1	210	*	70	130	4	30
		trichlorofluoromethane		1.1	ug/g	1	110		70	130	3	30
		1,1-dichloroethene		0.9	ug/g	1	94		70	130	2	30
		methylene chloride		1.2	ug/g	1	118		70	130	1	30
		trans-1,2-dichloroethene		1.0	ug/g	1	102		70	130	3	30
		1,1-dichloroethane		1.0	ug/g	1	104		70	130	1	30
		cis-1,2-dichloroethene		1.0	ug/g	1	99		70	130	3	30
		chloroform		1.0	ug/g	1	103		70	130	2	30
		1,1,1-trichloroethane		1.0	ug/g	1	100		70	130	3	30
		carbon tetrachloride		0.9	ug/g	1	87		70	130	6	30
		1,2-dichloroethane		1.2	ug/g	1	118		70	130	0	30
		trichloroethene		1.0	ug/g	1	104		70	130	3	30
		1,2-dichloropropane		1.1	ug/g	1	110		70	130	0	30
		bromodichloromethane		0.9	ug/g	1	94		70	130	6	30
		cis-1,3-dichloropropene		1.0	ug/g	1	98		70	130	3	30
		trans-1,3-dichloropropene		1.0	ug/g	1	100		70	130	6	30
		1,1,2-trichloroethane		1.1	ug/g	1	107		70	130	3	30
		tetrachloroethene		0.9	ug/g	1	87		70	130	2	30
		dibromochloromethane		0.7	ug/g	1	73		70	130	12	30
		chlorobenzene		0.9	ug/g	1	90		70	130	2	30
		1,1,1,2-tetrachloroethane		0.8	ug/g	1	84		70	130	2	30
		bromoform		0.7	ug/g	1	71		70	130	7	30
		1,1,2,2-tetrachloroethane		1.1	ug/g	1	106		70	130	5	30
		1,3-dichlorobenzene		0.9	ug/g	1	94		70	130	1	30
		1,4-dichlorobenzene		0.9	ug/g	1	95		70	130	2	30
		1,2-dichlorobenzene		1.0	ug/g	1	97		70	130	3	30
		1,2,4-trichlorobenzene		1.0	ug/g	1	96		70	130	1	30
		1,2,3-trichlorobenzene		1.0	ug/g	1	100		70	130	1	30
		dibromofluoromethane SUR		96	%				78	114		
		toluene-D8 SUR		104	%				88	110		
		4-bromofluorobenzene SUR		106	%				86	115		
		a,a,a-trifluorotoluene SUR		95	%				70	130		

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34377

Company Name: Weston Solutions
Company Address: 43 North Main St, Concord, NH 03301
Report To: Vincie Dellorusso
Phone #: 603 656 5467
Invoice to Email: Vincent.Dellorusso@westonsolutions.com
☐ Hard Copy Invoice Required

Project Name: Kearsarge Metallurgical Superfund site
Project #: NHDES 198708002
Project Location: (NH) MA ME VT NY Other
Protocol: RCRA MCP SDWA (NHDES) NPDES OTHER
Reporting Limits: QAPP EPA DW GW-1 S-1 Other Project Goals
Quote # 6943 ☐ NH Reimbursement Pricing
PO # 0089493

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	VOC 8260	VOC 8260 MADEP	VOC 8260 NHDES	Grab (G) or Composite (C)
34377-01	EQ&SOS-092115-1	1		X						X	9/21/15	1630	EH	X			X
~~-01~~	~~EQ&SOS-092115-1~~ (DUP)	~~1~~		~~X~~						~~X~~	~~9/21/15~~	~~1630~~	~~EH~~				
-02	GW-13 MW-092115-1	1		X							9/21/15	1630	EH	X			X
-03	TRIP BLANK			X						X				X			X

TAT REQUESTED
Priority (24 hr)* X
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 9/22/15

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
Please email results to vincent.dellorusso@westonsolutions.com + Erik.Hall@westonsolutions.com

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) _____
☐ HARD COPY REQUIRED ☐ FAX (FAX#) _____

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE _____ °C

CUSTODY RECORD
QSD-01 Revision 01/09/15

		Date	Time		Date	Time
Relinquished by Sampler:	Erik Hall	9/21/15	1912	Received by:		
Relinquished by:				Received by:		
Relinquished by:		9/22/15	8:50	Received by Laboratory:		9/22/15 9:50

Hall, Erik

Subject: FW: KMC- 1,4-Dioxane data and one missing EDD
Attachments: 34520 EnviroData 120315.xlsx; 34520 NH EMD EDD 120315.xlsx

From: Aaron DeWees [mailto:aarond@absoluteresourceassociates.com]
Sent: Thursday, December 03, 2015 9:39 AM
To: Hall, Erik
Subject: RE: KMC- 1,4-Dioxane data and one missing EDD

The EDD is attached.
The reporting limit range for 1,4-dioxane would be between 2.5ug/g and 5ug/g.
Let me know if you need anything else, -Aaron.

P.S. Did you know ARA offers a full range of Indoor Air Quality Services? Call us for any projects related to Asbestos, Mold, Lead, etc. We provide IAQ consulting, remediation planning and in house lab testing for many IAQ contaminants.

Aaron DeWees
Acting Lab Director
Absolute Resource Associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001 - office
aarond@absoluteresourceassociates.com
www.absoluteresourceassociates.com

WOSB, EDWOSB, SBA 8(a), SDB, DBE, NELAC, DoD ELAP, ISO/IEC 17025

APPENDIX F

CATCH BASIN ANALYTICAL DATA PACKAGES

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Vinnie DellaRusso
Weston Solutions,Inc.
45 Constitution Ave
Suite 100
Concord, NH 03301

PO Number: 0089493
Job ID: 34278
Date Received: 9/15/15

Project: Kearsarge Metallurgical Superfund Site NHDES198708002

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 9/25/2015
Total number of pages: 17

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Lab ID: 34278

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
E17S14-091515-1	Solid	9/15/2015 9:45	34278-001	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
CB5-6-091415-1	Water	9/14/2015 8:15	34278-002	
				VOCs 8021 Halocarbons in water by 8260
E17S13-091515-1	Solid	9/15/2015 10:40	34278-003	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
E17S11-091515-1	Solid	9/15/2015 11:00	34278-004	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
Trip Blank	Water	9/15/2015 0:00	34278-005	
				VOCs 8021 Halocarbons in water by 8260

Absolute Resource associates

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34278
Sample#: 34278-002
Sample ID: CB5-6-091415-1
Matrix: Water
Sampled: 9/14/15 8:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
chloromethane	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
vinyl chloride	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
bromomethane	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
chloroethane	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
trichlorofluoromethane	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
1,1-dichloroethene	U	1	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
methylene chloride	U	5	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
trans-1,2-dichloroethene	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
1,1-dichloroethane	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
cis-1,2-dichloroethene	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
chloroform	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
1,1,1-trichloroethane	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
carbon tetrachloride	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
1,2-dichloroethane	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
trichloroethene	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
1,2-dichloropropane	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
bromodichloromethane	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
cis-1,3-dichloropropene	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
trans-1,3-dichloropropene	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
1,1,2-trichloroethane	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
tetrachloroethene	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
dibromochloromethane	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
chlorobenzene	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
1,1,1,2-tetrachloroethane	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
bromoform	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
1,1,2,2-tetrachloroethane	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
1,3-dichlorobenzene	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
1,4-dichlorobenzene	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
1,2-dichlorobenzene	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
1,2,4-trichlorobenzene	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
1,2,3-trichlorobenzene	U	2	ug/L	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	90	78-114	%	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
toluene-D8 SUR	101	88-110	%	1	LMM			1502623	9/15/15	22:53	SW5030C8260C
4-bromofluorobenzene SUR	98	86-115	%	1	LMM			1502623	9/15/15	22:53	SW5030C8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34278
Sample#: 34278-005
Sample ID: Trip Blank
Matrix: Water
Sampled: 9/15/15 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
chloromethane	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
vinyl chloride	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
bromomethane	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
chloroethane	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
trichlorofluoromethane	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
1,1-dichloroethene	U	1	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
methylene chloride	U	5	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
trans-1,2-dichloroethene	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
1,1-dichloroethane	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
cis-1,2-dichloroethene	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
chloroform	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
1,1,1-trichloroethane	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
carbon tetrachloride	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
1,2-dichloroethane	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
trichloroethene	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
1,2-dichloropropane	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
bromodichloromethane	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
cis-1,3-dichloropropene	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
trans-1,3-dichloropropene	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
1,1,2-trichloroethane	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
tetrachloroethene	1 J	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
dibromochloromethane	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
chlorobenzene	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
1,1,1,2-tetrachloroethane	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
bromoform	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
1,1,2,2-tetrachloroethane	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
1,3-dichlorobenzene	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
1,4-dichlorobenzene	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
1,2-dichlorobenzene	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
1,2,4-trichlorobenzene	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
1,2,3-trichlorobenzene	U	2	ug/L	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	95	78-114	%	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
toluene-D8 SUR	106	88-110	%	1	LMM			1502623	9/15/15	16:00	SW5030C8260C
4-bromofluorobenzene SUR	97	86-115	%	1	LMM			1502623	9/15/15	16:00	SW5030C8260C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 34278

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 5 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

No exceptions noted.

Laboratory Control Sample Results

VOC: The MLCS/D8167 did not meet the acceptance criteria for chloroethane. This compound showed high recovery. There is no impact to the data as this analyte was not detected in the associated samples.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

Data Qualifiers

U = This compound was analyzed for, but not detected above half the reporting limit.
J = The analytical result was below the instrument calibration range, but above half the reporting limit, regardless of detectability. The reported concentration is an estimate.

- QC Association Table -

Analysis	QC Number	Field ID	Lab ID
VOCs 8021 Halocarbons SW5030C8260C			
	1502623	CB5-6-091415-1	34278-002
		Trip Blank	34278-005
VOCs 8021 Halocarbons SW5035A8260C			
	8167	E17S14-091515-1	34278-001
		E17S13-091515-1	34278-003
		E17S11-091515-1	34278-004

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	BLK1502623	dichlorodifluoromethane		<	2	ug/L						
		chloromethane		<	2	ug/L						
		vinyl chloride		<	2	ug/L						
		bromomethane		<	2	ug/L						
		chloroethane		<	2	ug/L						
		trichlorofluoromethane		<	2	ug/L						
		1,1-dichloroethene		<	1	ug/L						
		methylene chloride		<	5	ug/L						
		trans-1,2-dichloroethene		<	2	ug/L						
		1,1-dichloroethane		<	2	ug/L						
		cis-1,2-dichloroethene		<	2	ug/L						
		chloroform		<	2	ug/L						
		1,1,1-trichloroethane		<	2	ug/L						
		carbon tetrachloride		<	2	ug/L						
		1,2-dichloroethane		<	2	ug/L						
		trichloroethene		<	2	ug/L						
		1,2-dichloropropane		<	2	ug/L						
		bromodichloromethane		<	0.6	ug/L						
		cis-1,3-dichloropropene		<	2	ug/L						
		trans-1,3-dichloropropene		<	2	ug/L						
		1,1,2-trichloroethane		<	2	ug/L						
		tetrachloroethene		J	2	ug/L						
		dibromochloromethane		<	2	ug/L						
		chlorobenzene		<	2	ug/L						
		1,1,1,2-tetrachloroethane		<	2	ug/L						
		bromoform		<	2	ug/L						
		1,1,2,2-tetrachloroethane		<	2	ug/L						
		1,3-dichlorobenzene		<	2	ug/L						
		1,4-dichlorobenzene		<	2	ug/L						
		1,2-dichlorobenzene		<	2	ug/L						
		1,2,4-trichlorobenzene		<	2	ug/L						
		1,2,3-trichlorobenzene		<	2	ug/L						
		dibromofluoromethane SUR			93	%			78	114		
		toluene-D8 SUR			104	%			88	110		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCS1502623	dichlorodifluoromethane		20	ug/L	20	100	70	130		
		chloromethane		22	ug/L	20	112	70	130		
		vinyl chloride		22	ug/L	20	109	70	130		
		bromomethane		15	ug/L	20	77	70	130		
		chloroethane		22	ug/L	20	112	70	130		
		trichlorofluoromethane		21	ug/L	20	107	70	130		
		1,1-dichloroethene		20	ug/L	20	98	70	130		
		methylene chloride		21	ug/L	20	105	70	130		
		trans-1,2-dichloroethene		21	ug/L	20	107	70	130		
		1,1-dichloroethane		21	ug/L	20	104	70	130		
		cis-1,2-dichloroethene		20	ug/L	20	98	70	130		
		chloroform		21	ug/L	20	103	70	130		
		1,1,1-trichloroethane		22	ug/L	20	108	70	130		
		carbon tetrachloride		20	ug/L	20	100	70	130		
		1,2-dichloroethane		23	ug/L	20	117	70	130		
		trichloroethene		22	ug/L	20	108	70	130		
		1,2-dichloropropane		22	ug/L	20	109	70	130		
		bromodichloromethane		21	ug/L	20	105	70	130		
		cis-1,3-dichloropropene		20	ug/L	20	102	70	130		
		trans-1,3-dichloropropene		21	ug/L	20	104	70	130		
		1,1,2-trichloroethane		20	ug/L	20	101	70	130		
		tetrachloroethene		19	ug/L	20	96	70	130		
		dibromochloromethane		17	ug/L	20	83	70	130		
		chlorobenzene		18	ug/L	20	90	70	130		
		1,1,1,2-tetrachloroethane		18	ug/L	20	92	70	130		
		bromoform		17	ug/L	20	83	70	130		
		1,1,2,2-tetrachloroethane		23	ug/L	20	115	70	130		
		1,3-dichlorobenzene		19	ug/L	20	95	70	130		
		1,4-dichlorobenzene		19	ug/L	20	95	70	130		
		1,2-dichlorobenzene		19	ug/L	20	96	70	130		
		1,2,4-trichlorobenzene		18	ug/L	20	92	70	130		
		1,2,3-trichlorobenzene		19	ug/L	20	94	70	130		
		dibromofluoromethane SUR		102	%			78	114		
		toluene-D8 SUR		104	%			88	110		
		4-bromofluorobenzene SUR		102	%			86	115		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCSD1502623	dichlorodifluoromethane		20	ug/L	20	102	70	130	2	20
		chloromethane		22	ug/L	20	112	70	130	0	20
		vinyl chloride		22	ug/L	20	109	70	130	0	20
		bromomethane		17	ug/L	20	85	70	130	10	20
		chloroethane		23	ug/L	20	113	70	130	1	20
		trichlorofluoromethane		22	ug/L	20	110	70	130	3	20
		1,1-dichloroethene		20	ug/L	20	99	70	130	1	20
		methylene chloride		21	ug/L	20	105	70	130	0	20
		trans-1,2-dichloroethene		21	ug/L	20	107	70	130	1	20
		1,1-dichloroethane		21	ug/L	20	106	70	130	2	20
		cis-1,2-dichloroethene		20	ug/L	20	101	70	130	3	20
		chloroform		21	ug/L	20	105	70	130	2	20
		1,1,1-trichloroethane		23	ug/L	20	113	70	130	4	20
		carbon tetrachloride		20	ug/L	20	102	70	130	2	20
		1,2-dichloroethane		23	ug/L	20	116	70	130	1	20
		trichloroethene		21	ug/L	20	106	70	130	1	20
		1,2-dichloropropane		22	ug/L	20	110	70	130	1	20
		bromodichloromethane		22	ug/L	20	108	70	130	3	20
		cis-1,3-dichloropropene		21	ug/L	20	106	70	130	3	20
		trans-1,3-dichloropropene		21	ug/L	20	107	70	130	4	20
		1,1,2-trichloroethane		21	ug/L	20	105	70	130	4	20
		tetrachloroethene		18	ug/L	20	91	70	130	5	20
		dibromochloromethane		17	ug/L	20	84	70	130	1	20
		chlorobenzene		18	ug/L	20	88	70	130	3	20
		1,1,1,2-tetrachloroethane		18	ug/L	20	89	70	130	3	20
		bromoform		17	ug/L	20	86	70	130	3	20
		1,1,2,2-tetrachloroethane		22	ug/L	20	112	70	130	3	20
		1,3-dichlorobenzene		19	ug/L	20	93	70	130	2	20
		1,4-dichlorobenzene		18	ug/L	20	92	70	130	3	20
		1,2-dichlorobenzene		19	ug/L	20	95	70	130	1	20
		1,2,4-trichlorobenzene		18	ug/L	20	89	70	130	3	20
		1,2,3-trichlorobenzene		19	ug/L	20	94	70	130	1	20
		dibromofluoromethane SUR		100	%			78	114		
		toluene-D8 SUR		103	%			88	110		
		4-bromofluorobenzene SUR		102	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260C	MB8167	dichlorodifluoromethane		<	0.1	ug/g						
		chloromethane		<	0.1	ug/g						
		vinyl chloride		<	0.1	ug/g						
		bromomethane		<	0.2	ug/g						
		chloroethane		<	0.1	ug/g						
		trichlorofluoromethane		<	0.1	ug/g						
		1,1-dichloroethene		<	0.02	ug/g						
		methylene chloride		<	0.2	ug/g						
		trans-1,2-dichloroethene		<	0.1	ug/g						
		1,1-dichloroethane		<	0.1	ug/g						
		cis-1,2-dichloroethene		<	0.1	ug/g						
		chloroform		<	0.1	ug/g						
		1,1,1-trichloroethane		<	0.1	ug/g						
		carbon tetrachloride		<	0.1	ug/g						
		1,2-dichloroethane		<	0.1	ug/g						
		trichloroethene		<	0.1	ug/g						
		1,2-dichloropropane		<	0.1	ug/g						
		bromodichloromethane		<	0.1	ug/g						
		cis-1,3-dichloropropene		<	0.1	ug/g						
		trans-1,3-dichloropropene		<	0.1	ug/g						
		1,1,2-trichloroethane		<	0.1	ug/g						
		tetrachloroethene		<	0.1	ug/g						
		dibromochloromethane		<	0.1	ug/g						
		chlorobenzene		<	0.1	ug/g						
		1,1,1,2-tetrachloroethane		<	0.1	ug/g						
		bromoform		<	0.1	ug/g						
		1,1,2,2-tetrachloroethane		<	0.1	ug/g						
		1,3-dichlorobenzene		<	0.1	ug/g						
		1,4-dichlorobenzene		<	0.1	ug/g						
		1,2-dichlorobenzene		<	0.1	ug/g						
		1,2,4-trichlorobenzene		<	0.1	ug/g						
		1,2,3-trichlorobenzene		<	0.1	ug/g						
		dibromofluoromethane SUR			84	%			78	114		
		toluene-D8 SUR			100	%			88	110		
		4-bromofluorobenzene SUR			100	%			86	115		
		a,a,a-trifluorotoluene SUR			100	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCS8167	dichlorodifluoromethane		1.0	ug/g	1	97		70	130		
		chloromethane		0.8	ug/g	1	83		70	130		
		vinyl chloride		1.1	ug/g	1	112		70	130		
		bromomethane		1.1	ug/g	1	106		70	130		
		chloroethane		2.1	ug/g	1	208	*	70	130		
		trichlorofluoromethane		1.1	ug/g	1	112		70	130		
		1,1-dichloroethene		1.0	ug/g	1	97		70	130		
		methylene chloride		1.1	ug/g	1	112		70	130		
		trans-1,2-dichloroethene		1.0	ug/g	1	104		70	130		
		1,1-dichloroethane		1.0	ug/g	1	102		70	130		
		cis-1,2-dichloroethene		1.0	ug/g	1	100		70	130		
		chloroform		1.0	ug/g	1	102		70	130		
		1,1,1-trichloroethane		1.0	ug/g	1	104		70	130		
		carbon tetrachloride		0.9	ug/g	1	94		70	130		
		1,2-dichloroethane		1.1	ug/g	1	109		70	130		
		trichloroethene		1.1	ug/g	1	107		70	130		
		1,2-dichloropropane		1.0	ug/g	1	103		70	130		
		bromodichloromethane		1.0	ug/g	1	99		70	130		
		cis-1,3-dichloropropene		1.0	ug/g	1	99		70	130		
		trans-1,3-dichloropropene		1.0	ug/g	1	99		70	130		
		1,1,2-trichloroethane		1.0	ug/g	1	99		70	130		
		tetrachloroethene		1.0	ug/g	1	100		70	130		
		dibromochloromethane		0.8	ug/g	1	83		70	130		
		chlorobenzene		1.0	ug/g	1	96		70	130		
		1,1,1,2-tetrachloroethane		1.0	ug/g	1	99		70	130		
		bromoform		0.8	ug/g	1	81		70	130		
		1,1,2,2-tetrachloroethane		1.1	ug/g	1	109		70	130		
		1,3-dichlorobenzene		1.0	ug/g	1	104		70	130		
		1,4-dichlorobenzene		1.0	ug/g	1	101		70	130		
		1,2-dichlorobenzene		1.0	ug/g	1	102		70	130		
		1,2,4-trichlorobenzene		1.0	ug/g	1	104		70	130		
		1,2,3-trichlorobenzene		1.1	ug/g	1	111		70	130		
		dibromofluoromethane SUR		94	%				78	114		
		toluene-D8 SUR		102	%				88	110		
		4-bromofluorobenzene SUR		101	%				86	115		
		a,a,a-trifluorotoluene SUR		96	%				70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCSD8167	dichlorodifluoromethane		1.0	ug/g	1	98		70	130	0	30
		chloromethane		0.8	ug/g	1	84		70	130	2	30
		vinyl chloride		1.1	ug/g	1	110		70	130	2	30
		bromomethane		1.1	ug/g	1	110		70	130	5	30
		chloroethane		1.8	ug/g	1	183	*	70	130	13	30
		trichlorofluoromethane		1.1	ug/g	1	111		70	130	1	30
		1,1-dichloroethene		1.0	ug/g	1	97		70	130	0	30
		methylene chloride		1.1	ug/g	1	108		70	130	4	30
		trans-1,2-dichloroethene		1.0	ug/g	1	104		70	130	0	30
		1,1-dichloroethane		1.0	ug/g	1	101		70	130	2	30
		cis-1,2-dichloroethene		1.0	ug/g	1	98		70	130	2	30
		chloroform		1.0	ug/g	1	102		70	130	0	30
		1,1,1-trichloroethane		1.0	ug/g	1	102		70	130	1	30
		carbon tetrachloride		0.9	ug/g	1	92		70	130	2	30
		1,2-dichloroethane		1.1	ug/g	1	109		70	130	0	30
		trichloroethene		1.0	ug/g	1	101		70	130	6	30
		1,2-dichloropropane		1.0	ug/g	1	103		70	130	0	30
		bromodichloromethane		0.9	ug/g	1	93		70	130	6	30
		cis-1,3-dichloropropene		1.0	ug/g	1	98		70	130	1	30
		trans-1,3-dichloropropene		1.0	ug/g	1	98		70	130	1	30
		1,1,2-trichloroethane		1.0	ug/g	1	98		70	130	0	30
		tetrachloroethene		1.0	ug/g	1	99		70	130	2	30
		dibromochloromethane		0.8	ug/g	1	80		70	130	3	30
		chlorobenzene		1.0	ug/g	1	96		70	130	0	30
		1,1,1,2-tetrachloroethane		0.9	ug/g	1	94		70	130	6	30
		bromoform		0.8	ug/g	1	79		70	130	3	30
		1,1,2,2-tetrachloroethane		1.1	ug/g	1	106		70	130	2	30
		1,3-dichlorobenzene		1.0	ug/g	1	98		70	130	6	30
		1,4-dichlorobenzene		1.0	ug/g	1	99		70	130	3	30
		1,2-dichlorobenzene		1.0	ug/g	1	99		70	130	4	30
		1,2,4-trichlorobenzene		1.0	ug/g	1	104		70	130	0	30
		1,2,3-trichlorobenzene		1.1	ug/g	1	105		70	130	5	30
		dibromofluoromethane SUR		97	%				78	114		
		toluene-D8 SUR		104	%				88	110		
		4-bromofluorobenzene SUR		102	%				86	115		
		a,a,a-trifluorotoluene SUR		97	%				70	130		

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34278

Company Name: WestonSolutions

Company Address: 43 North Mainstreet Concord NH 03301

Report To: Vinnie DelloRusso

Phone #: 603 656 5467

Invoice to Email: Vincent.DelloRusso@WestonSolutions.com

☐ Hard Copy Invoice Required

Project Name: Keysarge Metallurgical Superfund site

Project #: NHDES 19870802

Project Location: NH MA ME VT NY Other

Protocol: RCRA MCP SDWA NHDES NPDES OTHER

Reporting Limits: QAPP EPA DW GW-1 Other Project goal S-1

Quote # 6943 ☐ NH Reimbursement Pricing

PO # PO 6443

ANALYSIS REQUEST

☐ VOC 8260 MADEP ☐ VOC 8260 NHDES ☐ VOC 8260 ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT ☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List: ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint ☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB ☐ O&G 1664 ☐ Mineral O&G SM5520F ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness ☐ Total Metals-list: ☐ Dissolved Metals-list: ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	ANALYSIS REQUEST
34278-01	E17514-091515-1	1		X						X	9/15/15	0945	EH	X
-02	CBS-6-091415-1	2	X			X					9/14/15	0815	EH	X
-03	E17513-091515-1	1		X						X	9/15/15	1040	EH	X
-04	E17511-091515-1	1		X						X	9/15/15	1100	EH	X
-05	trip blank AD													

TAT REQUESTED

Priority (24 hr)* ☒
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 9/16

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS: Email PDF Results to: Vinnie.DelloRusso@WestonSolutions.com + Erik.Hall@WestonSolutions.com

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) Erik.Hall@WestonSolutions.com

☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☑ YES ☐ NO

TEMPERATURE 5 °C

CUSTODY RECORD

QSD-01 Revision 01/09/15

Relinquished by Sampler:	Date	Time	Received by:	Date	Time
	9/15/15	1245		9/15/15	12:15
Relinquished by:	9/15/15	14:10	Received by:	Date	Time
Relinquished by:	Date	Time	Received by Laboratory:	9/15/15	14:10

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Vinnie DellaRusso
Weston Solutions,Inc.
45 Constitution Ave
Suite 100
Concord, NH 03301

PO Number: 0089493
Job ID: 34364
Date Received: 9/19/15

Project: Kearsarge Metallurgical Superfund Site NHDES198708002

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 9/25/2015
Total number of pages: 28

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Lab ID: 34364

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
CB5-6-091915-1	Water	9/19/2015 9:17	34364-002	VOCs 8021 Halocarbons in water by 8260
E02S04-091915-1	Solid	9/19/2015 8:05	34364-003	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E04S04-091915-1	Solid	9/19/2015 8:10	34364-004	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E05S04-091915-1	Solid	9/19/2015 8:13	34364-005	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E07S04-091915-1	Solid	9/19/2015 8:17	34364-006	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E10S04-091915-1	Solid	9/19/2015 8:20	34364-007	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E11S04-091915-1	Solid	9/19/2015 8:25	34364-008	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E13S04-091915-1	Solid	9/19/2015 8:30	34364-009	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E14S04-091915-1	Solid	9/19/2015 8:33	34364-010	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E15S04-091915-1	Solid	9/19/2015 8:38	34364-011	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E03S05-091915-1	Solid	9/19/2015 8:42	34364-012	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E03S05-091915-2	Solid	9/19/2015 8:42	34364-013	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E04S05-091915-1	Solid	9/19/2015 8:51	34364-014	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
E05S05-091915-1	Solid	9/19/2015 8:55	34364-015	Percent Dry Matter for Sample Calc by SM2540B,G VOCs 8021 Halocarbons in solid by 8260
Trip Blank	Water	9/19/2015 0:00	34364-016	VOCs 8021 Halocarbons in water by 8260

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34364
Sample#: 34364-002
Sample ID: CB5-6-091915-1
Matrix: Water
Sampled: 9/19/15 9:17

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
chloromethane	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
vinyl chloride	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
bromomethane	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
chloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
trichlorofluoromethane	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
1,1-dichloroethene	U	1	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
methylene chloride	U	5	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
trans-1,2-dichloroethene	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
1,1-dichloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
cis-1,2-dichloroethene	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
chloroform	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
1,1,1-trichloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
carbon tetrachloride	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
1,2-dichloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
trichloroethene	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
1,2-dichloropropane	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
bromodichloromethane	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
cis-1,3-dichloropropene	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
trans-1,3-dichloropropene	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
1,1,2-trichloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
tetrachloroethene	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
dibromochloromethane	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
chlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
1,1,1,2-tetrachloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
bromoform	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
1,1,2,2-tetrachloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
1,3-dichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
1,4-dichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
1,2-dichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
1,2,4-trichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
1,2,3-trichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	93	78-114	%	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
toluene-D8 SUR	94	88-110	%	1	LMM			1502690	9/19/15	14:22	SW5030C8260C
4-bromofluorobenzene SUR	99	86-115	%	1	LMM			1502690	9/19/15	14:22	SW5030C8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34364
Sample#: 34364-016
Sample ID: Trip Blank
Matrix: Water
Sampled: 9/19/15 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
chloromethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
vinyl chloride	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
bromomethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
chloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
trichlorofluoromethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,1-dichloroethene	U	1	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
methylene chloride	U	5	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
trans-1,2-dichloroethene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,1-dichloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
cis-1,2-dichloroethene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
chloroform	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,1,1-trichloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
carbon tetrachloride	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,2-dichloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
trichloroethene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,2-dichloropropane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
bromodichloromethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
cis-1,3-dichloropropene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
trans-1,3-dichloropropene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,1,2-trichloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
tetrachloroethene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
dibromochloromethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
chlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,1,1,2-tetrachloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
bromoform	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,1,2,2-tetrachloroethane	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,3-dichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,4-dichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,2-dichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,2,4-trichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
1,2,3-trichlorobenzene	U	2	ug/L	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	94	78-114	%	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
toluene-D8 SUR	98	88-110	%	1	LMM			1502690	9/19/15	13:53	SW5030C8260C
4-bromofluorobenzene SUR	92	86-115	%	1	LMM			1502690	9/19/15	13:53	SW5030C8260C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 34364

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 2 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

No exceptions noted.

Laboratory Control Sample Results

VOC: The relative percent difference between the LCS and LCSD1502690 was outside the acceptance criteria for chloroethane. The percent recovery for this analyte in each QC parameter was within the acceptance criteria. No impact to the data suspected.
VOC: The MLCS/D8195 did not meet the acceptance criteria for chloroethane. This compound showed high recovery. There is no impact to the data as this analyte was not detected in the associated samples.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

Data Qualifiers

U = This compound was analyzed for, but not detected above half the reporting limit.
J = The analytical result was below the instrument calibration range, but above half the reporting limit, regardless of detectability. The reported concentration is an estimate.

- QC Association Table -

Analysis	QC Number	Field ID	Lab ID
VOCs 8021 Halocarbons SW5030C8260C			
	1502690	CB5-6-091915-1	34364-002
		Trip Blank	34364-016
VOCs 8021 Halocarbons SW5035A8260C			
	8195	E02S04-091915-1	34364-003
		E04S04-091915-1	34364-004
		E05S04-091915-1	34364-005
		E07S04-091915-1	34364-006
		E10S04-091915-1	34364-007
		E11S04-091915-1	34364-008
		E13S04-091915-1	34364-009
		E14S04-091915-1	34364-010
		E15S04-091915-1	34364-011
		E03S05-091915-1	34364-012
		E03S05-091915-2	34364-013
		E04S05-091915-1	34364-014
		E05S05-091915-1	34364-015

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	BLK1502690	dichlorodifluoromethane		<	2	ug/L						
		chloromethane		<	2	ug/L						
		vinyl chloride		<	2	ug/L						
		bromomethane		<	2	ug/L						
		chloroethane		<	2	ug/L						
		trichlorofluoromethane		<	2	ug/L						
		1,1-dichloroethene		<	1	ug/L						
		methylene chloride		<	5	ug/L						
		trans-1,2-dichloroethene		<	2	ug/L						
		1,1-dichloroethane		<	2	ug/L						
		cis-1,2-dichloroethene		<	2	ug/L						
		chloroform		<	2	ug/L						
		1,1,1-trichloroethane		<	2	ug/L						
		carbon tetrachloride		<	2	ug/L						
		1,2-dichloroethane		<	2	ug/L						
		trichloroethene		<	2	ug/L						
		1,2-dichloropropane		<	2	ug/L						
		bromodichloromethane		<	0.6	ug/L						
		cis-1,3-dichloropropene		<	2	ug/L						
		trans-1,3-dichloropropene		<	2	ug/L						
		1,1,2-trichloroethane		<	2	ug/L						
		tetrachloroethene		<	2	ug/L						
		dibromochloromethane		<	2	ug/L						
		chlorobenzene		<	2	ug/L						
		1,1,1,2-tetrachloroethane		<	2	ug/L						
		bromoform		<	2	ug/L						
		1,1,2,2-tetrachloroethane		<	2	ug/L						
		1,3-dichlorobenzene		<	2	ug/L						
		1,4-dichlorobenzene		<	2	ug/L						
		1,2-dichlorobenzene		<	2	ug/L						
		1,2,4-trichlorobenzene		<	2	ug/L						
		1,2,3-trichlorobenzene		<	2	ug/L						
		dibromofluoromethane SUR			92	%			78	114		
		toluene-D8 SUR			98	%			88	110		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCS1502690	dichlorodifluoromethane		19	ug/L	20	93	70	130		
		chloromethane		24	ug/L	20	118	70	130		
		vinyl chloride		23	ug/L	20	113	70	130		
		bromomethane		23	ug/L	20	113	70	130		
		chloroethane		25	ug/L	20	126	70	130		
		trichlorofluoromethane		20	ug/L	20	101	70	130		
		1,1-dichloroethene		17	ug/L	20	87	70	130		
		methylene chloride		19	ug/L	20	97	70	130		
		trans-1,2-dichloroethene		20	ug/L	20	98	70	130		
		1,1-dichloroethane		20	ug/L	20	101	70	130		
		cis-1,2-dichloroethene		18	ug/L	20	89	70	130		
		chloroform		19	ug/L	20	96	70	130		
		1,1,1-trichloroethane		20	ug/L	20	98	70	130		
		carbon tetrachloride		18	ug/L	20	91	70	130		
		1,2-dichloroethane		22	ug/L	20	111	70	130		
		trichloroethene		21	ug/L	20	103	70	130		
		1,2-dichloropropane		21	ug/L	20	105	70	130		
		bromodichloromethane		18	ug/L	20	91	70	130		
		cis-1,3-dichloropropene		19	ug/L	20	93	70	130		
		trans-1,3-dichloropropene		19	ug/L	20	94	70	130		
		1,1,2-trichloroethane		19	ug/L	20	93	70	130		
		tetrachloroethene		19	ug/L	20	95	70	130		
		dibromochloromethane		16	ug/L	20	80	70	130		
		chlorobenzene		18	ug/L	20	91	70	130		
		1,1,1,2-tetrachloroethane		18	ug/L	20	89	70	130		
		bromoform		15	ug/L	20	77	70	130		
		1,1,2,2-tetrachloroethane		23	ug/L	20	114	70	130		
		1,3-dichlorobenzene		21	ug/L	20	103	70	130		
		1,4-dichlorobenzene		20	ug/L	20	102	70	130		
		1,2-dichlorobenzene		20	ug/L	20	102	70	130		
		1,2,4-trichlorobenzene		19	ug/L	20	97	70	130		
		1,2,3-trichlorobenzene		20	ug/L	20	99	70	130		
		dibromofluoromethane SUR		98	%			78	114		
		toluene-D8 SUR		102	%			88	110		
		4-bromofluorobenzene SUR		97	%			86	115		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits		RPD		RPD Limit
SW5030C8260C	LCSD1502690	dichlorodifluoromethane		17	ug/L	20	87	70	130	6		20
		chloromethane		21	ug/L	20	107	70	130	9		20
		vinyl chloride		21	ug/L	20	103	70	130	9		20
		bromomethane		21	ug/L	20	105	70	130	7		20
		chloroethane		20	ug/L	20	100	70	130	23	*	20
		trichlorofluoromethane		20	ug/L	20	98	70	130	3		20
		1,1-dichloroethene		17	ug/L	20	86	70	130	2		20
		methylene chloride		19	ug/L	20	94	70	130	4		20
		trans-1,2-dichloroethene		19	ug/L	20	94	70	130	3		20
		1,1-dichloroethane		20	ug/L	20	98	70	130	3		20
		cis-1,2-dichloroethene		17	ug/L	20	85	70	130	5		20
		chloroform		18	ug/L	20	92	70	130	4		20
		1,1,1-trichloroethane		19	ug/L	20	97	70	130	1		20
		carbon tetrachloride		18	ug/L	20	90	70	130	1		20
		1,2-dichloroethane		21	ug/L	20	104	70	130	7		20
		trichloroethene		21	ug/L	20	103	70	130	1		20
		1,2-dichloropropane		20	ug/L	20	98	70	130	7		20
		bromodichloromethane		18	ug/L	20	92	70	130	1		20
		cis-1,3-dichloropropene		18	ug/L	20	90	70	130	3		20
		trans-1,3-dichloropropene		18	ug/L	20	91	70	130	4		20
		1,1,2-trichloroethane		18	ug/L	20	91	70	130	1		20
		tetrachloroethene		20	ug/L	20	101	70	130	6		20
		dibromochloromethane		18	ug/L	20	88	70	130	10		20
		chlorobenzene		19	ug/L	20	96	70	130	6		20
		1,1,1,2-tetrachloroethane		20	ug/L	20	98	70	130	9		20
		bromoform		17	ug/L	20	86	70	130	11		20
		1,1,2,2-tetrachloroethane		21	ug/L	20	105	70	130	8		20
		1,3-dichlorobenzene		20	ug/L	20	102	70	130	1		20
		1,4-dichlorobenzene		20	ug/L	20	100	70	130	2		20
		1,2-dichlorobenzene		20	ug/L	20	100	70	130	2		20
		1,2,4-trichlorobenzene		19	ug/L	20	95	70	130	1		20
		1,2,3-trichlorobenzene		20	ug/L	20	98	70	130	1		20
		dibromofluoromethane SUR		96	%			78	114			
		toluene-D8 SUR		96	%			88	110			
		4-bromofluorobenzene SUR		103	%			86	115			

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260C	MB8195	dichlorodifluoromethane		<	0.1	ug/g						
		chloromethane		<	0.1	ug/g						
		vinyl chloride		<	0.1	ug/g						
		bromomethane		<	0.2	ug/g						
		chloroethane		<	0.1	ug/g						
		trichlorofluoromethane		<	0.1	ug/g						
		1,1-dichloroethene		<	0.02	ug/g						
		methylene chloride		<	0.2	ug/g						
		trans-1,2-dichloroethene		<	0.1	ug/g						
		1,1-dichloroethane		<	0.1	ug/g						
		cis-1,2-dichloroethene		<	0.1	ug/g						
		chloroform		<	0.1	ug/g						
		1,1,1-trichloroethane		<	0.1	ug/g						
		carbon tetrachloride		<	0.1	ug/g						
		1,2-dichloroethane		<	0.1	ug/g						
		trichloroethene		<	0.1	ug/g						
		1,2-dichloropropane		<	0.1	ug/g						
		bromodichloromethane		<	0.1	ug/g						
		cis-1,3-dichloropropene		<	0.1	ug/g						
		trans-1,3-dichloropropene		<	0.1	ug/g						
		1,1,2-trichloroethane		<	0.1	ug/g						
		tetrachloroethene		<	0.1	ug/g						
		dibromochloromethane		<	0.1	ug/g						
		chlorobenzene		<	0.1	ug/g						
		1,1,1,2-tetrachloroethane		<	0.1	ug/g						
		bromoform		<	0.1	ug/g						
		1,1,2,2-tetrachloroethane		<	0.1	ug/g						
		1,3-dichlorobenzene		<	0.1	ug/g						
		1,4-dichlorobenzene		<	0.1	ug/g						
		1,2-dichlorobenzene		<	0.1	ug/g						
		1,2,4-trichlorobenzene		<	0.1	ug/g						
		1,2,3-trichlorobenzene		<	0.1	ug/g						
		dibromofluoromethane SUR			79	%			78	114		
		toluene-D8 SUR			97	%			88	110		
		4-bromofluorobenzene SUR			97	%			86	115		
		a,a,a-trifluorotoluene SUR			85	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCS8195	dichlorodifluoromethane		0.8	ug/g	1	75		70	130		
		chloromethane		0.8	ug/g	1	78		70	130		
		vinyl chloride		1.1	ug/g	1	113		70	130		
		bromomethane		1.0	ug/g	1	104		70	130		
		chloroethane		2.2	ug/g	1	217	*	70	130		
		trichlorofluoromethane		1.0	ug/g	1	104		70	130		
		1,1-dichloroethene		0.9	ug/g	1	91		70	130		
		methylene chloride		1.1	ug/g	1	107		70	130		
		trans-1,2-dichloroethene		1.0	ug/g	1	96		70	130		
		1,1-dichloroethane		1.0	ug/g	1	102		70	130		
		cis-1,2-dichloroethene		0.9	ug/g	1	93		70	130		
		chloroform		1.0	ug/g	1	99		70	130		
		1,1,1-trichloroethane		1.0	ug/g	1	98		70	130		
		carbon tetrachloride		0.9	ug/g	1	86		70	130		
		1,2-dichloroethane		1.1	ug/g	1	112		70	130		
		trichloroethene		1.0	ug/g	1	104		70	130		
		1,2-dichloropropane		1.1	ug/g	1	107		70	130		
		bromodichloromethane		0.9	ug/g	1	89		70	130		
		cis-1,3-dichloropropene		0.9	ug/g	1	94		70	130		
		trans-1,3-dichloropropene		0.9	ug/g	1	93		70	130		
		1,1,2-trichloroethane		1.0	ug/g	1	98		70	130		
		tetrachloroethene		0.9	ug/g	1	95		70	130		
		dibromochloromethane		0.7	ug/g	1	74		70	130		
		chlorobenzene		0.9	ug/g	1	95		70	130		
		1,1,1,2-tetrachloroethane		0.9	ug/g	1	88		70	130		
		bromoform		0.7	ug/g	1	72		70	130		
		1,1,2,2-tetrachloroethane		1.2	ug/g	1	116		70	130		
		1,3-dichlorobenzene		1.0	ug/g	1	103		70	130		
		1,4-dichlorobenzene		1.0	ug/g	1	104		70	130		
		1,2-dichlorobenzene		1.0	ug/g	1	103		70	130		
		1,2,4-trichlorobenzene		1.1	ug/g	1	107		70	130		
		1,2,3-trichlorobenzene		1.1	ug/g	1	112		70	130		
		dibromofluoromethane SUR		94	%				78	114		
		toluene-D8 SUR		97	%				88	110		
		4-bromofluorobenzene SUR		102	%				86	115		
		a,a,a-trifluorotoluene SUR		86	%				70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCSD8195	dichlorodifluoromethane		0.8	ug/g	1	76		70	130	0	30
		chloromethane		0.8	ug/g	1	75		70	130	4	30
		vinyl chloride		1.1	ug/g	1	111		70	130	2	30
		bromomethane		1.0	ug/g	1	100		70	130	4	30
		chloroethane		2.3	ug/g	1	228	*	70	130	5	30
		trichlorofluoromethane		1.0	ug/g	1	105		70	130	1	30
		1,1-dichloroethene		0.9	ug/g	1	90		70	130	1	30
		methylene chloride		1.1	ug/g	1	106		70	130	1	30
		trans-1,2-dichloroethene		1.0	ug/g	1	96		70	130	1	30
		1,1-dichloroethane		1.0	ug/g	1	99		70	130	2	30
		cis-1,2-dichloroethene		0.9	ug/g	1	94		70	130	1	30
		chloroform		1.0	ug/g	1	96		70	130	4	30
		1,1,1-trichloroethane		1.0	ug/g	1	98		70	130	1	30
		carbon tetrachloride		0.8	ug/g	1	85		70	130	1	30
		1,2-dichloroethane		1.1	ug/g	1	110		70	130	2	30
		trichloroethene		1.0	ug/g	1	102		70	130	2	30
		1,2-dichloropropane		1.0	ug/g	1	103		70	130	4	30
		bromodichloromethane		0.9	ug/g	1	88		70	130	1	30
		cis-1,3-dichloropropene		0.9	ug/g	1	94		70	130	0	30
		trans-1,3-dichloropropene		1.0	ug/g	1	96		70	130	3	30
		1,1,2-trichloroethane		1.0	ug/g	1	98		70	130	0	30
		tetrachloroethene		1.0	ug/g	1	102		70	130	7	30
		dibromochloromethane		0.8	ug/g	1	80		70	130	8	30
		chlorobenzene		1.0	ug/g	1	103		70	130	8	30
		1,1,1,2-tetrachloroethane		1.0	ug/g	1	100		70	130	12	30
		bromoform		0.8	ug/g	1	79		70	130	8	30
		1,1,2,2-tetrachloroethane		1.2	ug/g	1	122		70	130	5	30
		1,3-dichlorobenzene		1.1	ug/g	1	106		70	130	3	30
		1,4-dichlorobenzene		1.1	ug/g	1	107		70	130	3	30
		1,2-dichlorobenzene		1.1	ug/g	1	106		70	130	3	30
		1,2,4-trichlorobenzene		1.1	ug/g	1	109		70	130	2	30
		1,2,3-trichlorobenzene		1.1	ug/g	1	113		70	130	1	30
		dibromofluoromethane SUR		90	%				78	114		
		toluene-D8 SUR		97	%				88	110		
		4-bromofluorobenzene SUR		105	%				86	115		
		a,a,a-trifluorotoluene SUR		89	%				70	130		

PAGE 1 OF 2

Absolute Resource associates

124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34364

Company Name: Weston Solutions, Inc.
Company Address: 43 North Main St. Concord, NH 03301
Report To: Vinnie DelloRusso
Phone #: 603 656 5467
Invoice to Email: Vincent.dellorusso@westonsolutions.com
☐ Hard Copy Invoice Required

Project Name: Kearsarge Metallurgical Superfund Site
Project #: NHDES 198708002
Project Location: (NH) MA ME VT NY ___ Other
Protocol: RCRA SDWA NPDES MCP (NHDES) OTHER
Reporting Limits: QAPP GW-1 S-1 EPA DW Other project goal
Quote # 6943 ☐ NH Reimbursement Pricing
PO # 0089493

ANALYSIS REQUEST

☐ VOC 8260 ☒ VOC 8260 NHDES ☐ VOC 8260 MADEP; ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT; ☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane; ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:; ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint; ☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB; ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB; ☐ O&G 1664 ☐ Mineral O&G SM5520F; ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity; ☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity; ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness; ☐ Total Metals-list:; ☐ Dissolved Metals-list:; ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC; ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN; ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P; ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride; ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP; ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide; Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde; Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	VOC 8260 NHDES
~~34364-01~~	~~TRIP BLANK~~			X						X		0917		X — not rec'd -jd
-02	CB5-6-091915-1	1	X			X					9/19/15	~~0800~~	AB	X
-03	E02S04-091915-1	1		X						X	9/19/15	0805	AB	X
-04	E04S04-091915-1	1		X						X	9/19/15	0810	AB	X
-05	E05S04-091915-1	1		X						X	9/19/15	0813	AB	X
-06	E07S04-091915-1	1		X						X	9/19/15	0817	AB	X
-07	E10S04-091915-1	1		X						X	9/19/15	0820	AB	X
-08	E11S04-091915-1	1		X						X	9/19/15	0825	AB	X
-09	E13S04-091915-1	1		X						X	9/19/15	0830	AB	X
-10	E04S04-091915-1	1		X						X	9/19/15	0833	AB	X
-11	E15S04-091915-1	1		X						X	9/19/15	0838	AB	X

TAT REQUESTED
Priority (24 hr)* ☒
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 9/21/15

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
email PDF to Vincent.dellorusso@westonsolutions.com and erik.hall@westonsolutions.com

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) Vincent.dellorusso@westonsolutions.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 2 °C

CUSTODY RECORD

	Date	Time		Date	Time
Relinquished by Sampler: [signature]	09/19/15	1000	Received by: [signature]	9/19/15	1000
Relinquished by: [signature]	9/19/15	1200	Received by:		
Relinquished by:			Received by Laboratory: [signature]	9/19/15	1200

QSD-01 Revision 01/09/15

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34364

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Phone #: 603 656 5467
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☐ Hard Copy Invoice Required

Project Name: Keeisarge Metallurgical Superfund Site
Project #: NHDES 198708002
Project Location: (NH) MA ME VT NY Other
Protocol: RCRA SDWA NPDES MCP (NHDES) OTHER
Reporting Limits: QAPP GW-1 S-1 EPA DW Other project goal
Quote # 6943 ☐ NH Reimbursement Pricing
PO # 0089493

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	Matrix: SOLID	Matrix: OTHER	Preservation Method: HCl	Preservation Method: HNO_3	Preservation Method: H_2SO_4	Preservation Method: NaOH	Preservation Method: MeOH	Sampling: DATE	Sampling: TIME	Sampling: SAMPLER	☒ VOC 8260 NHDES
34364-12	E03S05-091915-1	1		X						X	9/19/15	0842	AB	X
-13	E03S05-091915-2	1		X						X	9/19/15	0848	AB	X
-14	E04S05-091915-1	1		X						X	9/19/15	0851	AB	X
-15	E05S05-091915-1	1		X						X	9/19/15	0855	AB	X
-16	TRIP BLANK		X			X								X

☐ VOC 8260 ☐ VOC 8260 MADEP ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT ☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gasses-List: ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint ☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB ☐ O&G 1664 ☐ Mineral O&G SM5520F ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ TSS ☐ TDS ☐ TVS ☐ Alkalinity ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness ☐ Total Metals-list: ☐ Dissolved Metals-list: ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide ☐ Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde

Grab (G) or Composite (C)

TAT REQUESTED
Priority (24 hr)* ☒
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 9/21/15

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
Email PDF to vincent.dellorusso@westonsolutions.com and erik.hall@westonsolutions.com

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) vincent.dellorusso@westonsolutions.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 2 °C

CUSTODY RECORD
QSD-01 Revision 01/09/15

	Relinquished by Sampler:	Date	Time	Received by:	Date	Time
		9/19/15	1060		9/19/15	1000
	Relinquished by:	Date	Time	Received by:	Date	Time
		9/19/15	1205			
	Relinquished by:	Date	Time	Received by Laboratory:	Date	Time
					9/19/15	1200

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Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Vinnie DellaRusso
Weston Solutions,Inc.
45 Constitution Ave
Suite 100
Concord, NH 03301

PO Number: 0089493
Job ID: 34520
Date Received: 10/5/15

Project: Kearsarge Metallurgical Superfund Site NHDES198708002

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 10/15/2015
Total number of pages: 17

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Lab ID: 34520

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
CB5-6-100215-1	Water	10/2/2015 14:00	34520-001	
				VOCs 8021 Halocarbons in water by 8260
BF-100215-1-1	Solid	10/2/2015 12:15	34520-002	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
BF-100215-2-1	Solid	10/2/2015 13:10	34520-003	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
Trip Blank	Solid	10/2/2015 0:00	34520-004	
				VOCs 8021 Halocarbons in solid by 8260
Trip Blank	Water	10/2/2015 0:00	34520-005	
				VOCs 8021 Halocarbons in water by 8260

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34520
Sample#: 34520-001
Sample ID: CB5-6-100215-1
Matrix: Water
Sampled: 10/2/15 14:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
chloromethane	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
vinyl chloride	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
bromomethane	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
chloroethane	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
trichlorofluoromethane	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
1,1-dichloroethene	U	1	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
methylene chloride	U	5	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
trans-1,2-dichloroethene	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
1,1-dichloroethane	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
cis-1,2-dichloroethene	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
chloroform	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
1,1,1-trichloroethane	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
carbon tetrachloride	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
1,2-dichloroethane	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
trichloroethene	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
1,2-dichloropropane	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
bromodichloromethane	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
cis-1,3-dichloropropene	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
trans-1,3-dichloropropene	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
1,1,2-trichloroethane	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
tetrachloroethene	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
dibromochloromethane	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
chlorobenzene	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
1,1,1,2-tetrachloroethane	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
bromoform	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
1,1,2,2-tetrachloroethane	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
1,3-dichlorobenzene	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
1,4-dichlorobenzene	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
1,2-dichlorobenzene	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
1,2,4-trichlorobenzene	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
1,2,3-trichlorobenzene	U	2	ug/L	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	97	78-114	%	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
toluene-D8 SUR	106	88-110	%	1	LMM			1502997	10/9/15	19:38	SW5030C8260C
4-bromofluorobenzene SUR	111	86-115	%	1	LMM			1502997	10/9/15	19:38	SW5030C8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34520
Sample#: 34520-005
Sample ID: Trip Blank
Matrix: Water
Sampled: 10/2/15 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
chloromethane	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
vinyl chloride	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
bromomethane	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
chloroethane	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
trichlorofluoromethane	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
1,1-dichloroethene	U	1	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
methylene chloride	U	5	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
trans-1,2-dichloroethene	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
1,1-dichloroethane	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
cis-1,2-dichloroethene	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
chloroform	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
1,1,1-trichloroethane	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
carbon tetrachloride	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
1,2-dichloroethane	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
trichloroethene	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
1,2-dichloropropane	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
bromodichloromethane	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
cis-1,3-dichloropropene	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
trans-1,3-dichloropropene	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
1,1,2-trichloroethane	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
tetrachloroethene	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
dibromochloromethane	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
chlorobenzene	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
1,1,1,2-tetrachloroethane	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
bromoform	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
1,1,2,2-tetrachloroethane	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
1,3-dichlorobenzene	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
1,4-dichlorobenzene	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
1,2-dichlorobenzene	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
1,2,4-trichlorobenzene	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
1,2,3-trichlorobenzene	U	2	ug/L	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	99	78-114	%	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
toluene-D8 SUR	106	88-110	%	1	LMM			1502997	10/9/15	15:15	SW5030C8260C
4-bromofluorobenzene SUR	105	86-115	%	1	LMM			1502997	10/9/15	15:15	SW5030C8260C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 34520

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 0 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.
The sample, 34520-003, was preserved in methanol at the lab on 10/7/15.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

VOC: The surrogate a,a,a-trifluorotoluene was above the acceptance criteria in the sample 34520-002. Since no targets were detected above the quantitation limit, there is no impact to the data.

Laboratory Control Sample Results

VOC: The LCS/D1502997 did not meet the acceptance criteria for bromomethane and trichloroethene. These compounds showed high recovery. There is no impact to the data as these analytes were not detected in the associated samples.
VOC: The MLCS/D8243 did not meet the acceptance criteria for bromomethane and chloroethane. These compounds showed high recovery. There is no impact to the data as these analytes were not detected in the associated samples.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

Data Qualifiers

U = This compound was analyzed for, but not detected above the associated detection limit.
J = The analytical result was below the instrument calibration range, but above the detection limit. The reported concentration is an estimate.

- QC Association Table -

Analysis	QC Number	Field ID	Lab ID
VOCs 8021 Halocarbons SW5030C8260C			
	1502997	CB5-6-100215-1	34520-001
		Trip Blank	34520-005
VOCs 8021 Halocarbons SW5035A8260C			
	8243	BF-100215-1-1	34520-002
		BF-100215-2-1	34520-003
		Trip Blank	34520-004

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	BLK1502997	dichlorodifluoromethane		<	2	ug/L						
		chloromethane		<	2	ug/L						
		vinyl chloride		<	2	ug/L						
		bromomethane		<	2	ug/L						
		chloroethane		<	2	ug/L						
		trichlorofluoromethane		<	2	ug/L						
		1,1-dichloroethene		<	1	ug/L						
		methylene chloride		<	5	ug/L						
		trans-1,2-dichloroethene		<	2	ug/L						
		1,1-dichloroethane		<	2	ug/L						
		cis-1,2-dichloroethene		<	2	ug/L						
		chloroform		<	2	ug/L						
		1,1,1-trichloroethane		<	2	ug/L						
		carbon tetrachloride		<	2	ug/L						
		1,2-dichloroethane		<	2	ug/L						
		trichloroethene		<	2	ug/L						
		1,2-dichloropropane		<	2	ug/L						
		bromodichloromethane		<	0.6	ug/L						
		cis-1,3-dichloropropene		<	2	ug/L						
		trans-1,3-dichloropropene		<	2	ug/L						
		1,1,2-trichloroethane		<	2	ug/L						
		tetrachloroethene		<	2	ug/L						
		dibromochloromethane		<	2	ug/L						
		chlorobenzene		<	2	ug/L						
		1,1,1,2-tetrachloroethane		<	2	ug/L						
		bromoform		<	2	ug/L						
		1,1,2,2-tetrachloroethane		<	2	ug/L						
		1,3-dichlorobenzene		<	2	ug/L						
		1,4-dichlorobenzene		<	2	ug/L						
		1,2-dichlorobenzene		<	2	ug/L						
		1,2,4-trichlorobenzene		<	2	ug/L						
		1,2,3-trichlorobenzene		<	2	ug/L						
		dibromofluoromethane SUR			94	%			78	114		
		toluene-D8 SUR			106	%			88	110		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030C8260C	LCS1502997	dichlorodifluoromethane		20	ug/L	20	101		70	130		
		chloromethane		23	ug/L	20	116		70	130		
		vinyl chloride		22	ug/L	20	108		70	130		
		bromomethane		31	ug/L	20	156	*	70	130		
		chloroethane		16	ug/L	20	81		70	130		
		trichlorofluoromethane		23	ug/L	20	113		70	130		
		1,1-dichloroethene		20	ug/L	20	101		70	130		
		methylene chloride		21	ug/L	20	106		70	130		
		trans-1,2-dichloroethene		22	ug/L	20	111		70	130		
		1,1-dichloroethane		20	ug/L	20	102		70	130		
		cis-1,2-dichloroethene		21	ug/L	20	105		70	130		
		chloroform		21	ug/L	20	107		70	130		
		1,1,1-trichloroethane		22	ug/L	20	112		70	130		
		carbon tetrachloride		21	ug/L	20	106		70	130		
		1,2-dichloroethane		24	ug/L	20	118		70	130		
		trichloroethene		25	ug/L	20	127		70	130		
		1,2-dichloropropane		22	ug/L	20	108		70	130		
		bromodichloromethane		21	ug/L	20	106		70	130		
		cis-1,3-dichloropropene		21	ug/L	20	105		70	130		
		trans-1,3-dichloropropene		21	ug/L	20	104		70	130		
		1,1,2-trichloroethane		21	ug/L	20	104		70	130		
		tetrachloroethene		21	ug/L	20	104		70	130		
		dibromochloromethane		17	ug/L	20	84		70	130		
		chlorobenzene		19	ug/L	20	95		70	130		
		1,1,1,2-tetrachloroethane		19	ug/L	20	94		70	130		
		bromoform		17	ug/L	20	84		70	130		
		1,1,2,2-tetrachloroethane		16	ug/L	20	80		70	130		
		1,3-dichlorobenzene		19	ug/L	20	95		70	130		
		1,4-dichlorobenzene		19	ug/L	20	96		70	130		
		1,2-dichlorobenzene		19	ug/L	20	94		70	130		
		1,2,4-trichlorobenzene		18	ug/L	20	89		70	130		
		1,2,3-trichlorobenzene		18	ug/L	20	88		70	130		
		dibromofluoromethane SUR		105	%				78	114		
		toluene-D8 SUR		106	%				88	110		
		4-bromofluorobenzene SUR		108	%				86	115		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030C8260C	LCSD1502997	dichlorodifluoromethane		20	ug/L	20	102		70	130		20
		chloromethane		24	ug/L	20	122		70	130		20
		vinyl chloride		23	ug/L	20	113		70	130		20
		bromomethane		34	ug/L	20	169	*	70	130		20
		chloroethane		16	ug/L	20	82		70	130		20
		trichlorofluoromethane		24	ug/L	20	119		70	130		20
		1,1-dichloroethene		22	ug/L	20	108		70	130		20
		methylene chloride		22	ug/L	20	110		70	130		20
		trans-1,2-dichloroethene		24	ug/L	20	118		70	130		20
		1,1-dichloroethane		21	ug/L	20	107		70	130		20
		cis-1,2-dichloroethene		22	ug/L	20	111		70	130		20
		chloroform		23	ug/L	20	113		70	130		20
		1,1,1-trichloroethane		24	ug/L	20	121		70	130		20
		carbon tetrachloride		23	ug/L	20	115		70	130		20
		1,2-dichloroethane		25	ug/L	20	123		70	130		20
		trichloroethene		27	ug/L	20	133	*	70	130		20
		1,2-dichloropropane		23	ug/L	20	114		70	130		20
		bromodichloromethane		23	ug/L	20	115		70	130		20
		cis-1,3-dichloropropene		22	ug/L	20	112		70	130		20
		trans-1,3-dichloropropene		23	ug/L	20	113		70	130		20
		1,1,2-trichloroethane		21	ug/L	20	107		70	130		20
		tetrachloroethene		22	ug/L	20	112		70	130		20
		dibromochloromethane		18	ug/L	20	92		70	130		20
		chlorobenzene		20	ug/L	20	99		70	130		20
		1,1,1,2-tetrachloroethane		20	ug/L	20	100		70	130		20
		bromoform		19	ug/L	20	93		70	130		20
		1,1,2,2-tetrachloroethane		17	ug/L	20	85		70	130		20
		1,3-dichlorobenzene		20	ug/L	20	98		70	130		20
		1,4-dichlorobenzene		20	ug/L	20	99		70	130		20
		1,2-dichlorobenzene		20	ug/L	20	98		70	130		20
		1,2,4-trichlorobenzene		19	ug/L	20	93		70	130		20
		1,2,3-trichlorobenzene		18	ug/L	20	90		70	130		20
		dibromofluoromethane SUR		103	%				78	114		
		toluene-D8 SUR		107	%				88	110		
		4-bromofluorobenzene SUR		110	%				86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260C	MB8243	dichlorodifluoromethane		<	0.1	ug/g						
		chloromethane		<	0.1	ug/g						
		vinyl chloride		<	0.1	ug/g						
		bromomethane		<	0.2	ug/g						
		chloroethane		<	0.1	ug/g						
		trichlorofluoromethane		<	0.1	ug/g						
		1,1-dichloroethene		<	0.02	ug/g						
		methylene chloride		<	0.2	ug/g						
		trans-1,2-dichloroethene		<	0.1	ug/g						
		1,1-dichloroethane		<	0.1	ug/g						
		cis-1,2-dichloroethene		<	0.1	ug/g						
		chloroform		<	0.1	ug/g						
		1,1,1-trichloroethane		<	0.1	ug/g						
		carbon tetrachloride		<	0.1	ug/g						
		1,2-dichloroethane		<	0.1	ug/g						
		trichloroethene		J	0.1	ug/g						
		1,2-dichloropropane		<	0.1	ug/g						
		bromodichloromethane		<	0.1	ug/g						
		cis-1,3-dichloropropene		<	0.1	ug/g						
		trans-1,3-dichloropropene		<	0.1	ug/g						
		1,1,2-trichloroethane		<	0.1	ug/g						
		tetrachloroethene		<	0.1	ug/g						
		dibromochloromethane		<	0.1	ug/g						
		chlorobenzene		<	0.1	ug/g						
		1,1,1,2-tetrachloroethane		<	0.1	ug/g						
		bromoform		<	0.1	ug/g						
		1,1,2,2-tetrachloroethane		<	0.1	ug/g						
		1,3-dichlorobenzene		<	0.1	ug/g						
		1,4-dichlorobenzene		<	0.1	ug/g						
		1,2-dichlorobenzene		<	0.1	ug/g						
		1,2,4-trichlorobenzene		<	0.1	ug/g						
		1,2,3-trichlorobenzene		<	0.1	ug/g						
		dibromofluoromethane SUR			86	%			78	114		
		toluene-D8 SUR			105	%			88	110		
		4-bromofluorobenzene SUR			107	%			86	115		
		a,a,a-trifluorotoluene SUR			111	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCS8243	dichlorodifluoromethane		1.0	ug/g	1	97		70	130		
		chloromethane		0.9	ug/g	1	95		70	130		
		vinyl chloride		1.1	ug/g	1	110		70	130		
		bromomethane		1.5	ug/g	1	149	*	70	130		
		chloroethane		1.3	ug/g	1	127		70	130		
		trichlorofluoromethane		1.2	ug/g	1	117		70	130		
		1,1-dichloroethene		1.0	ug/g	1	103		70	130		
		methylene chloride		1.2	ug/g	1	117		70	130		
		trans-1,2-dichloroethene		1.1	ug/g	1	114		70	130		
		1,1-dichloroethane		1.1	ug/g	1	105		70	130		
		cis-1,2-dichloroethene		1.1	ug/g	1	107		70	130		
		chloroform		1.1	ug/g	1	108		70	130		
		1,1,1-trichloroethane		1.1	ug/g	1	113		70	130		
		carbon tetrachloride		1.0	ug/g	1	102		70	130		
		1,2-dichloroethane		1.2	ug/g	1	119		70	130		
		trichloroethene		1.2	ug/g	1	120		70	130		
		1,2-dichloropropane		1.2	ug/g	1	115		70	130		
		bromodichloromethane		1.0	ug/g	1	104		70	130		
		cis-1,3-dichloropropene		1.1	ug/g	1	110		70	130		
		trans-1,3-dichloropropene		1.1	ug/g	1	111		70	130		
		1,1,2-trichloroethane		1.1	ug/g	1	111		70	130		
		tetrachloroethene		1.1	ug/g	1	110		70	130		
		dibromochloromethane		0.8	ug/g	1	82		70	130		
		chlorobenzene		1.0	ug/g	1	100		70	130		
		1,1,1,2-tetrachloroethane		1.0	ug/g	1	97		70	130		
		bromoform		0.8	ug/g	1	85		70	130		
		1,1,2,2-tetrachloroethane		0.9	ug/g	1	93		70	130		
		1,3-dichlorobenzene		1.0	ug/g	1	100		70	130		
		1,4-dichlorobenzene		1.0	ug/g	1	103		70	130		
		1,2-dichlorobenzene		1.0	ug/g	1	102		70	130		
		1,2,4-trichlorobenzene		1.1	ug/g	1	105		70	130		
		1,2,3-trichlorobenzene		1.1	ug/g	1	107		70	130		
		dibromofluoromethane SUR		99	%				78	114		
		toluene-D8 SUR		107	%				88	110		
		4-bromofluorobenzene SUR		111	%				86	115		
		a,a,a-trifluorotoluene SUR		121	%				70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCSD8243	dichlorodifluoromethane		0.9	ug/g	1	95		70	130	3	30
		chloromethane		0.9	ug/g	1	89		70	130	6	30
		vinyl chloride		1.0	ug/g	1	104		70	130	6	30
		bromomethane		1.5	ug/g	1	147	*	70	130	1	30
		chloroethane		1.3	ug/g	1	134	*	70	130	5	30
		trichlorofluoromethane		1.1	ug/g	1	110		70	130	5	30
		1,1-dichloroethene		1.0	ug/g	1	97		70	130	6	30
		methylene chloride		1.1	ug/g	1	113		70	130	4	30
		trans-1,2-dichloroethene		1.1	ug/g	1	110		70	130	3	30
		1,1-dichloroethane		1.0	ug/g	1	103		70	130	2	30
		cis-1,2-dichloroethene		1.0	ug/g	1	104		70	130	2	30
		chloroform		1.1	ug/g	1	108		70	130	0	30
		1,1,1-trichloroethane		1.1	ug/g	1	107		70	130	5	30
		carbon tetrachloride		1.0	ug/g	1	98		70	130	4	30
		1,2-dichloroethane		1.2	ug/g	1	120		70	130	1	30
		trichloroethene		1.2	ug/g	1	121		70	130	1	30
		1,2-dichloropropane		1.1	ug/g	1	111		70	130	4	30
		bromodichloromethane		1.0	ug/g	1	100		70	130	4	30
		cis-1,3-dichloropropene		1.1	ug/g	1	107		70	130	3	30
		trans-1,3-dichloropropene		1.1	ug/g	1	109		70	130	1	30
		1,1,2-trichloroethane		1.1	ug/g	1	110		70	130	1	30
		tetrachloroethene		1.0	ug/g	1	104		70	130	5	30
		dibromochloromethane		0.8	ug/g	1	81		70	130	2	30
		chlorobenzene		1.0	ug/g	1	97		70	130	3	30
		1,1,1,2-tetrachloroethane		0.9	ug/g	1	95		70	130	3	30
		bromoform		0.8	ug/g	1	82		70	130	3	30
		1,1,2,2-tetrachloroethane		0.9	ug/g	1	86		70	130	8	30
		1,3-dichlorobenzene		1.0	ug/g	1	98		70	130	1	30
		1,4-dichlorobenzene		1.0	ug/g	1	99		70	130	3	30
		1,2-dichlorobenzene		1.0	ug/g	1	101		70	130	1	30
		1,2,4-trichlorobenzene		1.0	ug/g	1	103		70	130	2	30
		1,2,3-trichlorobenzene		1.0	ug/g	1	103		70	130	3	30
		dibromofluoromethane SUR		96	%				78	114		
		toluene-D8 SUR		106	%				88	110		
		4-bromofluorobenzene SUR		112	%				86	115		
		a,a,a-trifluorotoluene SUR		115	%				70	130		

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34520

Company Name: Weston Solutions
Company Address: 43 North Main
Report To: Vincent DelloRusso
Phone #: 6036565467
Invoice to Email: Vincent.DelloRusso@westonsolutions.com
☐ Hard Copy Invoice Required

Project Name: Kearsarge Metallurgical Superfund Site
Project #: NHDES 198708002
Project Location: NH MA ME VT NY Other
Protocol: RCRA MCP SDWA NHDES NPDES OTHER
Reporting Limits: QAPP EPA DW GW-1 S-1 Other Program
Quote # 6943 ☐ NH Reimbursement Pricing
PO # EX089493

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	Matrix: SOLID	Matrix: OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER
31520-01	CB5-6-100215-1	2	X			X					10/2/15	1400	GH
-02	BF-100215-1-1	1	X	X						X		1215	
-03	BF-100215-2-1	1		X								1310	
-04	TRIP BLANK			X						X			
-05	TRIP BLANK		X			X							

ANALYSIS REQUEST columns: ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP ☐ VOC 8260 ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT ☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List: ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint ☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB ☐ O&G 1664 ☐ Mineral O&G SM5520F ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness ☐ Total Metals-list: ☐ Dissolved Metals-list: ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide ☐ Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde ☐ Grab (G) or Composite (C)

GH 10/2/15

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) X
*Date Needed _____

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
Please Preserve BF-100201-2-1 in MEOH vial at Laboratory.

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) Erik.Hill@westonsolutions.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#) _____

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 1 °C

CUSTODY RECORD
QSD-01 Revision 01/09/15

	Relinquished by Sampler:	Date	Time	Received by:	Date	Time
1	GH	10/2/15	1500		10/2/15	1500
2		10/5/15	1403		10/5/15	14:05
3		10/5/15	15:10	Received by Laboratory:	10/5/15	1510

APPENDIX G

BACKFILL MATERIAL ANALYTICAL DATA PACKAGES

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Vinnie DellaRusso
Weston Solutions,Inc.
45 Constitution Ave
Suite 100
Concord, NH 03301

PO Number: 0089493
Job ID: 34520
Date Received: 10/5/15

Project: Kearsarge Metallurgical Superfund Site NHDES198708002

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 10/15/2015
Total number of pages: 17

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Lab ID: 34520

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
CB5-6-100215-1	Water	10/2/2015 14:00	34520-001	
				VOCs 8021 Halocarbons in water by 8260
BF-100215-1-1	Solid	10/2/2015 12:15	34520-002	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
BF-100215-2-1	Solid	10/2/2015 13:10	34520-003	
				Percent Dry Matter for Sample Calc by SM2540B,G
				VOCs 8021 Halocarbons in solid by 8260
Trip Blank	Solid	10/2/2015 0:00	34520-004	
				VOCs 8021 Halocarbons in solid by 8260
Trip Blank	Water	10/2/2015 0:00	34520-005	
				VOCs 8021 Halocarbons in water by 8260

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34520

Sample#: 34520-002

Sample ID: BF-100215-1-1

Matrix: Solid Percent Dry: 79.2% Results expressed on a dry weight basis.

Sampled: 10/2/15 12:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
bromomethane	U	0.3	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
1,1-dichloroethene	U	0.03	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
methylene chloride	U	0.3	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	84	78-114	%	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
toluene-D8 SUR	106	88-110	%	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
4-bromofluorobenzene SUR	105	86-115	%	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C
a,a,a-trifluorotoluene SUR	139 *	70-130	%	1	LMM	10/7/15	14:13	8243	10/10/15	0:03	SW5035A8260C

**** This surrogate is above the acceptance criteria. Since no targets were detected above the quantitation limit, there is no impact to the data.***

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002

Job ID: 34520

Sample#: 34520-003

Sample ID: BF-100215-2-1

Matrix: Solid Percent Dry: 90.6% Results expressed on a dry weight basis.

Sampled: 10/2/15 13:10

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
bromomethane	U	0.2	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
1,1-dichloroethene	U	0.02	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
methylene chloride	U	0.2	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	84	78-114	%	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
toluene-D8 SUR	107	88-110	%	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
4-bromofluorobenzene SUR	106	86-115	%	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C
a,a,a-trifluorotoluene SUR	119	70-130	%	1	LMM	10/7/15	14:13	8243	10/10/15	0:33	SW5035A8260C

Project ID: Kearsarge Metallurgical Superfund Site NHDES198708002
Job ID: 34520
Sample#: 34520-004
Sample ID: Trip Blank
Matrix: Solid
Sampled: 10/2/15 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Prep Time	Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
chloromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
vinyl chloride	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
bromomethane	U	0.2	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
chloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
trichlorofluoromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
1,1-dichloroethene	U	0.02	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
methylene chloride	U	0.2	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
trans-1,2-dichloroethene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
1,1-dichloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
cis-1,2-dichloroethene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
chloroform	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
1,1,1-trichloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
carbon tetrachloride	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
1,2-dichloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
trichloroethene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
1,2-dichloropropane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
bromodichloromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
cis-1,3-dichloropropene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
trans-1,3-dichloropropene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
1,1,2-trichloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
tetrachloroethene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
dibromochloromethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
chlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
1,1,1,2-tetrachloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
bromoform	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
1,1,2,2-tetrachloroethane	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
1,3-dichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
1,4-dichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
1,2-dichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
1,2,4-trichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
1,2,3-trichlorobenzene	U	0.1	ug/g	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
Surrogate Recovery		Limits									
dibromofluoromethane SUR	89	78-114	%	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
toluene-D8 SUR	107	88-110	%	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
4-bromofluorobenzene SUR	109	86-115	%	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C
a,a,a-trifluorotoluene SUR	118	70-130	%	1	LMM	10/7/15	14:13	8243	10/9/15	15:45	SW5035A8260C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Case Narrative
Lab # 34520

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 0 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.
The sample, 34520-003, was preserved in methanol at the lab on 10/7/15.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

VOC: The surrogate a,a,a-trifluorotoluene was above the acceptance criteria in the sample 34520-002. Since no targets were detected above the quantitation limit, there is no impact to the data.

Laboratory Control Sample Results

VOC: The LCS/D1502997 did not meet the acceptance criteria for bromomethane and trichloroethene. These compounds showed high recovery. There is no impact to the data as these analytes were not detected in the associated samples.
VOC: The MLCS/D8243 did not meet the acceptance criteria for bromomethane and chloroethane. These compounds showed high recovery. There is no impact to the data as these analytes were not detected in the associated samples.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

Data Qualifiers

U = This compound was analyzed for, but not detected above the associated detection limit.
J = The analytical result was below the instrument calibration range, but above the detection limit. The reported concentration is an estimate.

- QC Association Table -

Analysis	QC Number	Field ID	Lab ID
VOCs 8021 Halocarbons SW5030C8260C			
	1502997	CB5-6-100215-1	34520-001
		Trip Blank	34520-005
VOCs 8021 Halocarbons SW5035A8260C			
	8243	BF-100215-1-1	34520-002
		BF-100215-2-1	34520-003
		Trip Blank	34520-004

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	BLK1502997	dichlorodifluoromethane		<	2	ug/L						
		chloromethane		<	2	ug/L						
		vinyl chloride		<	2	ug/L						
		bromomethane		<	2	ug/L						
		chloroethane		<	2	ug/L						
		trichlorofluoromethane		<	2	ug/L						
		1,1-dichloroethene		<	1	ug/L						
		methylene chloride		<	5	ug/L						
		trans-1,2-dichloroethene		<	2	ug/L						
		1,1-dichloroethane		<	2	ug/L						
		cis-1,2-dichloroethene		<	2	ug/L						
		chloroform		<	2	ug/L						
		1,1,1-trichloroethane		<	2	ug/L						
		carbon tetrachloride		<	2	ug/L						
		1,2-dichloroethane		<	2	ug/L						
		trichloroethene		<	2	ug/L						
		1,2-dichloropropane		<	2	ug/L						
		bromodichloromethane		<	0.6	ug/L						
		cis-1,3-dichloropropene		<	2	ug/L						
		trans-1,3-dichloropropene		<	2	ug/L						
		1,1,2-trichloroethane		<	2	ug/L						
		tetrachloroethene		<	2	ug/L						
		dibromochloromethane		<	2	ug/L						
		chlorobenzene		<	2	ug/L						
		1,1,1,2-tetrachloroethane		<	2	ug/L						
		bromoform		<	2	ug/L						
		1,1,2,2-tetrachloroethane		<	2	ug/L						
		1,3-dichlorobenzene		<	2	ug/L						
		1,4-dichlorobenzene		<	2	ug/L						
		1,2-dichlorobenzene		<	2	ug/L						
		1,2,4-trichlorobenzene		<	2	ug/L						
		1,2,3-trichlorobenzene		<	2	ug/L						
		dibromofluoromethane SUR			94	%			78	114		
		toluene-D8 SUR			106	%			88	110		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030C8260C	LCS1502997	dichlorodifluoromethane		20	ug/L	20	101		70	130		
		chloromethane		23	ug/L	20	116		70	130		
		vinyl chloride		22	ug/L	20	108		70	130		
		bromomethane		31	ug/L	20	156	*	70	130		
		chloroethane		16	ug/L	20	81		70	130		
		trichlorofluoromethane		23	ug/L	20	113		70	130		
		1,1-dichloroethene		20	ug/L	20	101		70	130		
		methylene chloride		21	ug/L	20	106		70	130		
		trans-1,2-dichloroethene		22	ug/L	20	111		70	130		
		1,1-dichloroethane		20	ug/L	20	102		70	130		
		cis-1,2-dichloroethene		21	ug/L	20	105		70	130		
		chloroform		21	ug/L	20	107		70	130		
		1,1,1-trichloroethane		22	ug/L	20	112		70	130		
		carbon tetrachloride		21	ug/L	20	106		70	130		
		1,2-dichloroethane		24	ug/L	20	118		70	130		
		trichloroethene		25	ug/L	20	127		70	130		
		1,2-dichloropropane		22	ug/L	20	108		70	130		
		bromodichloromethane		21	ug/L	20	106		70	130		
		cis-1,3-dichloropropene		21	ug/L	20	105		70	130		
		trans-1,3-dichloropropene		21	ug/L	20	104		70	130		
		1,1,2-trichloroethane		21	ug/L	20	104		70	130		
		tetrachloroethene		21	ug/L	20	104		70	130		
		dibromochloromethane		17	ug/L	20	84		70	130		
		chlorobenzene		19	ug/L	20	95		70	130		
		1,1,1,2-tetrachloroethane		19	ug/L	20	94		70	130		
		bromoform		17	ug/L	20	84		70	130		
		1,1,2,2-tetrachloroethane		16	ug/L	20	80		70	130		
		1,3-dichlorobenzene		19	ug/L	20	95		70	130		
		1,4-dichlorobenzene		19	ug/L	20	96		70	130		
		1,2-dichlorobenzene		19	ug/L	20	94		70	130		
		1,2,4-trichlorobenzene		18	ug/L	20	89		70	130		
		1,2,3-trichlorobenzene		18	ug/L	20	88		70	130		
		dibromofluoromethane SUR		105	%				78	114		
		toluene-D8 SUR		106	%				88	110		
		4-bromofluorobenzene SUR		108	%				86	115		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030C8260C	LCSD1502997	dichlorodifluoromethane		20	ug/L	20	102		70	130		20
		chloromethane		24	ug/L	20	122		70	130		20
		vinyl chloride		23	ug/L	20	113		70	130		20
		bromomethane		34	ug/L	20	169	*	70	130		20
		chloroethane		16	ug/L	20	82		70	130		20
		trichlorofluoromethane		24	ug/L	20	119		70	130		20
		1,1-dichloroethene		22	ug/L	20	108		70	130		20
		methylene chloride		22	ug/L	20	110		70	130		20
		trans-1,2-dichloroethene		24	ug/L	20	118		70	130		20
		1,1-dichloroethane		21	ug/L	20	107		70	130		20
		cis-1,2-dichloroethene		22	ug/L	20	111		70	130		20
		chloroform		23	ug/L	20	113		70	130		20
		1,1,1-trichloroethane		24	ug/L	20	121		70	130		20
		carbon tetrachloride		23	ug/L	20	115		70	130		20
		1,2-dichloroethane		25	ug/L	20	123		70	130		20
		trichloroethene		27	ug/L	20	133	*	70	130		20
		1,2-dichloropropane		23	ug/L	20	114		70	130		20
		bromodichloromethane		23	ug/L	20	115		70	130		20
		cis-1,3-dichloropropene		22	ug/L	20	112		70	130		20
		trans-1,3-dichloropropene		23	ug/L	20	113		70	130		20
		1,1,2-trichloroethane		21	ug/L	20	107		70	130		20
		tetrachloroethene		22	ug/L	20	112		70	130		20
		dibromochloromethane		18	ug/L	20	92		70	130		20
		chlorobenzene		20	ug/L	20	99		70	130		20
		1,1,1,2-tetrachloroethane		20	ug/L	20	100		70	130		20
		bromoform		19	ug/L	20	93		70	130		20
		1,1,2,2-tetrachloroethane		17	ug/L	20	85		70	130		20
		1,3-dichlorobenzene		20	ug/L	20	98		70	130		20
		1,4-dichlorobenzene		20	ug/L	20	99		70	130		20
		1,2-dichlorobenzene		20	ug/L	20	98		70	130		20
		1,2,4-trichlorobenzene		19	ug/L	20	93		70	130		20
		1,2,3-trichlorobenzene		18	ug/L	20	90		70	130		20
		dibromofluoromethane SUR		103	%				78	114		
		toluene-D8 SUR		107	%				88	110		
		4-bromofluorobenzene SUR		110	%				86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260C	MB8243	dichlorodifluoromethane		<	0.1	ug/g						
		chloromethane		<	0.1	ug/g						
		vinyl chloride		<	0.1	ug/g						
		bromomethane		<	0.2	ug/g						
		chloroethane		<	0.1	ug/g						
		trichlorofluoromethane		<	0.1	ug/g						
		1,1-dichloroethene		<	0.02	ug/g						
		methylene chloride		<	0.2	ug/g						
		trans-1,2-dichloroethene		<	0.1	ug/g						
		1,1-dichloroethane		<	0.1	ug/g						
		cis-1,2-dichloroethene		<	0.1	ug/g						
		chloroform		<	0.1	ug/g						
		1,1,1-trichloroethane		<	0.1	ug/g						
		carbon tetrachloride		<	0.1	ug/g						
		1,2-dichloroethane		<	0.1	ug/g						
		trichloroethene		J	0.1	ug/g						
		1,2-dichloropropane		<	0.1	ug/g						
		bromodichloromethane		<	0.1	ug/g						
		cis-1,3-dichloropropene		<	0.1	ug/g						
		trans-1,3-dichloropropene		<	0.1	ug/g						
		1,1,2-trichloroethane		<	0.1	ug/g						
		tetrachloroethene		<	0.1	ug/g						
		dibromochloromethane		<	0.1	ug/g						
		chlorobenzene		<	0.1	ug/g						
		1,1,1,2-tetrachloroethane		<	0.1	ug/g						
		bromoform		<	0.1	ug/g						
		1,1,2,2-tetrachloroethane		<	0.1	ug/g						
		1,3-dichlorobenzene		<	0.1	ug/g						
		1,4-dichlorobenzene		<	0.1	ug/g						
		1,2-dichlorobenzene		<	0.1	ug/g						
		1,2,4-trichlorobenzene		<	0.1	ug/g						
		1,2,3-trichlorobenzene		<	0.1	ug/g						
		dibromofluoromethane SUR			86	%			78	114		
		toluene-D8 SUR			105	%			88	110		
		4-bromofluorobenzene SUR			107	%			86	115		
		a,a,a-trifluorotoluene SUR			111	%			70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCS8243	dichlorodifluoromethane		1.0	ug/g	1	97		70	130		
		chloromethane		0.9	ug/g	1	95		70	130		
		vinyl chloride		1.1	ug/g	1	110		70	130		
		bromomethane		1.5	ug/g	1	149	*	70	130		
		chloroethane		1.3	ug/g	1	127		70	130		
		trichlorofluoromethane		1.2	ug/g	1	117		70	130		
		1,1-dichloroethene		1.0	ug/g	1	103		70	130		
		methylene chloride		1.2	ug/g	1	117		70	130		
		trans-1,2-dichloroethene		1.1	ug/g	1	114		70	130		
		1,1-dichloroethane		1.1	ug/g	1	105		70	130		
		cis-1,2-dichloroethene		1.1	ug/g	1	107		70	130		
		chloroform		1.1	ug/g	1	108		70	130		
		1,1,1-trichloroethane		1.1	ug/g	1	113		70	130		
		carbon tetrachloride		1.0	ug/g	1	102		70	130		
		1,2-dichloroethane		1.2	ug/g	1	119		70	130		
		trichloroethene		1.2	ug/g	1	120		70	130		
		1,2-dichloropropane		1.2	ug/g	1	115		70	130		
		bromodichloromethane		1.0	ug/g	1	104		70	130		
		cis-1,3-dichloropropene		1.1	ug/g	1	110		70	130		
		trans-1,3-dichloropropene		1.1	ug/g	1	111		70	130		
		1,1,2-trichloroethane		1.1	ug/g	1	111		70	130		
		tetrachloroethene		1.1	ug/g	1	110		70	130		
		dibromochloromethane		0.8	ug/g	1	82		70	130		
		chlorobenzene		1.0	ug/g	1	100		70	130		
		1,1,1,2-tetrachloroethane		1.0	ug/g	1	97		70	130		
		bromoform		0.8	ug/g	1	85		70	130		
		1,1,2,2-tetrachloroethane		0.9	ug/g	1	93		70	130		
		1,3-dichlorobenzene		1.0	ug/g	1	100		70	130		
		1,4-dichlorobenzene		1.0	ug/g	1	103		70	130		
		1,2-dichlorobenzene		1.0	ug/g	1	102		70	130		
		1,2,4-trichlorobenzene		1.1	ug/g	1	105		70	130		
		1,2,3-trichlorobenzene		1.1	ug/g	1	107		70	130		
		dibromofluoromethane SUR		99	%				78	114		
		toluene-D8 SUR		107	%				88	110		
		4-bromofluorobenzene SUR		111	%				86	115		
		a,a,a-trifluorotoluene SUR		121	%				70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260C	MLCSD8243	dichlorodifluoromethane		0.9	ug/g	1	95		70	130	3	30
		chloromethane		0.9	ug/g	1	89		70	130	6	30
		vinyl chloride		1.0	ug/g	1	104		70	130	6	30
		bromomethane		1.5	ug/g	1	147	*	70	130	1	30
		chloroethane		1.3	ug/g	1	134	*	70	130	5	30
		trichlorofluoromethane		1.1	ug/g	1	110		70	130	5	30
		1,1-dichloroethene		1.0	ug/g	1	97		70	130	6	30
		methylene chloride		1.1	ug/g	1	113		70	130	4	30
		trans-1,2-dichloroethene		1.1	ug/g	1	110		70	130	3	30
		1,1-dichloroethane		1.0	ug/g	1	103		70	130	2	30
		cis-1,2-dichloroethene		1.0	ug/g	1	104		70	130	2	30
		chloroform		1.1	ug/g	1	108		70	130	0	30
		1,1,1-trichloroethane		1.1	ug/g	1	107		70	130	5	30
		carbon tetrachloride		1.0	ug/g	1	98		70	130	4	30
		1,2-dichloroethane		1.2	ug/g	1	120		70	130	1	30
		trichloroethene		1.2	ug/g	1	121		70	130	1	30
		1,2-dichloropropane		1.1	ug/g	1	111		70	130	4	30
		bromodichloromethane		1.0	ug/g	1	100		70	130	4	30
		cis-1,3-dichloropropene		1.1	ug/g	1	107		70	130	3	30
		trans-1,3-dichloropropene		1.1	ug/g	1	109		70	130	1	30
		1,1,2-trichloroethane		1.1	ug/g	1	110		70	130	1	30
		tetrachloroethene		1.0	ug/g	1	104		70	130	5	30
		dibromochloromethane		0.8	ug/g	1	81		70	130	2	30
		chlorobenzene		1.0	ug/g	1	97		70	130	3	30
		1,1,1,2-tetrachloroethane		0.9	ug/g	1	95		70	130	3	30
		bromoform		0.8	ug/g	1	82		70	130	3	30
		1,1,2,2-tetrachloroethane		0.9	ug/g	1	86		70	130	8	30
		1,3-dichlorobenzene		1.0	ug/g	1	98		70	130	1	30
		1,4-dichlorobenzene		1.0	ug/g	1	99		70	130	3	30
		1,2-dichlorobenzene		1.0	ug/g	1	101		70	130	1	30
		1,2,4-trichlorobenzene		1.0	ug/g	1	103		70	130	2	30
		1,2,3-trichlorobenzene		1.0	ug/g	1	103		70	130	3	30
		dibromofluoromethane SUR		96	%				78	114		
		toluene-D8 SUR		106	%				88	110		
		4-bromofluorobenzene SUR		112	%				86	115		
		a,a,a-trifluorotoluene SUR		115	%				70	130		

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34520

Company Name: Weston Solutions
Company Address: 43 North Main
Report To: Vincent DelloRusso
Phone #: 6036565467
Invoice to Email: Vincent.DelloRusso@westonsolutions.com
☐ Hard Copy Invoice Required

Project Name: Kearsarge Metallurgical Superfund Site
Project #: NHDES 198708002
Project Location: NH MA ME VT NY Other
Protocol: RCRA MCP SDWA NHDES NPDES OTHER
Reporting Limits: QAPP EPA DW GW-1 S-1 Other Program
Quote # 6943 ☐ NH Reimbursement Pricing
PO # EX089493

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	Matrix: SOLID	Matrix: OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER
31520-01	CB5-6-100215-1	2	X			X					10/2/15	1400	GH
-02	BF-100215-1-1	1	X	X						X		1215	
-03	BF-100215-2-1	1		X								1310	
-04	TRIP BLANK			X						X			
-05	TRIP BLANK		X			X							

ANALYSIS REQUEST columns: ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP ☐ VOC 8260 ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT ☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List: ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint ☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB ☐ O&G 1664 ☐ Mineral O&G SM5520F ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness ☐ Total Metals-list: ☐ Dissolved Metals-list: ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide ☐ Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde ☐ Grab (G) or Composite (C)

GH 10/2/15

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) X
*Date Needed _____

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
Please Preserve BF-100201-2-1 in MEOH vial at Laboratory.

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) Erik.Hill@westonsolutions.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#) _____

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 1 °C

CUSTODY RECORD
QSD-01 Revision 01/09/15

	Relinquished by Sampler:	Date	Time	Received by:	Date	Time
1	GH	10/2/15	1500		10/2/15	1500
2		10/5/15	1403		10/5/15	14:05
3		10/5/15	15:10	Received by Laboratory:	10/5/15	1510

APPENDIX H

CEMENT KILN DUST AND LIME KILN DUST MATERIAL ANALYTICAL DATA PACKAGES

Cement and Lime Kiln Dust Data
In-Situ Chemical Oxidation Via Soil Mixing
Kearsarge Superfund Site
Conway, New Hampshire

Analyte	Units	LKD - Bedford	LKD - Marbleton	Dragon CKD	NH SRS
Calcium	(%)	42.4	48.9	31.48	---
Magnesium	(%)	0.5	0.4	1.44	---
Iron	(%)	1	0.4	1.02	---
Aluminum	(%)	2.1	0.7	1.05	---
Strontium	(mg/kg)	501	397		---
Manganese	(mg/kg)	57	109	237	1000
Silicon	(%)	4.4	1.8		---
Barium	(mg/kg)	231	85	63	1000
Potassium	(mg/kg)	6945	2507	9	---
Sodium	(mg/kg)	853	530	171	---
Phosphorus	(mg/kg)	338	128		---
Titanium	(mg/kg)	1222	469		---
Sulfur	(%)	2.1	3.8		---
Silver	(mg/kg)	<2.5	<2.5		89
Arsenic	(mg/kg)	7	<5	23.6	11
Boron	(mg/kg)	79	40	25	1000
Beryllium	(mg/kg)	2	1	0.46	12
Bismuth	(mg/kg)	<7.5	<7.5		---
Cadmium	(mg/kg)	3	3	0.9	33
Cerium	(mg/kg)	29	13		---
Cobalt	(mg/kg)	12	5	4	---
Chromium	(mg/kg)	25	13	49	1000 (III); 130 (IV)
Copper	(mg/kg)	16	9	5	---
Mercury	(mg/kg)	0.11	<0.02	0.05	7
Molybdenum	(mg/kg)	13	25	0.7	---
Nickel	(mg/kg)	90	165	12	400
Lead	(mg/kg)	33	35	54	400
Antimony	(mg/kg)	13	5		9
Scandium	(mg/kg)	7	2		---
Selenium	(mg/kg)	<7.5	<7.5	1.4	180
Tin	(mg/kg)	<11	<11		---
Thallium	(mg/kg)	<4	<4	1.3	10
Vanadium	(mg/kg)	260	506	36	---
Tungsten	(mg/kg)	<7.3	<7.3		---
Zinc	(mg/kg)	34	28	35	1000
Zirconium	(mg/kg)	31	14		---

Notes:
CKD - Cement Kiln Dust
LKD - Lime Kiln Dust
Bedford - Bedford, Quebec quarry for Graymont
Marbleton - Marbleton, Quebec quarry for Graymont
Dragon - Dragon Products Company
mg/kg - milligrams per killogram
NHDES SRS - New Hampshire Department of Environmental Services Soil Remediation Standards

Maine Environmental Laboratory

Report of Analyses

One Main Street Yarmouth, Maine 04096 Tel.: (207) 846-6569 Fax: (207) 846-9066 Email: melab@mel-lab.com

Michael Martunas
Dragon Products Company
PO Box 191
Thomaston, ME 04861

April 28, 2015

Report No.: DPC241-15

Enclosed are the results of the analyses requested for your samples as received by the laboratory. Samples were received in acceptable condition and analyzed within method holding times. All quality control data was within laboratory acceptance limits unless noted. The Limit of Quantitation (LOQ) is the minimum level for reporting quantitative data. The Limit of Detection (LOD) is the minimum level for reporting estimated data. Data reported between the Limit of Quantitation and Limit of Detection are J flagged as estimated. Maine Environmental Laboratory is certified by Maine (cert. #2015007) and New Hampshire NELAP (NH ELAP) (cert. #2031). A list of certified parameters is available on request. The results reported herein conform to the most current NELAP standards where applicable unless otherwise narrated in this report. This report shall not be reproduced except in full without the written consent of the laboratory.

The complete report consists of the following sections:

Maine Environmental Laboratory report
Chain of Custody form

References

EPA - EPA600/4-79-020, Methods for Chemical Analysis of Water and Wastes, USEPA, Cincinnati, Ohio, March 1983.
EPA1 - EPA/600/R-93/100 Methods for the Determination of Inorganic Substances in Environmental Samples, Aug. 1993.
EPA2 - EPA/600R-94/111, Methods for the Determination of Metals in Environmental Samples, Supplement 1, May, 1994.
EPA3-EPA/600/R-06/115,Determination of Trace Elements in DW by Axially Viewed ICP-Atomic Emission Spectrometry,Rev 4.2 Oct. 2003
STM - Standard Methods for the Examination of Water and Wastewater, 18th edition, APHA,AWWA,WPCF, 1992.
SW8- SW846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA, third edition. Updates I-IV, 2007.
CLP - USEPA CLP Statement of Work for Inorganic Superfund Methods, ISM01.2, Exh. D, Sec. 1.6, Jan. 2010.
HACH - Chemical Oxygen Demand, Method 8000, Hach Handbook of Water Analysis, Hach Chemical Company, 1979.
HEX - EPA-821-R-98-002, Method 1664, Rev. A: N-Hexane Extractable Material by Extraction and Gravimetry, Feb. 1999.
AOA - Official Methods of Analysis of the Association of Official Analytical Chemists, 14th edition, 1984.

Authorized signature Jacquelyn R. Villinski

Jacquelyn R. Villinski, Laboratory Director

Maine Environmental Laboratory

Report of Analyses

One Main Street Yarmouth, Maine 04096 Tel.: (207) 846-6569 Fax: (207) 846-9066 Email: melab@mel-lab.com

Michael Martunas
Dragon Products Company
PO Box 191
Thomaston, ME 04861

April 28, 2015

Report No:	DPC241-15	Sampler:	E. Greiner
Date received:	04/14/15	Sampling date:	04/13/15
Project ID:	Semi-annual CKD 04/13/15	Sample matrix:	Solid-Composite
Laboratory ID:	DPC24115-01	Sample ID:	CKD 13/04/22

Data reported on a dry-weight basis.

Parameter	Results		units	Date Analyzed	LOD	LOQ	Method	Reference
Aluminum, total	10500		mg/kg	04/20/15	9	26	3050B/6010B	SW8
Antimony, total	ND		mg/kg	04/20/15	0.5	1.7	3050B/6010B	SW8
Arsenic, total	23.6		mg/kg	04/20/15	0.5	1.7	3050B/6010B	SW8
Barium, total	63		mg/kg	04/20/15	2	5	3050B/6010B	SW8
Beryllium, total	0.46		mg/kg	04/20/15	0.05	0.17	3050B/6010B	SW8
Boron, soluble	25		mg/kg	04/17/15	3	9	H2O/6010B	SW8
Cadmium, total	0.9	J	mg/kg	04/20/15	0.5	1.7	3050B/6010B	SW8
Calcium, total	314800		mg/kg	04/20/15	430	1290	3050B/6010B	SW8
Chromium, total	49		mg/kg	04/20/15	2	5	3050B/6010B	SW8
Cobalt, total	4	J	mg/kg	04/20/15	2	5	3050B/6010B	SW8
Copper, total	5		mg/kg	04/20/15	2	5	3050B/6010B	SW8
Iron, total	10200		mg/kg	04/20/15	9	26	3050B/6010B	SW8
Lead, total	54		mg/kg	04/20/15	2	5	3050B/6010B	SW8
Magnesium, total	14400		mg/kg	04/20/15	9	26	3050B/6010B	SW8
Manganese, total	237		mg/kg	04/20/15	9	26	3050B/6010B	SW8
Mercury, total	0.05	J	mg/kg	04/24/15	0.03	0.09	7471B	SW8
Molybdenum, total	0.7	J	mg/kg	04/20/15	0.5	1.7	3050B/6010B	SW8
Nickel, total	12		mg/kg	04/20/15	2	5	3050B/6010B	SW8
Potassium, total	2179		mg/kg	04/20/15	9	26	3050B/6010B	SW8
Selenium, total	1.4	J	mg/kg	04/20/15	0.5	1.7	3050B/6010B	SW8
Silver, total	ND		mg/kg	04/20/15	0.5	1.7	3050B/6010B	SW8
Sodium, total	171		mg/kg	04/20/15	9	26	3050B/6010B	SW8
Thallium, total	1.3	J	mg/kg	04/20/15	0.5	1.7	3050B/6010B	SW8
Vanadium, total	36		mg/kg	04/20/15	2	5	3050B/6010B	SW8
Zinc, total	35		mg/kg	04/20/15	2	5	3050B/6010B	SW8
Total Solids	58.30		%	04/16/15		0.01	CLP	CLP
Cyanide, total	0.6	J	mg/kg	04/27/15	0.5	1.7	9010C/9014	SW8

ND = not detected J = estimated B = detected in blank S = DLs increased due to sample matrix

Maine Environmental Laboratory - Chain of Custody

One Main Street Yarmouth, Maine 04096-6716 (207) 846-6569 fax: (207) 846-9066
email: melab@ime.net

Laboratory Report # DPC241-15

Project Manager	Telephone	Fax/E-Mail
Michael Martunas	207-593-0147	michael.martunas@gcpv.com

Company	Purchase Order #/Bill To
Dragon Products Company LLC	Requisition # 185354

Address			
P.O. Box 191 / U.S. Route 1	Thomaston	ME	04861

Project Name	Sampler Name
Semi-annual CKD 4/13/15	Eric Greiner

Analyses: Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Cyanide

Delivered by: UPS

Turnaround Request: Standard X / Priority

Quote #

Sample Identification	# Containers	Container Type	Field Filtration (Yes or No)	Sample Matrix	Grab	Composite	Method Preserved	Sampling Date/Time		Analyses	Laboratory Identification/ Subcontractor
CKD 13/04/22	1		No	solid		X		4/13/15	10:54	X	-01

Received in hold time: [X] yes [ ] no [ ] N/A

Received in good condition: [X] yes [ ] no [ ] N/A

Temp. Blank °C 2.5 /Frozen ice packs

Samples received preserved: [X] yes [ ] no [ ] N/A

Comments

	Date	Time	
Relinquished by Sampler: Eric Greiner	4/13/15	1353	Received by: [signature] 4/13/15
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date 4/14/15	Time 0955	Received by Laboratory: [signature]

			Bedford	Marbleton
			K1 & K2	K2
Calcium	Ca	(%)	42.4	48.9
Magnesium	Mg	(%)	0.5	0.4
Iron	Fe	(%)	1.0	0.4
Aluminum	Al	(%)	2.1	0.7
Strontium	Sr	(mg/kg)	501	397
Manganese	Mn	(mg/kg)	57	109
Silicon	Si	(%)	4.4	1.8
Barium	Ba	(mg/kg)	231	85
Potassium	K	(mg/kg)	6945	2507
Sodium	Na	(mg/kg)	853	530
Phosphorus	P	(mg/kg)	338	128
Titanium	Ti	(mg/kg)	1222	469
Sulfur	S	(%)	2.1	3.8
Silver	Ag	(mg/kg)	< 2.5	< 2.5
Arsenic	As	(mg/kg)	7	< 5
Boron	B	(mg/kg)	79	40
Beryllium	Be	(mg/kg)	2	1
Bismuth	Bi	(mg/kg)	< 7.5	< 7.5
Cadmium	Cd	(mg/kg)	3	3
Cerium	Ce	(mg/kg)	29	13
Cobalt	Co	(mg/kg)	12	5
Chromium	Cr	(mg/kg)	25	13
Copper	Cu	(mg/kg)	16	9
Mercury	Hg	(mg/kg)	0.11	< 0.02
Molybdenum	Mo	(mg/kg)	13	25
Nickel	Ni	(mg/kg)	90	165
Lead	Pb	(mg/kg)	33	35
Antimony	Sb	(mg/kg)	13	5
Scandium	Sc	(mg/kg)	7	2
Selenium	Se	(mg/kg)	< 7.5	< 7.5
Tin	Sn	(mg/kg)	< 11	< 11
Thallium	Tl	(mg/kg)	< 4	< 4
Vanadium	V	(mg/kg)	260	506
Tungsten	W	(mg/kg)	< 7.3	< 7.3
Zinc	Zn	(mg/kg)	34	28
Zirconium	Zr	(mg/kg)	31	14

Weston Solutions, Inc.

Telecon for KMC Project

Date: 10/7/2015

Time: 2 pm

Weston Personnel: Vinnie DelloRusso

Conversation with: Drew Hoffman, NHDES 603-271-6778

Conversation summary: Vinnie DelloRusso contacted Drew Hoffman to follow-up on an email sent prior to the call with data analysis on various soil amendments for stabilizing soil at the Kearsarge Metallurgical Superfund Site, Conway, NH. The call was to discuss whether Weston has approval to proceed with use of a proposed cement kiln dust that contained elevated arsenic. The rationale for use included the low volume to be used for mixing with site soil and imported native soils for stabilization, low potential for direct exposure to site soil, and the anticipated low degree of leachability anticipated due to low permeability of site soil. Drew Hoffman gave approval to proceed with use of the Dragon CKD product. Vinnie confirmed that we had one truck confirmed for delivery on Thursday 10/8/15, another truck the following day (Friday), and possibly 2 trucks on Saturday and another 2 trucks the following Monday if needed. Estimated loads were about 30 tons per load or less.

Signature: