



April 24, 2015

Mr. Brian Jankauskas, P.E.
New York State Department of Environmental Remediation
Division of Environmental Remediation
Remedial Bureau A – Section C
625 Broadway
Albany, New York 12233-7015

**Re: Supplementary ISCO Work Plan
Melody Cleaners Site – 2050 Hempstead Turnpike, East Meadow, New York
NYSDEC VCP Site No. V00347-1**

Dear. Mr. Jankauskas,

Impact Environmental Closures, Inc. (IEC) on the behalf of Capparelli Properties, Ltd. is pleased to present the following Supplementary (“Polishing”) ISCO Work Plan for the abovementioned Site. Said Work Plan was prepared at the request of the New York State Department of Environmental Conservation (NYSDEC) pursuant towards the remediation of dissolved chlorinated volatile organic compounds (CVOCs) identified in groundwater within the footprint of the former Melody Cleaners sanitary system and from within the footprint of the former laundromat process wastewater drainage system.

Design and Scope of Supplementary ISCO Injection Work

The purpose of the supplementary ISCO injection work is to reduce the mass of tetrachloroethylene (PCE) and its breakdown components within Zone 1 (former Melody Cleaners sanitary system) and Zone 2 (former laundromat process wastewater drainage system), and to minimize migration to downgradient receptors, thereby reducing risk to human health and the environment.

At Zone-1, recent groundwater monitoring events detected concentrations of PCE in groundwater above the applicable NYSED Class GA groundwater quality standards, within the footprint of the former secondary and tertiary cesspool structures. Said injections will be conducted directly through injection wells IW-1S and IW-1D; both located within Zone 1 and within/proximal to the footprint of said former structures.

At Zone-2, the supplementary ISCO application will be performed with focus in the vicinity of the former process wastewater leaching structures and proximal to the MLW-1 well cluster. Said injections will be conducted directly through injection wells IW-3S and IW-3D; both located within Zone 2 and within/proximal to the footprint of said former leaching structures.

The results of the ISCO pilot test, ISCO full-scale application, the 2013 ISCO supplementary application, and post-injection groundwater sampling data were reviewed and scrutinized with the project design staff from the Carus Corporation, (RemOx manufacturer). The following assumptions were made in regards to the performance of the ISCO application(s).

- It appears that the amount oxidant consumed by the soil matrix is less than the 2.3 g/kg calculated during the baseline assessment work. For the supplementary design, a SOD value of 1 g/kg will be utilized.

- It appears that the injection radius of influence (ROI) is greater than the 15 foot radius, assumed for the design of the previous full scale application. Said ROI was verified during the November 2011 – January 2012 Full-Scale ISCO application work, as the presence of the oxidant solution was detected and verified in sentinel well SW-1, located approximately 19 to 20 feet from the closest ISCO injection location. Based on said verification, the ROI used for the design of this work will be conservatively set at 17.5 feet.
- The assumed concentrations of PCE in groundwater utilized for the design of the supplementary ISCO injection work is 4,000 µg/l; concentrated within Zone 2 proximal to monitoring well MLW-1IS, at or above the observed confining layer at approximately 115 feet BEG.

Based upon the results of the 2010/2011 full-scale ISCO application and the 2013 supplementary ISCO application, with observed field parameter measurements and subsequent groundwater sampling results, injecting RemOx-L (sodium permanganate) to the saturated substratum will be continued as the approach to chemically oxidize, degrade and remediate chlorinated VOCs in onsite groundwater.

The following data was utilized as part of the dosage model prepared by the manufacturer:

- Injection radius of influence: 17.5 ft.
- Porosity (n): 0.35
- Revised PNOD 1.0 g/kg
- Effective PNOD 10%
- Oxidant Demand (PCE) 0.96 lb./lb.
- Contaminant (PCE) concentration 4,000 µg/l (assumed throughout injection zones)
- Contaminant (PCE) mass 1.68 lb.

Based upon the manufactures model results, approximately 1,914 pounds (167 gallons) of 40% stock RemOx-L solution will be utilized for this work. Said solution will be diluted to a 4% working solution and directly injected into injection wells IW-IS, IW-ID, IW-3S and IW-3D. Utilizing the calculated specific gravity of the diluted solution (1.03665 g/ml) the following oxidant loading and molar dilution calculation results are as follows:

- Oxidant Loading: 9.57 lbs. of oxidant per linear ft. of well screen (765.6 lbs. total)
- Diluted Solution: 27.66 gal. of 4% solution per linear ft. of well screen (2,213 gal. total)

Manufacturer provided specifications of the RemOx-L oxidant with the manufacturer dosage calculation model results are provided in **Attachment A**.

Implementation Sequence

Step 1: Baseline Groundwater Sampling

Initial baseline groundwater sampling was performed during the fourth quarter 2014 quarterly sampling event. In addition to typical VOC analyses and field parameter measurements, Target Analyte List (TAL) total metals and dissolved iron/manganese analyses were performed in groundwater samples collected from onsite monitoring wells MLW-1IS, MLW-1ID and MLW-1D, injection wells IW-1S, IW-1D, IW-3S and IW-3D, remedial system well SVE-2 (VOCs only), sentinel well SW-1, and from onsite monitoring well MLW-2I. Said sampling results were used by the oxidant manufacturer to construct the supplementary ISCO application model calculations. Said analyses were tabulated and presented in **Table 1** and **Table 2**, the locations of said injection wells are presented in **Figure 1**, and the laboratory analytical summary data for the fourth quarter 2014 groundwater monitoring event is presented in **Attachment B**.

Remediation-grade permanganate solutions reportedly contain heavy metal impurities; including, but limited to, arsenic and chromium. Although said impurities are more pronounced in potassium permanganate (RemOx-S) solutions, said impurities are commonly found in sodium permanganate (RemOx-L) solutions. The potential also exists for the mobilization of naturally occurring metals to in the substratum after permanganate-related ISCO injections. Elevated concentrations of said impurities and mobilized metals were present in groundwater samples collected from the abovementioned onsite wells after the ISCO pilot test and full scale application. Post-injection monitoring for metals in groundwater will be performed as described in Step 5.

The locations of the abovementioned onsite injection wells, monitoring wells, and sentinel well are shown on **Figure 1**.

Step 2: Injection Notifications

Prior to implementing the injection work, the following entities in addition to the NYSDEC, NYSDOH and NCDOH will be notified prior to the start of the work:

- United States Environmental Protection Agency (USEPA): A work notification correspondence will be prepared and delivered to the USEPA Region Two office, in accordance with federal underground injection control (UIC) regulations. A copy of the Department-approved work plan and related UIC injection well inventory forms will be submitted concurrent with the notification.
- Town of Hempstead Department of Water – East Meadow Water District: A work notification correspondence will be prepared and delivered to the Department, concurrent with a copy of the Department-approved work plan.

Step 3: Field Parameter Equipment Installation

Monitoring well MLW-1IS, and sentinel well SW-1 will be utilized as observation wells for this work. Prior to the supplementary ISCO injection work, physical parameter data loggers will be installed within each of the observation wells. Said data loggers will be installed prior to the injection event. Groundwater data will be collected prior to and during the ISCO injection work, and for approximately nine (9) to ten (10) days after the injection work is completed. Said physical parameter information will consist of water table elevation, pH, oxidation-reduction potential (ORP), dissolved oxygen (DO), turbidity, temperature and electric conductivity.

Step 4: ISCO via Injection Wells

Pressurized ISCO injections will be conducted through the IW-1 and IW-3 injection well clusters. The concentrated RemOx-L solution will be metered with potable water into a portable, polyethylene storage tank, to achieve the 4% diluted working solution concentration. Once said concentration is achieved, the working solution will be directly conveyed into each of the four injection well, utilizing a centrifugal pump. A series of pressure gauges and flow rate meters will be utilized to gauge the rate of solution introduced into each injection well. Upon completion of the solution injection, the injection wells will be flushed with water to prevent against potential well screen fouling by precipitated MnO₂ crystals.

Step 5: ISCO Performance Monitoring

The purpose of performance monitoring and post injection sampling is to assess the long-term effectiveness of the ISCO remedy and to monitor potential mobilization of metals in groundwater.

Two (2) groundwater sampling events will be performed to evaluate the effectiveness of the injected oxidants and to monitor potential metal mobilization:

- The first sampling event will be performed approximately thirty (30) days after the completion of the proposed ISCO injection work.
- The second sampling event will be performed concurrent with the second quarter 2015 groundwater sampling event.

Groundwater samples will be collected from onsite monitoring wells MLW-1IS, MLW-1ID and MLW-1D, offsite monitoring well MLW-2I, injection wells IW-1S, IW-1D, IW-3S and IW-3D, and sentinel well SW-1 will be field measured for pH, temperature, DO, salinity, electric conductivity and turbidity during each event and measured for permanganate concentration utilizing an Omega Model HHWT-12 Dip Strip Photometer equipped with permanganate test strips. In addition to typical VOC analyses and the abovementioned field parameter measurements, said groundwater samples will be analyzed for TAL total metals, to track the potential mobilization of metals in groundwater resultant from the proposed ISCO injection work, and dissolved iron and manganese to track the chemical reactions of the oxidant in the substratum. The performance of the ISCO injection work will be reported concurrent with the second quarter 2015 groundwater sampling monitoring event report. Additional groundwater metals analyses may be performed in future groundwater sampling events based upon the results of the abovementioned performance monitoring analyses.

Step 6: Contingency Injection

If deemed necessary by on-site post-injection monitoring data, multiple injections will be conducted through the installed injection wells. Upon consulting with the NYSDEC, other existing wells may also be utilized for injection. If said additional injections are required by the Department, an additional supplementary ISCO work plan will be prepared and submitted to the Department for review, prior to implementation.

Health and Safety Plan

A Health and Safety Plan (HASP) was previously prepared on October 28, 2011 and submitted to the Department, prior to the implementation of the ISCO Pilot Test and subsequent November 2011 – January 2012 Full-Scale ISCO Application. Said HASP addressed precautions for RemOx-S and RemOX-L ISCO implementation activities, included relevant materials safety data sheets for chemicals brought onsite, and detailed on how the chemicals will be properly stored and utilized so that the workers and the public are protected during the remedial activities. The HASP also included a community air monitoring program (CAMP) to describe in detail the ambient air monitoring activities during the ISCO implementation. The HASP also addressed communication protocols between the field staff and on-site workers and residents, both before and during ISCO implementation, will be coordinated to minimize health and safety risks by securing the ISCO staging and implementation area from pedestrian traffic.

IEC will implement this Department-approved HASP, specific to the abovementioned ISCO injection work proposed in this supplementary work plan. A copy of the HASP is presented in **Attachment C**.

Quality Assurance Procedures Plan

A Quality Assurance Procedures Plan (QAPP) was prepared as a component of the NYSDEC-approved *March 2, 2010, Remediation Plan*, to establish specific procedures that will be followed during the supplementary ISCO injection work, to identify the responsibilities of the Site officers during the injection work, establish protocols and procedures to ensure the quality and reliability of the field measurements and subsequent post-injection groundwater sampling data, and establish protocols and procedures to determine whether the resultant laboratory analytical data meets the project data quality objectives. IEC will re-implement the abovementioned QAPP for the supplementary ISCO injection work, as proposed in this work plan.

Please feel free to contact us with any questions or comments regarding this supplementary work plan.

Sincerely,
**Impact Environmental
Closures, Inc.**

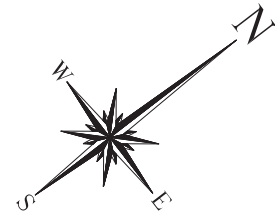


Kevin Kleaka, *Environmental Professional*
Vice President, Sr. Environmental Scientist



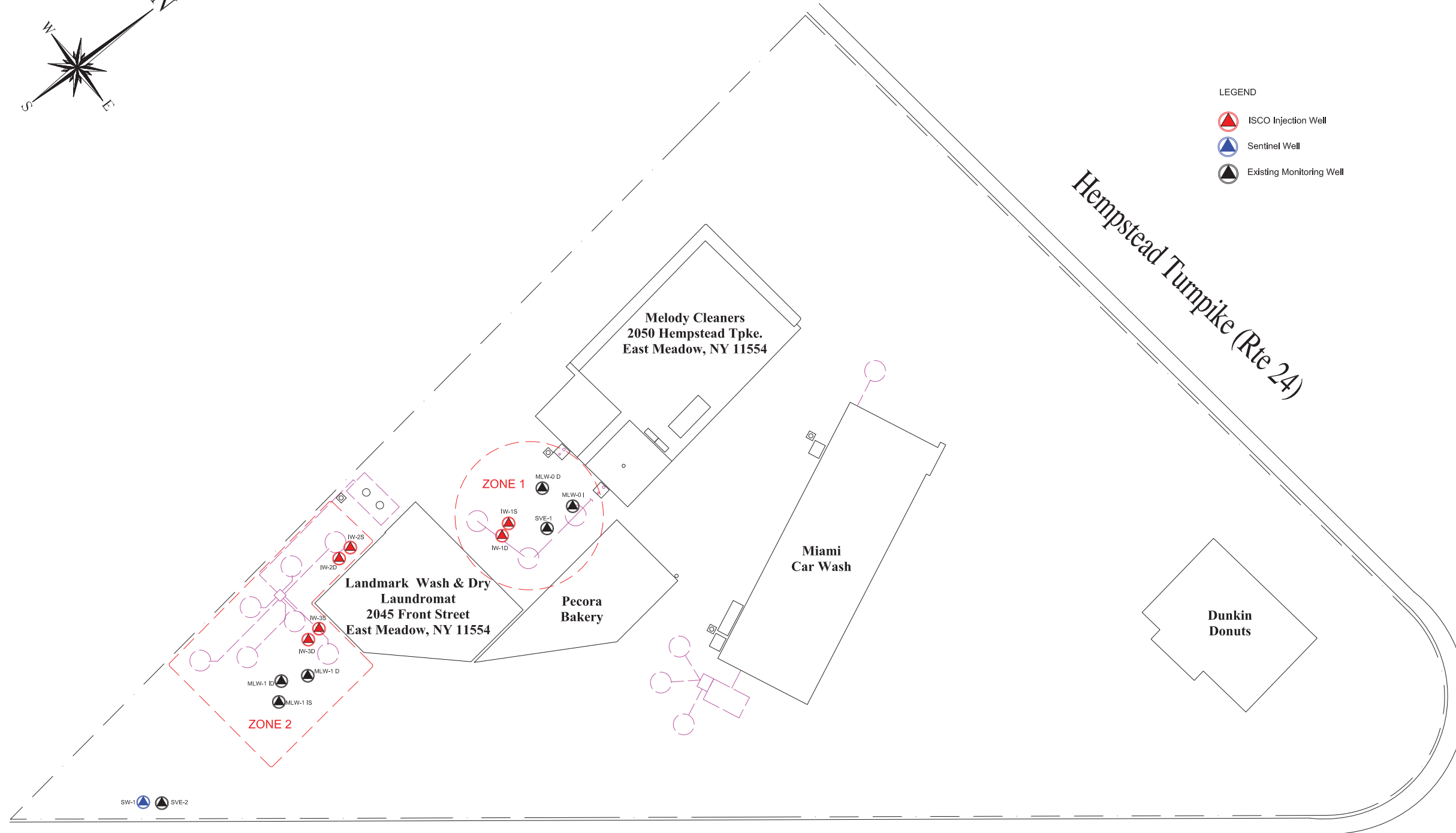
Michael Blaight, *Environmental Professional*
Project Manager

Enclosure



LEGEND

- ISCO Injection Well
- Sentinel Well
- Existing Monitoring Well



PROJECT #	04-455	
	Figure #	01
TITLE:	ISCO Implementation Plan	
	Melody Cleaners Site East Meadow, New York	
DRAWN BY:	WF	
	KK	
	10-4-2011	
CHECKED BY:		
DATE:		
SCALE:		
	1" = 40'	

IMPACT ENVIRONMENTAL

170 KEYLAND COURT
BOHEMIA, NEW YORK 11716
TEL (631) 269-8800 FAX (631) 269-1599



Melody Cleaners Site 2050 Hempstead Turnpike, East Meadow, New York											
Table 1 ISCO Baseline Sampling - Fourth Quarter 2014 Groundwater Sampling Results Volatile Organic Compounds USEPA Method 8260											
Sample Source	IW-1S	IW-1D	IW-3S	IW-3D	MLW-1IS	MLW-1ID	MLW-1D	SVE-2	SW-1	MLW-2I	NYSDEC Part 703 Class GA Groundwater Standards (ppb)
Sample Identification	IW-1S	IW-1D	IW-3S	IW-3D	MLW-1IS	MLW-1ID	MLW-1D	SVE-2	SW-1	MLW-2I	
Laboratory Identification	AC82728-004	AC82728-006	AC82728-009	AC82728-010	AC82728-011	AC82728-012	AC82728-013	AC82728-016	AC82728-017	AC82728-018	
Dilution Factor	1 : 1	1 : 1	1 : 1	1 : 1	100 : 1	1 : 1	1 : 1	1 : 1	1 : 1	1 : 1	
Sampling Date	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	
PARAMETER - µg/l											
Dichlorodifluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.0
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
Acetone	ND	ND	ND	ND	ND	ND	5.6	ND	ND	ND	50.0
Carbon Disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	60.0
Methyl tert-Butyl Ether (MTBE)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.0
Methyl Acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	5.0
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
2-Butanone (MEK)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50.0
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
2,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	0.97 J	ND	ND	8.0	5.0
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
Chloroform	ND	ND	ND	ND	2.7 J	ND	0.78 J	ND	ND	ND	7.0
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	2.9	ND	ND	ND	5.0
Methylcyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6
Trichloroethene	ND	ND	ND	ND	ND	ND	3.7	ND	ND	4.8	5.0
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50.0
4-Methyl-2-Pentanone (MIBK)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50.0
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.43 J	5.0
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0
2-Hexanone (MBK)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50.0
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
Tetrachloroethene	ND	280	ND	3,800	750	93	5.0	3.4	180	10	5.0

Melody Cleaners Site 2050 Hempstead Turnpike, East Meadow, New York											
Table 1 (continued) ISCO Baseline Sampling - Fourth Quarter 2014 Groundwater Sampling Results Volatile Organic Compounds USEPA Method 8260											
Sample Source	IW-1S	IW-1D	IW-3S	IW-3D	MLW-1IS	MLW-1ID	MLW-1D	SVE-2	SW-1	MLW-2I	NYSDEC Part 703 Class GA Groundwater Standards (ppb)
Sample Identification	IW-1S	IW-1D	IW-3S	IW-3D	MLW-1IS	MLW-1ID	MLW-1D	SVE-2	SW-1	MLW-2I	
Laboratory Identification	AC82728-004	AC82728-006	AC82728-009	AC82728-010	AC82728-011	AC82728-012	AC82728-013	AC82728-016	AC82728-017	AC82728-018	
Dilution Factor	1 : 1	1 : 1	1 : 1	1 : 1	100 : 1	1 : 1	1 : 1	1 : 1	1 : 1	1 : 1	
Sampling Date	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	
PARAMETER - µg/l											
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
Ethyl Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
m&p-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50.0
Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.0
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.0
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.57 J	3.0
1,2-Dibromo-3-Chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.04
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
Total VOCs	0.00	280.00	0.00	3800.00	752.70	93.00	34.95	3.40	180.00	13.80	
Total TICs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Notes: ND - Not Detected

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

E - Value Exceeds Calibration Range

Melody Cleaners Site
2050 Hempstead Turnpike, East Meadow, New York

Table 2
ISCO Baseline Sampling - Fourth Quarter 2014 Groundwater Sampling Results
TAL Total Metals USEPA Methods 6010B/6020B/7470A/7196A - Dissolved Iron/Manganese USEPA Method 6010B/1311

Sample Source	IW-1S	IW-1D	IW-3S	IW-3D	MLW-1IS	MLW-1ID	MLW-1D	SW-1	MLW-2I	NYSDEC Part 703 Groundwater Quality Standards (µg/l)
Sample Identification	IW-1S	IW-1D	IW-3S	IW-3D	MLW-1IS	MLW-1ID	MLW-1D	SW-1	MLW-2I	
Laboratory Identification	AC82728-004/036	AC82728-006/037	AC82728-009/039	AC82728-010/040	AC82728-011/041	AC82728-012/042	AC82728-013/043	AC82728-017/044	AC82728-018/045	
Dilution Factor	1 : 1	1 : 1	1 : 1	1 : 1	100 : 1	1 : 1	1 : 1	1 : 1	1 : 1	
Sampling Date	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	1/5/2015	
Analyte (µg/l)										
Aluminum, Total	30,000	260	1,400	ND	1,000	ND	720	4,400	480	-
Antimony, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	3
Arsenic, Total	18	ND	3.0	ND	2.3	ND	ND	3.0	3.2	25
Barium, Total	600	ND	ND	60	ND	100	ND	ND	60	1,000
Beryllium, Total	3.5	ND	ND	ND	ND	20,000	ND	ND	ND	3
Cadmium, Total	ND	ND	2.3	2.5	ND	ND	ND	ND	ND	5
Calcium, Total	36,000	12,000	27,000	12,000	ND	ND	ND	14,000	25,000	-
Chromium, Total (Cr ³⁺)	ND	ND	ND	61	ND	ND	ND	ND	ND	50
Chromium, Hexavalent (Cr ⁶⁺)	ND	ND	ND	0.034	ND	ND	ND	ND	ND	50
Cobalt, Total	21.00	ND	ND	ND	ND	ND	ND	3.5	2.7	50
Copper, Total	84.00	ND	ND	ND	ND	ND	ND	ND	ND	200
Iron, Total	42,000	2,600	2,400	1,700	5,600	1,900	2,300	13,000	1,600	300
Lead, Total	49	ND	ND	ND	6.6	ND	3.7	56	4.8	25
Magnesium, Total	5,800	2,710	ND	ND	ND	ND	ND	5,600	ND	35,000
Manganese, Total	13,000	1,700	3,400	120	670	910	81	140	210	300
Mercury, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7
Nickel, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Potassium, Total	6,400	6,800	ND	15,000	ND	ND	ND	ND	ND	-
Selenium, Total	10	ND	ND	ND	ND	ND	ND	ND	ND	10
Silver, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	50
Sodium, Total	94,000	48,000	95,000	47,000	ND	26,000	ND	ND	41,000	20,000
Thallium, Total	3.0	ND	ND	ND	ND	ND	ND	ND	ND	0.5
Vanadium, Total	61	ND	ND	ND	ND	ND	ND	ND	ND	14
Zinc, Total	170	ND	56	ND	100	53	61	350	53	2,000
iron, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
Managanese, Dissolved	2,100	240	190	71	ND	770	ND	130	ND	-

Melody Cleaners Site
2050 Hempstead Turnpike, East Meadow, NY
NYSDEC VCP No. 00347-1

Supplemental ISCO Work Plan

Attachment A
RemOx L Oxidant - Product Specifications



RemOx[®] S and L ISCO Reagents Estimation Spreadsheet

Input data into box with blue font

Site Name: Melody Cleaners - 2050 Hempstead Turnpike, East Meadow, New York

Date: 4/14/15 (rev)

Estimates Units

Treatment Area Volume

Injection Radius	17.5	ft
Cross Sectional Area	961.625	sq ft
Injection Thickness	80	ft
Total Volume	2849.26	cu yd

Soil Characteristics/Analysis

Porosity	35	%
Total Plume Pore Volume	201417	gal
Avg Contaminant Conc	4	ppm
Mass of Contaminant	6.72	lb
PNOD	1	g/kg
Effective PNOD	10	%
Effective PNOD Calculated	0.1	
PNOD Oxidant Demand	846.23	lb
Avg Stoichiometric Demand (PCE)	0.96	lb/lb
Contaminant Oxidant Demand	6.45	lb
Theoretical Oxidant Demand	852.68	lb
Confidence Factor	1	
Calculated Oxidant Demand	852.6847	

Injection Volumes for RemOx S

RemOx S Injection Concentration	4.0%	%
Total Volume of Injection Fluid	2,554	gal
Pore Volume Replaced	1.27	%

Amount of RemOx S ISCO Reagent Estimated

853 pounds

Injection Volumes for RemOx L

RemOx L Injection Concentration	4.0%	%
Calculated Specific Gravity	1.036649	g/ml
Total Volume of Injection Fluid	2,212.82	gal
Pore Volume Replaced	1.10	%

Amount of RemOx L ISCO Reagent Estimated

1,914 pounds
167 gallons

Melody Cleaners Site
2050 Hempstead Turnpike, East Meadow, NY
NYSDEC VCP No. 00347-1

Supplemental ISCO Work Plan

Attachment B
Fourth Quarter 2014 Groundwater Sampling Event
Laboratory Analytical Data

Hampton-Clarke Report Of Analysis

Client: Impact Environmental

HC Project #: 5010512

Project: 04-455 Melody Cleaner

Sample ID: FIELD BLANK

Collection Date: 1/5/2015

Lab#: AC82728-001

Receipt Date: 1/5/2015

Matrix: Aqueous

Cr (Hexavalent) 3500-Cr D

Analyte	DF	Units	RL	Result
Cr (Hexavalent)	1	mg/l	0.025	ND

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	ND
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	ND
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	ND
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND

Sample ID: FIELD BLANK

Lab#: AC82728-001

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	3.4
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	ND
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-OI

Lab#: AC82728-002

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	0.44J
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND

Sample ID: MLW-OI
 Lab#: AC82728-002
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	ND
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-OD
 Lab#: AC82728-003
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND

Sample ID: MLW-OD
 Lab#: AC82728-003
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	ND
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: SVE-1
 Lab#: AC82728-004
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND

Sample ID: SVE-1
 Lab#: AC82728-004
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	ND
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: IW-1S
 Lab#: AC82728-005
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Cr (Hexavalent) 3500-Cr D

Analyte	DF	Units	RL	Result
Cr (Hexavalent)	1	mg/l	0.025	ND

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	30000
Barium	1	ug/l	50	600
Calcium	1	ug/l	5000	36000
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	84
Iron	1	ug/l	300	42000
Magnesium	1	ug/l	5000	5800
Manganese	1	ug/l	40	13000
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	6400
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	94000
Vanadium	1	ug/l	50	61

Sample ID: IW-1S
 Lab#: AC82728-005
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Zinc	1	ug/l	50	170
TAL Metals 6020				
Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	18
Beryllium	1	ug/l	1.0	3.5
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	21
Lead	1	ug/l	3.0	49
Selenium	1	ug/l	10	10
Thallium	1	ug/l	2.0	3.0
Volatile Organics (no search) 8260				
Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	ND

Sample ID: IW-1S
Lab#: AC82728-005
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: IW-1D
Lab#: AC82728-006
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Cr (Hexavalent) 3500-Cr D

Analyte	DF	Units	RL	Result
Cr (Hexavalent)	1	mg/l	0.025	ND

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	260
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	12000
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	2600
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	1700
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	6800
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	48000
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	5	ug/l	1.2	ND
1,1,2,2-Tetrachloroethane	5	ug/l	3.3	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ug/l	3.2	ND
1,1,2-Trichloroethane	5	ug/l	2.1	ND
1,1-Dichloroethane	5	ug/l	1.4	ND
1,1-Dichloroethene	5	ug/l	2.3	ND
1,2,3-Trichlorobenzene	5	ug/l	1.8	ND
1,2,4-Trichlorobenzene	5	ug/l	1.8	ND
1,2-Dibromo-3-chloropropane	5	ug/l	3.9	ND
1,2-Dibromoethane	5	ug/l	2.3	ND
1,2-Dichlorobenzene	5	ug/l	1.8	ND

Sample ID: IW-1D

Lab#: AC82728-006

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

1,2-Dichloroethane	5	ug/l	1.9	ND
1,2-Dichloropropane	5	ug/l	2.6	ND
1,3-Dichlorobenzene	5	ug/l	2.0	ND
1,4-Dichlorobenzene	5	ug/l	2.0	ND
1,4-Dioxane	5	ug/l	150	ND
2-Butanone	5	ug/l	3.6	ND
2-Hexanone	5	ug/l	1.5	ND
4-Methyl-2-pentanone	5	ug/l	2.1	ND
Acetone	5	ug/l	14	ND
Benzene	5	ug/l	1.4	ND
Bromochloromethane	5	ug/l	3.4	ND
Bromodichloromethane	5	ug/l	2.4	ND
Bromoform	5	ug/l	2.9	ND
Bromomethane	5	ug/l	4.3	ND
Carbon disulfide	5	ug/l	1.8	ND
Carbon tetrachloride	5	ug/l	1.6	ND
Chlorobenzene	5	ug/l	1.1	ND
Chloroethane	5	ug/l	4.5	ND
Chloroform	5	ug/l	2.0	ND
Chloromethane	5	ug/l	2.0	ND
cis-1,2-Dichloroethene	5	ug/l	2.3	ND
cis-1,3-Dichloropropene	5	ug/l	0.91	ND
Cyclohexane	5	ug/l	2.2	ND
Dibromochloromethane	5	ug/l	2.1	ND
Dichlorodifluoromethane	5	ug/l	2.0	ND
Ethylbenzene	5	ug/l	2.2	ND
Isopropylbenzene	5	ug/l	0.82	ND
m&p-Xylenes	5	ug/l	2.5	ND
Methyl Acetate	5	ug/l	1.4	ND
Methylcyclohexane	5	ug/l	1.2	ND
Methylene chloride	5	ug/l	2.7	ND
Methyl-t-butyl ether	5	ug/l	1.8	ND
o-Xylene	5	ug/l	1.4	ND
Styrene	5	ug/l	1.3	ND
Tetrachloroethene	5	ug/l	2.3	280
Toluene	5	ug/l	1.6	ND
trans-1,2-Dichloroethene	5	ug/l	2.1	ND
trans-1,3-Dichloropropene	5	ug/l	1.2	ND
Trichloroethene	5	ug/l	3.0	ND
Trichlorofluoromethane	5	ug/l	3.1	ND
Vinyl chloride	5	ug/l	1.8	ND
Xylenes (Total)	5	ug/l	1.4	ND

Sample ID: IW-2D

Lab#: AC82728-007

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

Cr (Hexavalent) 3500-Cr D

Analyte	DF	Units	RL	Result
Cr (Hexavalent)	1	mg/l	0.025	ND

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	15000
Chromium	1	ug/l	50	ND

Sample ID: IW-2D
 Lab#: AC82728-007
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Copper	1	ug/l	50	ND
Iron	1	ug/l	300	1300
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	1500
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	46000
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	160

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	28
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	0.48J
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND

Sample ID: IW-2D
 Lab#: AC82728-007
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	ND
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	0.70J
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: TRIP BLANK
 Lab#: AC82728-008
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND

Sample ID: TRIP BLANK

Lab#: AC82728-008

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	ND
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: IW-3S

Lab#: AC82728-009

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

Cr (Hexavalent) 3500-Cr D

Analyte	DF	Units	RL	Result
Cr (Hexavalent)	1	mg/l	0.025	ND

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	1400
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	27000
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	2400
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	3400
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	95000
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	56

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	3.0
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	2.3
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND

Sample ID: IW-3S

Lab#: AC82728-009

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	ND
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: IW-3D

Lab#: AC82728-010

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

Cr (Hexavalent) 3500-Cr D

Analyte	DF	Units	RL	Result
Cr (Hexavalent)	1	mg/l	0.025	0.034

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
---------	----	-------	----	--------

Sample ID: IW-3D
 Lab#: AC82728-010
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Mercury	1	ug/l	0.70	ND
TAL Metals 6010				
Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	60
Calcium	1	ug/l	5000	12000
Chromium	1	ug/l	50	61
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	1700
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	120
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	15000
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	47000
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020				
Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	2.5
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260				
Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	50	ug/l	12	ND
1,1,2,2-Tetrachloroethane	50	ug/l	33	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	50	ug/l	32	ND
1,1,2-Trichloroethane	50	ug/l	21	ND
1,1-Dichloroethane	50	ug/l	14	ND
1,1-Dichloroethene	50	ug/l	23	ND
1,2,3-Trichlorobenzene	50	ug/l	18	ND
1,2,4-Trichlorobenzene	50	ug/l	18	ND
1,2-Dibromo-3-chloropropane	50	ug/l	39	ND
1,2-Dibromoethane	50	ug/l	23	ND
1,2-Dichlorobenzene	50	ug/l	18	ND
1,2-Dichloroethane	50	ug/l	19	ND
1,2-Dichloropropane	50	ug/l	26	ND
1,3-Dichlorobenzene	50	ug/l	20	ND
1,4-Dichlorobenzene	50	ug/l	20	ND
1,4-Dioxane	50	ug/l	1500	ND
2-Butanone	50	ug/l	36	ND
2-Hexanone	50	ug/l	15	ND
4-Methyl-2-pentanone	50	ug/l	21	ND
Acetone	50	ug/l	140	ND
Benzene	50	ug/l	14	ND
Bromochloromethane	50	ug/l	34	ND
Bromodichloromethane	50	ug/l	24	ND
Bromoform	50	ug/l	29	ND
Bromomethane	50	ug/l	43	ND
Carbon disulfide	50	ug/l	18	ND
Carbon tetrachloride	50	ug/l	16	ND
Chlorobenzene	50	ug/l	11	ND
Chloroethane	50	ug/l	45	ND

Sample ID: IW-3D
 Lab#: AC82728-010
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Chloroform	50	ug/l	20	ND
Chloromethane	50	ug/l	20	ND
cis-1,2-Dichloroethene	50	ug/l	23	ND
cis-1,3-Dichloropropene	50	ug/l	9.1	ND
Cyclohexane	50	ug/l	22	ND
Dibromochloromethane	50	ug/l	21	ND
Dichlorodifluoromethane	50	ug/l	20	ND
Ethylbenzene	50	ug/l	22	ND
Isopropylbenzene	50	ug/l	8.2	ND
m&p-Xylenes	50	ug/l	25	ND
Methyl Acetate	50	ug/l	14	ND
Methylcyclohexane	50	ug/l	12	ND
Methylene chloride	50	ug/l	27	ND
Methyl-t-butyl ether	50	ug/l	18	ND
o-Xylene	50	ug/l	14	ND
Styrene	50	ug/l	13	ND
Tetrachloroethene	50	ug/l	23	3800
Toluene	50	ug/l	16	ND
trans-1,2-Dichloroethene	50	ug/l	21	ND
trans-1,3-Dichloropropene	50	ug/l	12	ND
Trichloroethene	50	ug/l	30	ND
Trichlorofluoromethane	50	ug/l	31	ND
Vinyl chloride	50	ug/l	18	ND
Xylenes (Total)	50	ug/l	14	ND

Sample ID: MLW-1IS
 Lab#: AC82728-011
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Cr (Hexavalent) 3500-Cr D

Analyte	DF	Units	RL	Result
Cr (Hexavalent)	1	mg/l	0.025	ND

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	1000
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	ND
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	5600
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	670
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	ND
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	100

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	2.3
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND

Sample ID: MLW-1IS
 Lab#: AC82728-011
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Lead	1	ug/l	3.0	6.6
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	5	ug/l	1.2	ND
1,1,2,2-Tetrachloroethane	5	ug/l	3.3	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ug/l	3.2	ND
1,1,2-Trichloroethane	5	ug/l	2.1	ND
1,1-Dichloroethane	5	ug/l	1.4	ND
1,1-Dichloroethene	5	ug/l	2.3	ND
1,2,3-Trichlorobenzene	5	ug/l	1.8	ND
1,2,4-Trichlorobenzene	5	ug/l	1.8	ND
1,2-Dibromo-3-chloropropane	5	ug/l	3.9	ND
1,2-Dibromoethane	5	ug/l	2.3	ND
1,2-Dichlorobenzene	5	ug/l	1.8	ND
1,2-Dichloroethane	5	ug/l	1.9	ND
1,2-Dichloropropane	5	ug/l	2.6	ND
1,3-Dichlorobenzene	5	ug/l	2.0	ND
1,4-Dichlorobenzene	5	ug/l	2.0	ND
1,4-Dioxane	5	ug/l	150	ND
2-Butanone	5	ug/l	3.6	ND
2-Hexanone	5	ug/l	1.5	ND
4-Methyl-2-pentanone	5	ug/l	2.1	ND
Acetone	5	ug/l	14	ND
Benzene	5	ug/l	1.4	ND
Bromochloromethane	5	ug/l	3.4	ND
Bromodichloromethane	5	ug/l	2.4	ND
Bromoform	5	ug/l	2.9	ND
Bromomethane	5	ug/l	4.3	ND
Carbon disulfide	5	ug/l	1.8	ND
Carbon tetrachloride	5	ug/l	1.6	ND
Chlorobenzene	5	ug/l	1.1	ND
Chloroethane	5	ug/l	4.5	ND
Chloroform	5	ug/l	2.0	2.7J
Chloromethane	5	ug/l	2.0	ND
cis-1,2-Dichloroethene	5	ug/l	2.3	ND
cis-1,3-Dichloropropene	5	ug/l	0.91	ND
Cyclohexane	5	ug/l	2.2	ND
Dibromochloromethane	5	ug/l	2.1	ND
Dichlorodifluoromethane	5	ug/l	2.0	ND
Ethylbenzene	5	ug/l	2.2	ND
Isopropylbenzene	5	ug/l	0.82	ND
m&p-Xylenes	5	ug/l	2.5	ND
Methyl Acetate	5	ug/l	1.4	ND
Methylcyclohexane	5	ug/l	1.2	ND
Methylene chloride	5	ug/l	2.7	ND
Methyl-t-butyl ether	5	ug/l	1.8	ND
o-Xylene	5	ug/l	1.4	ND
Styrene	5	ug/l	1.3	ND
Tetrachloroethene	5	ug/l	2.3	750
Toluene	5	ug/l	1.6	ND
trans-1,2-Dichloroethene	5	ug/l	2.1	ND
trans-1,3-Dichloropropene	5	ug/l	1.2	ND
Trichloroethene	5	ug/l	3.0	ND
Trichlorofluoromethane	5	ug/l	3.1	ND
Vinyl chloride	5	ug/l	1.8	ND
Xylenes (Total)	5	ug/l	1.4	ND

Sample ID: MLW-1ID
 Lab#: AC82728-012
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Cr (Hexavalent) 3500-Cr D

Analyte	DF	Units	RL	Result
Cr (Hexavalent)	1	mg/l	0.025	ND

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	100
Calcium	1	ug/l	5000	20000
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	1900
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	910
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	26000
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	53

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND

Sample ID: MLW-1ID
 Lab#: AC82728-012
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	93
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-1D
 Lab#: AC82728-013
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Cr (Hexavalent) 3500-Cr D

Analyte	DF	Units	RL	Result
Cr (Hexavalent)	1	mg/l	0.025	ND

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	720
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	ND
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	2300
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	81
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	ND
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	61

Sample ID: MLW-1D
 Lab#: AC82728-013
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	3.7
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	2.9
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	16
1,1-Dichloroethene	1	ug/l	0.45	5.6
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	0.78J
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	0.97J
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	5.0
Toluene	1	ug/l	0.32	ND

Sample ID: MLW-1D
 Lab#: AC82728-013
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	3.7
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: DUP-1
 Lab#: AC82728-014
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	5	ug/l	1.2	ND
1,1,2,2-Tetrachloroethane	5	ug/l	3.3	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ug/l	3.2	ND
1,1,2-Trichloroethane	5	ug/l	2.1	ND
1,1-Dichloroethane	5	ug/l	1.4	ND
1,1-Dichloroethene	5	ug/l	2.3	ND
1,2,3-Trichlorobenzene	5	ug/l	1.8	ND
1,2,4-Trichlorobenzene	5	ug/l	1.8	ND
1,2-Dibromo-3-chloropropane	5	ug/l	3.9	ND
1,2-Dibromoethane	5	ug/l	2.3	ND
1,2-Dichlorobenzene	5	ug/l	1.8	ND
1,2-Dichloroethane	5	ug/l	1.9	ND
1,2-Dichloropropane	5	ug/l	2.6	ND
1,3-Dichlorobenzene	5	ug/l	2.0	ND
1,4-Dichlorobenzene	5	ug/l	2.0	ND
1,4-Dioxane	5	ug/l	150	ND
2-Butanone	5	ug/l	3.6	ND
2-Hexanone	5	ug/l	1.5	ND
4-Methyl-2-pentanone	5	ug/l	2.1	ND
Acetone	5	ug/l	14	ND
Benzene	5	ug/l	1.4	ND
Bromochloromethane	5	ug/l	3.4	ND
Bromodichloromethane	5	ug/l	2.4	ND
Bromoform	5	ug/l	2.9	ND
Bromomethane	5	ug/l	4.3	ND
Carbon disulfide	5	ug/l	1.8	ND
Carbon tetrachloride	5	ug/l	1.6	ND
Chlorobenzene	5	ug/l	1.1	ND
Chloroethane	5	ug/l	4.5	ND
Chloroform	5	ug/l	2.0	2.5J
Chloromethane	5	ug/l	2.0	ND
cis-1,2-Dichloroethene	5	ug/l	2.3	ND
cis-1,3-Dichloropropene	5	ug/l	0.91	ND
Cyclohexane	5	ug/l	2.2	ND
Dibromochloromethane	5	ug/l	2.1	ND
Dichlorodifluoromethane	5	ug/l	2.0	ND
Ethylbenzene	5	ug/l	2.2	ND
Isopropylbenzene	5	ug/l	0.82	ND
m&p-Xylenes	5	ug/l	2.5	ND
Methyl Acetate	5	ug/l	1.4	ND
Methylcyclohexane	5	ug/l	1.2	ND
Methylene chloride	5	ug/l	2.7	ND
Methyl-t-butyl ether	5	ug/l	1.8	ND
o-Xylene	5	ug/l	1.4	ND
Styrene	5	ug/l	1.3	ND
Tetrachloroethene	5	ug/l	2.3	760
Toluene	5	ug/l	1.6	ND
trans-1,2-Dichloroethene	5	ug/l	2.1	ND

Sample ID: DUP-1
 Lab#: AC82728-014
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

trans-1,3-Dichloropropene	5	ug/l	1.2	ND
Trichloroethene	5	ug/l	3.0	ND
Trichlorofluoromethane	5	ug/l	3.1	ND
Vinyl chloride	5	ug/l	1.8	ND
Xylenes (Total)	5	ug/l	1.4	ND

Sample ID: TRIP BLANK
 Lab#: AC82728-015
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	ND
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND

Sample ID: TRIP BLANK

Lab#: AC82728-015

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: SVE-2

Lab#: AC82728-016

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	3.4
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND

Sample ID: SVE-2
Lab#: AC82728-016
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: SW-1
Lab#: AC82728-017
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Cr (Hexavalent) 3500-Cr D

Analyte	DF	Units	RL	Result
Cr (Hexavalent)	1	mg/l	0.025	ND

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	4400
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	14000
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	13000
Magnesium	1	ug/l	5000	5600
Manganese	1	ug/l	40	140
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	ND
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	350

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	3.0
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	3.5
Lead	1	ug/l	3.0	56
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND

Sample ID: SW-1

Lab#: AC82728-017

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	180
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-2I

Lab#: AC82728-018

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

Cr (Hexavalent) 3500-Cr D

Analyte	DF	Units	RL	Result
Cr (Hexavalent)	1	mg/l	0.025	ND

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	480
Barium	1	ug/l	50	60
Calcium	1	ug/l	5000	25000
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	1600
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	210

Sample ID: MLW-2I
 Lab#: AC82728-018
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	41000
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	53

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	3.2
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	2.7
Lead	1	ug/l	3.0	4.8
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	0.57J
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	8.0
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND

Sample ID: MLW-2I
 Lab#: AC82728-018
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	10
Toluene	1	ug/l	0.32	0.43J
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	4.8
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-2D
 Lab#: AC82728-019
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	1.5
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	6.3
1,1-Dichloroethene	1	ug/l	0.45	2.2
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND

Sample ID: MLW-2D
 Lab#: AC82728-019
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	ND
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	1.5
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-3I
 Lab#: AC82728-020
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	0.38J
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	0.62J
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	51
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND

Sample ID: MLW-3I
 Lab#: AC82728-020
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	41
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	20
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-3D
 Lab#: AC82728-021
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	0.67J
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	2.2
1,1-Dichloroethene	1	ug/l	0.45	0.72J
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND

Sample ID: MLW-3D
 Lab#: AC82728-021
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	2.9
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	0.76J
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-6S
 Lab#: AC82728-022
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND

Sample ID: MLW-6S
 Lab#: AC82728-022
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Tetrachloroethene	1	ug/l	0.46	0.65J
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-6I
 Lab#: AC82728-023
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	0.60
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	0.51J

Sample ID: MLW-6I
 Lab#: AC82728-023
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-6D
 Lab#: AC82728-024
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	1.2
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	ND
Toluene	1	ug/l	0.32	ND

Sample ID: MLW-6D
 Lab#: AC82728-024
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-7I
 Lab#: AC82728-025
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	0.72J
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	1.3
1,1-Dichloroethene	1	ug/l	0.45	0.66J
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	0.92J
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	0.42J
1,4-Dichlorobenzene	1	ug/l	0.40	0.75J
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	0.27J
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	15
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	14
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND

Sample ID: MLW-7I
 Lab#: AC82728-025
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	6.9
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-7D
 Lab#: AC82728-026
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	1.1
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	1.8
1,1-Dichloroethene	1	ug/l	0.45	0.63J
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	7.9
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	5.7
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND

Sample ID: MLW-7D
 Lab#: AC82728-026
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Trichloroethene	1	ug/l	0.60	7.9
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-8S
 Lab#: AC82728-027
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	29
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	ND
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND

Sample ID: MLW-8S
 Lab#: AC82728-027
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-8I
 Lab#: AC82728-028
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	0.56J
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	35
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	49
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	14
Trichlorofluoromethane	1	ug/l	0.62	ND

Sample ID: MLW-8I
 Lab#: AC82728-028
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-8D
 Lab#: AC82728-029
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	0.29J
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	0.68J
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	55
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	110
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	34
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND

Sample ID: MLW-8D
 Lab#: AC82728-029
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Xylenes (Total)	1	ug/l	0.28	ND
-----------------	---	------	------	----

Sample ID: MLW-9S
 Lab#: AC82728-030
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	0.92J
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-9I
 Lab#: AC82728-031
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	0.42J
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	2.1
1,1-Dichloroethene	1	ug/l	0.45	0.83J
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	71
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	190
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	43
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: DUP-2
 Lab#: AC82728-032
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Sample ID: DUP-2
 Lab#: AC82728-032
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	0.59J
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	2.1
1,1-Dichloroethene	1	ug/l	0.45	0.74J
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	73
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	170
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	0.58J
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	44
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: MLW-9D
 Lab#: AC82728-033
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Sample ID: MLW-9D
Lab#: AC82728-033
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	1.1
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: TRIP BLANK
Lab#: AC82728-034
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Sample ID: TRIP BLANK
Lab#: AC82728-034
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	ND
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	ND
1,1,2-Trichloroethane	1	ug/l	0.41	ND
1,1-Dichloroethane	1	ug/l	0.28	ND
1,1-Dichloroethene	1	ug/l	0.45	ND
1,2,3-Trichlorobenzene	1	ug/l	0.36	ND
1,2,4-Trichlorobenzene	1	ug/l	0.37	ND
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	ND
1,2-Dibromoethane	1	ug/l	0.46	ND
1,2-Dichlorobenzene	1	ug/l	0.37	ND
1,2-Dichloroethane	1	ug/l	0.37	ND
1,2-Dichloropropane	1	ug/l	0.52	ND
1,3-Dichlorobenzene	1	ug/l	0.39	ND
1,4-Dichlorobenzene	1	ug/l	0.40	ND
1,4-Dioxane	1	ug/l	29	ND
2-Butanone	1	ug/l	0.72	ND
2-Hexanone	1	ug/l	0.31	ND
4-Methyl-2-pentanone	1	ug/l	0.43	ND
Acetone	1	ug/l	2.7	ND
Benzene	1	ug/l	0.27	ND
Bromochloromethane	1	ug/l	0.67	ND
Bromodichloromethane	1	ug/l	0.47	ND
Bromoform	1	ug/l	0.59	ND
Bromomethane	1	ug/l	0.87	ND
Carbon disulfide	1	ug/l	0.35	ND
Carbon tetrachloride	1	ug/l	0.32	ND
Chlorobenzene	1	ug/l	0.21	ND
Chloroethane	1	ug/l	0.89	ND
Chloroform	1	ug/l	0.41	ND
Chloromethane	1	ug/l	0.40	ND
cis-1,2-Dichloroethene	1	ug/l	0.45	ND
cis-1,3-Dichloropropene	1	ug/l	0.18	ND
Cyclohexane	1	ug/l	0.44	ND
Dibromochloromethane	1	ug/l	0.42	ND
Dichlorodifluoromethane	1	ug/l	0.40	ND
Ethylbenzene	1	ug/l	0.44	ND
Isopropylbenzene	1	ug/l	0.16	ND
m&p-Xylenes	1	ug/l	0.50	ND
Methyl Acetate	1	ug/l	0.27	ND
Methylcyclohexane	1	ug/l	0.23	ND
Methylene chloride	1	ug/l	0.54	ND
Methyl-t-butyl ether	1	ug/l	0.37	ND
o-Xylene	1	ug/l	0.28	ND
Styrene	1	ug/l	0.27	ND
Tetrachloroethene	1	ug/l	0.46	ND
Toluene	1	ug/l	0.32	ND
trans-1,2-Dichloroethene	1	ug/l	0.42	ND
trans-1,3-Dichloropropene	1	ug/l	0.24	ND
Trichloroethene	1	ug/l	0.60	ND
Trichlorofluoromethane	1	ug/l	0.62	ND
Vinyl chloride	1	ug/l	0.37	ND
Xylenes (Total)	1	ug/l	0.28	ND

Sample ID: FIELD BLANK F
Lab#: AC82728-035
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Sample ID: FIELD BLANK F

Lab#: AC82728-035

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	ND
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	ND
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	ND
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: IW-1S F

Lab#: AC82728-036

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	88
Calcium	1	ug/l	5000	27000
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	2100
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	5900
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	84000
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND

Sample ID: IW-1S F
Lab#: AC82728-036
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: IW-1D F
Lab#: AC82728-037
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	12000
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	240
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	8600
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	52000
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: IW-2D F
Lab#: AC82728-038
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	15000
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	1100

Sample ID: IW-2D F
Lab#: AC82728-038
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	48000
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	130

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	22
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: IW-3S F
Lab#: AC82728-039
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	270
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	23000
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	190
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	92000
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: IW-3D F
Lab#: AC82728-040
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

Sample ID: IW-3D F
Lab#: AC82728-040
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	51
Calcium	1	ug/l	5000	11000
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	71
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	14000
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	45000
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	2.3
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: MLW-1IS F
Lab#: AC82728-041
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	ND
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	ND
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	ND
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND

Sample ID: MLW-1IS F
Lab#: AC82728-041
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: MLW-1ID F
Lab#: AC82728-042
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	92
Calcium	1	ug/l	5000	19000
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	770
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	29000
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: MLW-1D F
Lab#: AC82728-043
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	ND
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	ND
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND

Sample ID: MLW-1D F
Lab#: AC82728-043
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Sodium	1	ug/l	5000	ND
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: SW-1 F
Lab#: AC82728-044
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	ND
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	130
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	ND
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: MLW-2I F
Lab#: AC82728-045
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
---------	----	-------	----	--------

Sample ID: MLW-2I F
 Lab#: AC82728-045
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	10000
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	ND
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	11000
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: MLW-1ID MS
 Lab#: AC82728-046
 Matrix: Aqueous

Collection Date: 1/5/2015
 Receipt Date: 1/5/2015

Cr (Hexavalent) 3500-Cr D

Analyte	DF	Units	RL	Result
Cr (Hexavalent)	1	mg/l	0.025	0.47

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	10

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	5100
Barium	1	ug/l	50	610
Calcium	1	ug/l	5000	70000
Chromium	1	ug/l	50	500
Copper	1	ug/l	50	510
Iron	1	ug/l	300	7100
Magnesium	1	ug/l	5000	52000
Manganese	1	ug/l	40	1400
Nickel	1	ug/l	50	510
Potassium	1	ug/l	5000	49000
Silver	1	ug/l	20	96
Sodium	1	ug/l	5000	76000
Vanadium	1	ug/l	50	500
Zinc	1	ug/l	50	550

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	550
Arsenic	1	ug/l	2.0	530
Beryllium	1	ug/l	1.0	590
Cadmium	1	ug/l	2.0	520

Sample ID: MLW-1ID MS

Lab#: AC82728-046

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

Cobalt	1	ug/l	2.0	530
Lead	1	ug/l	3.0	540
Selenium	1	ug/l	10	510
Thallium	1	ug/l	2.0	510

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	24
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	18
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	7.1
1,1,2-Trichloroethane	1	ug/l	0.41	15
1,1-Dichloroethane	1	ug/l	0.28	22
1,1-Dichloroethene	1	ug/l	0.45	24
1,2,3-Trichlorobenzene	1	ug/l	0.36	14
1,2,4-Trichlorobenzene	1	ug/l	0.37	18
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	16
1,2-Dibromoethane	1	ug/l	0.46	15
1,2-Dichlorobenzene	1	ug/l	0.37	17
1,2-Dichloroethane	1	ug/l	0.37	24
1,2-Dichloropropane	1	ug/l	0.52	20
1,3-Dichlorobenzene	1	ug/l	0.39	18
1,4-Dichlorobenzene	1	ug/l	0.40	17
1,4-Dioxane	1	ug/l	29	940
2-Butanone	1	ug/l	0.72	19
2-Hexanone	1	ug/l	0.31	19
4-Methyl-2-pentanone	1	ug/l	0.43	22
Acetone	1	ug/l	2.7	93
Benzene	1	ug/l	0.27	23
Bromochloromethane	1	ug/l	0.67	22
Bromodichloromethane	1	ug/l	0.47	25
Bromoform	1	ug/l	0.59	19
Bromomethane	1	ug/l	0.87	14
Carbon disulfide	1	ug/l	0.35	16
Carbon tetrachloride	1	ug/l	0.32	24
Chlorobenzene	1	ug/l	0.21	18
Chloroethane	1	ug/l	0.89	20
Chloroform	1	ug/l	0.41	20
Chloromethane	1	ug/l	0.40	23
cis-1,2-Dichloroethene	1	ug/l	0.45	19
cis-1,3-Dichloropropene	1	ug/l	0.18	19
Cyclohexane	1	ug/l	0.44	12
Dibromochloromethane	1	ug/l	0.42	18
Dichlorodifluoromethane	1	ug/l	0.40	34
Ethylbenzene	1	ug/l	0.44	17
Isopropylbenzene	1	ug/l	0.16	19
m&p-Xylenes	1	ug/l	0.50	38
Methyl Acetate	1	ug/l	0.27	18
Methylcyclohexane	1	ug/l	0.23	11
Methylene chloride	1	ug/l	0.54	16
Methyl-t-butyl ether	1	ug/l	0.37	11
o-Xylene	1	ug/l	0.28	18
Styrene	1	ug/l	0.27	18
Tetrachloroethene	1	ug/l	0.46	110
Toluene	1	ug/l	0.32	19
trans-1,2-Dichloroethene	1	ug/l	0.42	17
trans-1,3-Dichloropropene	1	ug/l	0.24	19
Trichloroethene	1	ug/l	0.60	17
Trichlorofluoromethane	1	ug/l	0.62	20
Vinyl chloride	1	ug/l	0.37	25
Xylenes (Total)	1	ug/l	0.28	56

Sample ID: MLW-1ID MSD

Lab#: AC82728-047

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

Cr (Hexavalent) 3500-Cr D

Analyte	DF	Units	RL	Result
Cr (Hexavalent)	1	mg/l	0.025	0.48

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	10

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	5100
Barium	1	ug/l	50	600
Calcium	1	ug/l	5000	70000
Chromium	1	ug/l	50	500
Copper	1	ug/l	50	510
Iron	1	ug/l	300	7300
Magnesium	1	ug/l	5000	52000
Manganese	1	ug/l	40	1400
Nickel	1	ug/l	50	510
Potassium	1	ug/l	5000	50000
Silver	1	ug/l	20	97
Sodium	1	ug/l	5000	76000
Vanadium	1	ug/l	50	500
Zinc	1	ug/l	50	550

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	570
Arsenic	1	ug/l	2.0	550
Beryllium	1	ug/l	1.0	620
Cadmium	1	ug/l	2.0	540
Cobalt	1	ug/l	2.0	540
Lead	1	ug/l	3.0	570
Selenium	1	ug/l	10	530
Thallium	1	ug/l	2.0	540

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1-Trichloroethane	1	ug/l	0.24	23
1,1,2,2-Tetrachloroethane	1	ug/l	0.66	18
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	0.64	6.0
1,1,2-Trichloroethane	1	ug/l	0.41	16
1,1-Dichloroethane	1	ug/l	0.28	21
1,1-Dichloroethene	1	ug/l	0.45	23
1,2,3-Trichlorobenzene	1	ug/l	0.36	15
1,2,4-Trichlorobenzene	1	ug/l	0.37	18
1,2-Dibromo-3-chloropropane	1	ug/l	0.78	18
1,2-Dibromoethane	1	ug/l	0.46	15
1,2-Dichlorobenzene	1	ug/l	0.37	17
1,2-Dichloroethane	1	ug/l	0.37	23
1,2-Dichloropropane	1	ug/l	0.52	20
1,3-Dichlorobenzene	1	ug/l	0.39	17
1,4-Dichlorobenzene	1	ug/l	0.40	16
1,4-Dioxane	1	ug/l	29	930
2-Butanone	1	ug/l	0.72	17
2-Hexanone	1	ug/l	0.31	19
4-Methyl-2-pentanone	1	ug/l	0.43	21
Acetone	1	ug/l	2.7	96
Benzene	1	ug/l	0.27	22
Bromochloromethane	1	ug/l	0.67	20
Bromodichloromethane	1	ug/l	0.47	25

Sample ID: MLW-1ID MSD

Lab#: AC82728-047

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

Bromoform	1	ug/l	0.59	19
Bromomethane	1	ug/l	0.87	14
Carbon disulfide	1	ug/l	0.35	15
Carbon tetrachloride	1	ug/l	0.32	22
Chlorobenzene	1	ug/l	0.21	18
Chloroethane	1	ug/l	0.89	18
Chloroform	1	ug/l	0.41	19
Chloromethane	1	ug/l	0.40	20
cis-1,2-Dichloroethene	1	ug/l	0.45	19
cis-1,3-Dichloropropene	1	ug/l	0.18	18
Cyclohexane	1	ug/l	0.44	11
Dibromochloromethane	1	ug/l	0.42	19
Dichlorodifluoromethane	1	ug/l	0.40	30
Ethylbenzene	1	ug/l	0.44	16
Isopropylbenzene	1	ug/l	0.16	18
m&p-Xylenes	1	ug/l	0.50	38
Methyl Acetate	1	ug/l	0.27	18
Methylcyclohexane	1	ug/l	0.23	11
Methylene chloride	1	ug/l	0.54	17
Methyl-t-butyl ether	1	ug/l	0.37	11
o-Xylene	1	ug/l	0.28	18
Styrene	1	ug/l	0.27	18
Tetrachloroethene	1	ug/l	0.46	110
Toluene	1	ug/l	0.32	18
trans-1,2-Dichloroethene	1	ug/l	0.42	18
trans-1,3-Dichloropropene	1	ug/l	0.24	18
Trichloroethene	1	ug/l	0.60	16
Trichlorofluoromethane	1	ug/l	0.62	18
Vinyl chloride	1	ug/l	0.37	22
Xylenes (Total)	1	ug/l	0.28	56

Sample ID: MLW-1ID MS F

Lab#: AC82728-048

Matrix: Aqueous

Collection Date: 1/5/2015

Receipt Date: 1/5/2015

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	10

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	4900
Barium	1	ug/l	50	580
Calcium	1	ug/l	5000	68000
Chromium	1	ug/l	50	490
Copper	1	ug/l	50	500
Iron	1	ug/l	300	4900
Magnesium	1	ug/l	5000	50000
Manganese	1	ug/l	40	1300
Nickel	1	ug/l	50	490
Potassium	1	ug/l	5000	49000
Silver	1	ug/l	20	95
Sodium	1	ug/l	5000	79000
Vanadium	1	ug/l	50	490
Zinc	1	ug/l	50	510

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	560
Arsenic	1	ug/l	2.0	550
Beryllium	1	ug/l	1.0	600

Sample ID: MLW-1ID MS F
Lab#: AC82728-048
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Cadmium	1	ug/l	2.0	540
Cobalt	1	ug/l	2.0	540
Lead	1	ug/l	3.0	550
Selenium	1	ug/l	10	520
Thallium	1	ug/l	2.0	510

Sample ID: MLW-1ID MSD F
Lab#: AC82728-049
Matrix: Aqueous

Collection Date: 1/5/2015
Receipt Date: 1/5/2015

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.70	10

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	4900
Barium	1	ug/l	50	580
Calcium	1	ug/l	5000	67000
Chromium	1	ug/l	50	490
Copper	1	ug/l	50	500
Iron	1	ug/l	300	4900
Magnesium	1	ug/l	5000	50000
Manganese	1	ug/l	40	1300
Nickel	1	ug/l	50	490
Potassium	1	ug/l	5000	51000
Silver	1	ug/l	20	95
Sodium	1	ug/l	5000	78000
Vanadium	1	ug/l	50	490
Zinc	1	ug/l	50	510

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	580
Arsenic	1	ug/l	2.0	570
Beryllium	1	ug/l	1.0	620
Cadmium	1	ug/l	2.0	560
Cobalt	1	ug/l	2.0	560
Lead	1	ug/l	3.0	560
Selenium	1	ug/l	10	540
Thallium	1	ug/l	2.0	530

175 Route 46 West and 2 Madison Road, Fairfield, New Jersey 07004
Ph: 800-426-9992 | 973-244-9770 Fax: 973-244-9787 | 973-439-1458
 Service Center: 137-D Gaither Drive, Mount Laurel, New Jersey 08054
Ph (Service Center): 856-780-6057 Fax: 856-780-6056



A Women-Owned, Disadvantaged, Small Business Enterprise

Project # (Lab Use Only)

5010512

Page 3 of 4

3) Reporting Requirements (Please Circle)

Turnaround	Report Type	Electronic Deliv.
1 Business Day (100%)	Data Summary	Hazsite/CSV
2 Business Days (75%)	Results + QC (Waste)	EnviroData
3 Business Days (50%)	NJ Reduced	Excel - NJ Regulatory
4 Business Days (35%)	NY Reduced	Excel - NY Regulatory
1 Week (25%)	PA Reduced	Excel - PA Regulatory
10 Calendar Days (10%)	Full / Category B	EQUIS (specify below):
2 Weeks	Category A	4-File/EQ/NYS/Reg. 2 or 5
Other:		Other: PDF

Expedited TAT Not Always Available. Please Check with Lab.

Batch

Check If Contingent ==>

Matrix Codes

DW - Drinking Water **S** - Soil **A** - Air
GW - Ground Water **SL** - Sludge
WW - Waste Water **OL** - Oil
OT - Other (please specify under item 9, Comments)

7) Analysis Request

<=== Check If Contingent

8)

of Bottles

[illegible]

10) Relinquished by:

Accepted by:

Date	Time
------	------

Comments, Notes, Special Requirements, HAZARDS

Note: Check if low-level groundwater methods required to meet current standards:

BN or BNA (8270C SIM)

VOC (8260B SIM or 8011) Low MDL ($<1 \mu\text{g/l}$)

Note: Check if applicable:

Project-Specific Reporting Limits High Contaminant Concentrations NJ LSRP Project

Cooler Temperature

Additional Notes

11) Sampler (print name): M. Thorne

Date: 1/5/15

Please note **NUMBERED** items. If not completed your analytical work may be delayed.

A fee of \$5/sample will be assessed for storage should sample not be activated for any analysis.

HamptonClarke-Veritech Laboratories 175 Route 46 West and 2 Madison Road, Fairfield, New Jersey 07004 Ph: 800-426-9992 973-244-9770 Fax: 973-244-9787 973-439-1458 Service Center: 137-D Gaither Drive, Mount Laurel, New Jersey 08054 Ph (Service Center): 856-780-6057 Fax: 856-780-6056				HC-V CHAIN OF CUSTODY RECORD HAMPTONCLARKE-VERITECH LABORATORIES <i>A Women-Owned, Disadvantaged, Small Business Enterprise</i>				Project # (Lab Use Only) 5010512		Page <u>4</u> of <u>4</u>																																																																																																																																																																																																																																																																																																																																																																						
NELAC/NJ #07071 PA #68-00463 NY #11408 CT #PH-0671 KY #90124																																																																																																																																																																																																																																																																																																																																																																																
Customer Information 1a) Customer: <u>Impact Environmental</u> Address: <u>170 Keyland Court</u> <u>Bohemia, NY 11716</u> 1b) Email/Cell/Fax/Ph: <u>mbluight@impactenvironmental.com</u> 1c) Send Invoice to: <u>M. Bluight</u> 1d) Send Report to: <u>M. Bluight</u>				Project Information 2a) Project: <u>Melody Cleaners</u> 2b) Project Mgr: <u>M. Bluight</u> 2c) Project Location (City/State): <u>East Meadow New York</u> 2d) Quote/PO # (If Applicable): <u>04-455</u>				3) Reporting Requirements (Please Circle) <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Turnaround</th> <th>Report Type</th> <th>Electronic Deliv.</th> </tr> <tr> <td>24 Hours (100%)</td> <td>Data Summary</td> <td>Hazsite/CSV</td> </tr> <tr> <td>48 Hours (75%)</td> <td>Waste</td> <td><u>EQulS-4-File / EZ / NYS</u></td> </tr> <tr> <td>72 Hours (50%)</td> <td>Red - NJ / NY / PA</td> <td>EQulS EPA Region 2 or 5</td> </tr> <tr> <td>4 Days (35%; TPH)</td> <td>CLP</td> <td>Excel - NJ Regulatory</td> </tr> <tr> <td>1 Week (25%; EPH)</td> <td><u>Full / Category B</u></td> <td>Excel - NY Regulatory</td> </tr> <tr> <td>10 Days (10%)</td> <td>Category A <u>243 ASD</u></td> <td>Excel - PA Regulatory</td> </tr> <tr> <td><u>2 Weeks</u></td> <td>Other: _____</td> <td><u>PDF</u></td> </tr> <tr> <td>Other: _____</td> <td></td> <td>Other: _____</td> </tr> </table>		Turnaround	Report Type	Electronic Deliv.	24 Hours (100%)	Data Summary	Hazsite/CSV	48 Hours (75%)	Waste	<u>EQulS-4-File / EZ / NYS</u>	72 Hours (50%)	Red - NJ / NY / PA	EQulS EPA Region 2 or 5	4 Days (35%; TPH)	CLP	Excel - NJ Regulatory	1 Week (25%; EPH)	<u>Full / Category B</u>	Excel - NY Regulatory	10 Days (10%)	Category A <u>243 ASD</u>	Excel - PA Regulatory	<u>2 Weeks</u>	Other: _____	<u>PDF</u>	Other: _____		Other: _____																																																																																																																																																																																																																																																																																																																																												
Turnaround	Report Type	Electronic Deliv.																																																																																																																																																																																																																																																																																																																																																																														
24 Hours (100%)	Data Summary	Hazsite/CSV																																																																																																																																																																																																																																																																																																																																																																														
48 Hours (75%)	Waste	<u>EQulS-4-File / EZ / NYS</u>																																																																																																																																																																																																																																																																																																																																																																														
72 Hours (50%)	Red - NJ / NY / PA	EQulS EPA Region 2 or 5																																																																																																																																																																																																																																																																																																																																																																														
4 Days (35%; TPH)	CLP	Excel - NJ Regulatory																																																																																																																																																																																																																																																																																																																																																																														
1 Week (25%; EPH)	<u>Full / Category B</u>	Excel - NY Regulatory																																																																																																																																																																																																																																																																																																																																																																														
10 Days (10%)	Category A <u>243 ASD</u>	Excel - PA Regulatory																																																																																																																																																																																																																																																																																																																																																																														
<u>2 Weeks</u>	Other: _____	<u>PDF</u>																																																																																																																																																																																																																																																																																																																																																																														
Other: _____		Other: _____																																																																																																																																																																																																																																																																																																																																																																														
Expedited TAT Not Always Available. Please Check with Lab.																																																																																																																																																																																																																																																																																																																																																																																
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td rowspan="4" style="width: 10%; text-align: center; vertical-align: middle;"> FOR LAB USE ONLY ↓ Batch # <u>Ac82728</u> </td> <td colspan="6" style="text-align: center;">Check If Contingent ==></td> <td colspan="10" style="text-align: center;">7) Analysis Request</td> <td colspan="10" style="text-align: center;"><=== Check If Contingent</td> </tr> <tr> <td colspan="6" style="text-align: center;"> Matrix Codes DW - Drinking Water S - Soil A - Air GW - Ground Water SL - Sludge WW - Waste Water OL - Oil OT - Other (please specify under item 9, Comments) </td> <td colspan="2" style="text-align: center;"> Sample Type Composite (C) Grab (G) </td> <td colspan="10" rowspan="3" style="vertical-align: top;"> VOCs 8260 Low MDL </td> <td colspan="10" rowspan="3" style="vertical-align: top;"> 8) # of Bottles <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>None</td><td>MeOH</td><td>En Core</td><td>NaOH</td><td>HCl</td><td>H2SO4</td><td>HNO3</td><td>Other:</td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table> </td> </tr> <tr> <td colspan="8"></td> </tr> <tr> <td style="text-align: center;">Lab Sample #</td> <td style="text-align: center;">4) Customer Sample ID</td> <td style="text-align: center;">5) Matrix</td> <td style="text-align: center;">6) Sample Date</td> <td style="text-align: center;">Time</td> <td style="text-align: center;">Composite (C)</td> <td style="text-align: center;">Grab (G)</td> <td colspan="10"></td> <td colspan="10"></td> <td style="text-align: center;">9) Comments</td> </tr> <tr> <td style="text-align: center;">026</td> <td style="text-align: center;">MLW-7D</td> <td style="text-align: center;">GW</td> <td style="text-align: center;">1/5/15</td> <td style="text-align: center;">12:30</td> <td style="text-align: center;">G</td> <td style="text-align: center;">X</td> <td colspan="10"></td> <td colspan="10"></td> <td></td> </tr> <tr> <td style="text-align: center;">027</td> <td style="text-align: center;">MLW-8S</td> <td style="text-align: center;">GW</td> <td style="text-align: center;">1/5/15</td> <td style="text-align: center;">12:35</td> <td style="text-align: center;">G</td> <td style="text-align: center;">X</td> <td colspan="10"></td> <td colspan="10"></td> <td></td> </tr> <tr> <td style="text-align: center;">028</td> <td style="text-align: center;">MLW-8I</td> <td style="text-align: center;">GW</td> <td style="text-align: center;">1/5/15</td> <td style="text-align: center;">12:40</td> <td style="text-align: center;">G</td> <td style="text-align: center;">X</td> <td colspan="10"></td> <td colspan="10"></td> <td></td> </tr> <tr> <td style="text-align: center;">029</td> <td style="text-align: center;">MLW-8D</td> <td style="text-align: center;">GW</td> <td style="text-align: center;">1/5/15</td> <td style="text-align: center;">12:45</td> <td style="text-align: center;">G</td> <td style="text-align: center;">X</td> <td colspan="10"></td> <td colspan="10"></td> <td></td> </tr> <tr> <td style="text-align: center;">030</td> <td style="text-align: center;">MLW-9S</td> <td style="text-align: center;">GW</td> <td style="text-align: center;">1/5/15</td> <td style="text-align: center;">12:50</td> <td style="text-align: center;">G</td> <td style="text-align: center;">X</td> <td colspan="10"></td> <td colspan="10"></td> <td></td> </tr> <tr> <td style="text-align: center;">031</td> <td style="text-align: center;">MLW-9I</td> <td style="text-align: center;">GW</td> <td style="text-align: center;">1/5/15</td> <td style="text-align: center;">12:55</td> <td style="text-align: center;">G</td> <td style="text-align: center;">X</td> <td colspan="10"></td> <td colspan="10"></td> <td></td> </tr> <tr> <td style="text-align: center;">032</td> <td style="text-align: center;">Dup-2</td> <td style="text-align: center;">GW</td> <td style="text-align: center;">1/5/15</td> <td style="text-align: center;">13:00</td> <td style="text-align: center;">G</td> <td style="text-align: center;">X</td> <td colspan="10"></td> <td colspan="10"></td> <td></td> </tr> <tr> <td style="text-align: center;">033</td> <td style="text-align: center;">MLW-9D</td> <td style="text-align: center;">GW</td> <td style="text-align: center;">1/5/15</td> <td style="text-align: center;">13:00</td> <td style="text-align: center;">G</td> <td style="text-align: center;">X</td> <td colspan="10"></td> <td colspan="10"></td> <td></td> </tr> <tr> <td style="text-align: center;">034</td> <td style="text-align: center;">Trip Blank</td> <td style="text-align: center;">GW</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">G</td> <td style="text-align: center;">X</td> <td colspan="10"></td> <td colspan="10"></td> <td></td> </tr> </table>										FOR LAB USE ONLY ↓ Batch # <u>Ac82728</u>	Check If Contingent ==>						7) Analysis Request										<=== Check If Contingent										Matrix Codes DW - Drinking Water S - Soil A - Air GW - Ground Water SL - Sludge WW - Waste Water OL - Oil OT - Other (please specify under item 9, Comments)						Sample Type Composite (C) Grab (G)		VOCs 8260 Low MDL										8) # of Bottles <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>None</td><td>MeOH</td><td>En Core</td><td>NaOH</td><td>HCl</td><td>H2SO4</td><td>HNO3</td><td>Other:</td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>										None	MeOH	En Core	NaOH	HCl	H2SO4	HNO3	Other:																	Lab Sample #	4) Customer Sample ID	5) Matrix	6) Sample Date	Time	Composite (C)	Grab (G)																					9) Comments	026	MLW-7D	GW	1/5/15	12:30	G	X																						027	MLW-8S	GW	1/5/15	12:35	G	X																						028	MLW-8I	GW	1/5/15	12:40	G	X																						029	MLW-8D	GW	1/5/15	12:45	G	X																						030	MLW-9S	GW	1/5/15	12:50	G	X																						031	MLW-9I	GW	1/5/15	12:55	G	X																						032	Dup-2	GW	1/5/15	13:00	G	X																						033	MLW-9D	GW	1/5/15	13:00	G	X																						034	Trip Blank	GW	-	-	G	X																					
FOR LAB USE ONLY ↓ Batch # <u>Ac82728</u>	Check If Contingent ==>						7) Analysis Request										<=== Check If Contingent																																																																																																																																																																																																																																																																																																																																																															
	Matrix Codes DW - Drinking Water S - Soil A - Air GW - Ground Water SL - Sludge WW - Waste Water OL - Oil OT - Other (please specify under item 9, Comments)						Sample Type Composite (C) Grab (G)		VOCs 8260 Low MDL										8) # of Bottles <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>None</td><td>MeOH</td><td>En Core</td><td>NaOH</td><td>HCl</td><td>H2SO4</td><td>HNO3</td><td>Other:</td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>										None	MeOH	En Core	NaOH	HCl	H2SO4	HNO3	Other:																																																																																																																																																																																																																																																																																																																																												
	None	MeOH	En Core	NaOH	HCl	H2SO4	HNO3	Other:																																																																																																																																																																																																																																																																																																																																																																								
Lab Sample #	4) Customer Sample ID	5) Matrix	6) Sample Date	Time	Composite (C)	Grab (G)																					9) Comments																																																																																																																																																																																																																																																																																																																																																					
026	MLW-7D	GW	1/5/15	12:30	G	X																																																																																																																																																																																																																																																																																																																																																																										
027	MLW-8S	GW	1/5/15	12:35	G	X																																																																																																																																																																																																																																																																																																																																																																										
028	MLW-8I	GW	1/5/15	12:40	G	X																																																																																																																																																																																																																																																																																																																																																																										
029	MLW-8D	GW	1/5/15	12:45	G	X																																																																																																																																																																																																																																																																																																																																																																										
030	MLW-9S	GW	1/5/15	12:50	G	X																																																																																																																																																																																																																																																																																																																																																																										
031	MLW-9I	GW	1/5/15	12:55	G	X																																																																																																																																																																																																																																																																																																																																																																										
032	Dup-2	GW	1/5/15	13:00	G	X																																																																																																																																																																																																																																																																																																																																																																										
033	MLW-9D	GW	1/5/15	13:00	G	X																																																																																																																																																																																																																																																																																																																																																																										
034	Trip Blank	GW	-	-	G	X																																																																																																																																																																																																																																																																																																																																																																										
10) Relinquished by: <u>[Signature]</u>				Accepted by: <u>[Signature]</u>				Date: <u>1/5/15</u>		Time: <u>1420</u>		Comments, Notes, Special Requirements, HAZARDS Note: Check if low-level groundwater methods required to meet current standards in NJ or PA: ☐ BN or BNA (8270C SIM) ☒ VOC (8260B SIM or 8011) <u>Low MDL (< 1 µg/L)</u> ☐ Metals (ICP-MS 200.8 or 6020) ☐ Metals- <u>Soil</u> (ICP-MS 6020 for Be & Ag) Note: Check if applicable: ☐ Project-Specific Reporting Limits ☐ High Contaminant Concentrations ☐ NJ LSRP Project																																																																																																																																																																																																																																																																																																																																																																				
Additional Notes 										11) Sampler (print name): <u>M. Thome</u> Date: <u>1/5/15</u> Please note NUMBERED items. If not completed your analytical work may be delayed. A fee of \$5/sample will be assessed for storage should sample not be activated for any analysis.																																																																																																																																																																																																																																																																																																																																																																						

Melody Cleaners Site
2050 Hempstead Turnpike, East Meadow, NY
NYSDEC VCP No. 00347-1

Supplemental ISCO Work Plan

Attachment C
Health and Safety Plan

Health and Safety Plan

April 25, 2015 Revision

Conducted at:

**Melody Cleaners Site
East Meadow, New York
Voluntary Cleanup Program Site Code #347-1**

Prepared for:

**New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York**

IMPACT ENVIRONMENTAL



TABLE OF CONTENTS

Section	Topic	Page
1.	INTRODUCTION	3
1.1	Purpose	3
1.2	Site Description	3
1.3	Scope of Work	3
1.4	Chemical Oxidant	4
2.	KEY PERSONNEL UPDATE.....	5
3.	TASK / OPERATION HEALTH AND SAFETY RISK ANALYSIS	6
3.1	Chemical Oxidant Handling Hazards	6
4.	COMMUNITY AIR MONITORING PROGRAM	7
4.1	Organic Compounds	7
4.2	Fugitive Emissions and Odor Monitoring	8
4.3	Fugitive Dust Control Measures	9
4.4	Site Matrix for Protection Level Determinations	9
5.	WORK ZONE DEFINITIONS.....	11
5.1.1	<i>Exclusion Zone (EZ).....</i>	<i>11</i>
5.1.2	<i>Contaminant Reduction Zone (CRZ).....</i>	<i>11</i>
5.1.3	<i>Support Zone (SZ).....</i>	<i>11</i>
6.	PERMANGANATE NEUTRALIZATION SOLUTIONS.....	12

Appendices

APPENDIX A	Materials Safety Data Sheets (MSDS)
------------	--

Introduction

This Health and Safety Plan (HASP) addendum describes the procedures to be followed to reduce employee exposure to potential health and safety hazards that may be present at the project site during the in-situ chemical oxidation (ISCO) activities. The emergency response procedures necessary to respond to such hazards are also described within this HASP. **All investigative and/or remedial activities other than the proposed ISCO activities to be performed on the project site will follow the original HASP, prepared by Impact Environmental dated 2001.**

1.1 Purpose

The purpose of this HASP addendum is to provide the contractor's field personnel, subcontractors, and other visitors with an understanding of the potential chemical and physical hazards that exist or may arise during the ISCO activities.

The primary objective is to ensure the well being of all field personnel and the community surrounding this site. In order to accomplish this, project staff and approved subcontractors shall acknowledge and adhere to the policies and procedures established herein. Accordingly, all personnel assigned to this project shall read this HASP and sign the Agreement and Acknowledgment Statement to certify that they have read, understood, and agree to abide by its provisions.

The contractor's personnel have the authority to stop work performed by our sub-contractors at this site if said work is not performed in accordance with the requirements of this HASP.

1.2 Site Description

The Site is a 74,702 square foot commercial shopping center located within the Village of East Meadow in Nassau County New York. The Site is triangular in shape, situated between the intersection of Hempstead Turnpike (on the north) and Front Street (to the south). The Site contains five commercial structures that are currently utilized as a donut shop, a television repair shop, a laundry mat, a dry cleaner and a car wash.

1.3 Scope of Work

According to the approved ISCO work plan, RemOX S (potassium permanganate), product of Carus Chemical Company, will be utilized as the chemical oxidants to remediate groundwater

contamination at the Site. The injection of chemical oxidants into the groundwater requires specialized equipment. Drilling equipment will be used to install permanent and temporary injection points at the site. A mixing tank and pump are necessary to prepare the chemical oxidant solution so it can be pumped into the groundwater via the injection points. The chemical oxidant will react with the site contaminants and breakdown the contaminants to innocuous substances (i.e. carbon dioxide, water, chloride). The injections will be done in phases. The first phase includes installation of permanent injection wells and the initial injection. The second phase will include injections performed at temporary points. Based on groundwater sampling results a third phase may be necessary, which includes injections performed at the permanent wells.

1.4 Chemical Oxidant

Besides the contaminants already identified in the original HASP, the chemical oxidants (potassium permanganate) to be utilized at the Site is the primary chemical of concern (COC) for this HASP addendum. The material safety data sheet (MSDS) of the COC is attached in **Appendix A.**

2.Key Personnel Update

A list of the updated pertinent personnel authorized to be present on site is as follows:

<u>Title</u>	<u>Name</u>	<u>Telephone Number</u>
Senior Project Manager	Kevin Kleaka	(631) 269-8800
Project Manager	Michael Bluight	(631) 334-4349
Field Operations Leader	Michael Bluight	(631) 334-4349
Site Health and Safety Officer	Michael Bluight	(631) 334-4349
Quality Assurance Officer	Kevin Kleaka	(631) 269-8800
Site Contact	Michael Bluight	(631) 334-4349
State Agency Contact (NYSDEC)	Brian Jankauskas, P.E.	(518) 402-9620

3.Task / Operation Health and Safety Risk Analysis

The field tasks covered by this HASP include ISCO injection well installation, development, gauging, soil & groundwater handling/sampling, and chemical oxidant injection. The following hazards may be encountered in addition to the hazards identified by the original HASP:

3.1 Chemical Oxidant Handling Hazards

Containers of the RemOX L should be protected against physical damage. When handling RemOX L, respirators should be worn to avoid irritation of, or damage to, mucous membranes. Eye protection should also be worn when handling RemOX S as a solid or in solution.

RemOX L should be stored in a cool, dry area in closed containers. Concrete floors are preferred to wooden decks. To clean up spills and leaks, follow the steps recommended in the MSDS. Goggles, rubber gloves, and respirator should be used when cleaning up a spill or leak.

Avoid contact with acids, peroxides, and all combustible organic or readily oxidizable materials including inorganic oxidizable materials and metal powders. With hydrochloric acid, chlorine gas is liberated. RemOX L is not combustible, but it will support combustion. It may decompose if exposed to intense heat. Fires may be controlled and extinguished by using large quantities of water.

4. Community Air Monitoring Program

During the ISCO activities, the air in work areas will be sampled periodically (on the site and at the property lines) for the presence of contaminants. Levels of organic vapors in the ambient air will be monitored during the fieldwork to ensure that appropriate levels of respiratory protection are employed at all times. Additionally, the testing will be performed to determine if changes to this plan are warranted to protect workers and public health.

4.1 Organic Compounds

A real-time, organic vapor analyzer to monitor will be utilized for the concentration VOCs in the air in the work areas, and will determine when changes in site operations and personal protection equipment are necessary. No changes in the levels of respiratory protection specified above will be made without the approval of the site safety supervisor and the project team leader.

During the ISCO activities, the site workers will use a photo ionization detector (PID) to monitor levels of organic vapor in the air and verify that they are within the safety guidelines established by the preliminary assessment of the risks associated with site investigations. The PID has an audible alarm set for 5 ppm (the lowest action threshold presented within this plan). If used, the GCI will have an audible alarm set to detect explosive atmospheres. Testing will be performed as necessary within the exclusion zone and at the nearest down-wind property line.

At a minimum, where monitoring equipment is used, the following information will be logged.

- Instrument type and detection range
- Control settings
- Reading locations
- Atmospheric conditions
- Calibration Records – To be performed a minimum of once per day

The data collected during monitoring will be used to guide site operations in a manner that is consistent with the New York State Department of Environmental Conservation, DER-10 Technical Guidance for Site Investigation and Remediation, Generic Community Air Monitoring Plan.

Accordingly, if the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average. **If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.**

4.2 Fugitive Emissions and Odor Monitoring

Airborne fugitive particulate emissions at the nearest down wind property line will be measured by the Site Safety Officer on a continuous basis during waste handling activities. The measurements will be made using a portable particulate monitoring device manufactured by the Casella Corporation. The monitoring device is capable of detecting airborne particulate (PM-10) at concentrations ranging from 1 to 1000 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Detected concentrations are logged within the instrument memory and can be retrieved using Microsoft Windows-based software provided by the manufacturer. Retrieved data can be imported into standard PC-based spreadsheet and database software for analysis and report presentation.

At a minimum, where the particulate monitoring device is used, the following information will be logged.

- Instrument type and detection range
- Control settings
- Reading locations
- Atmospheric conditions
- Calibration Records – To be performed a minimum of once per day

The data collected during monitoring will be used to guide site operations in a manner that is consistent, or due to the presence of heavy metal contaminants within the soil is more restrictive than those presented within the New York State Department of Environmental Conservation, DER-10 Technical Guidance for Site Investigation and Remediation, Generic Community Air Monitoring Plan.

If the total downwind PM-10 particulate level is 150 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then the handling activities must immediately stop, and the dust suppression techniques must be employed. Activities cannot resume until the mitigating measures result in a net downwind PM-10 particulate concentration below 150 $\mu\text{g}/\text{m}^3$.

If, after implementation of dust suppression techniques, downwind PM - 10 particulate levels are greater than 150 µg/m³ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 µg/m³ of the upwind level and in preventing visible dust migration.

Because the detection of odors is subjective, the Site Health and Safety Officer will be charged with the responsibility of making a determination if measures are required to abate odors. Since the contaminant concentrations in the soil/fill are generally below the odor threshold, the odor sources during the site will be the operation of diesel engines associated with hydraulic material handling and transportation.

4.3 Fugitive Dust Control Measures

To prevent the occurrence of fugitive emissions the following procedures will be implemented.

- ◆ A strict facility speed limit will be set at 15 miles per hour.
- ◆ Roads will be wetted using potable water.
- ◆ Media stockpiles over 500 cubic yards will be covered with plastic poly sheeting.
- ◆ Excavation and handling activities will be halted where winds exceed 40 miles per hour.
- ◆ Loading and mechanical screening of material will be performed within the central portions of the site as to provide maximum distance to the property lines.
- ◆ Media handled about the site will be covered while being transported within trucks.

4.4 Site Matrix for Protection Level Determinations

Action levels represent those conditions requiring an upgrade of personal protective equipment (PPE). The information presented below applies to the above chemical constituents. All air monitoring results should be logged in the Site Safety Log. The following tables provide for quick reference for each monitored parameter.

Ionization Detector Response

<i>Photoionization Detector (PID)</i>	
Concentrations (in ppmV)	Level of PPE Required / Procedure
0.0 to 15.0	Level D
15.1 to 250.0	Level C
> 750.0	Immediately withdraw from the area

Combustible Gas Response

<i>Combustible Gas Indicator (CGI)</i>	
Results (% of LEL)	Level of PPE Required / Procedure
0.0 to 20.0	Level D - Continue with normal activity
Above 20.0	Discontinue all site restoration activities - Immediately withdraw from the area and implement emergency procedures presented in Section 11 of this document.

Particulate Detector Response

<i>Real Time Particulate Detection Meter</i>	
Results (mg / m3)	Level of PPE Required / Procedure
0.0 to 5.0	Continue with normal activity – Level D
>5.0	Level C Protection - Discontinue site activities – initiate dust control activities listed in Section 8.3 of this document

5. Work Zone Definitions

Work and support areas shall be established based on ambient air data and proposed work sites. They shall be established in order to contain contamination within the smallest areas possible and shall ensure that each employee has the proper PPE for the area or zone in which work is to be performed.

5.1 Exclusion Zone (EZ)

It is within this zone that the environmental remediation activities are performed. No one shall enter this zone unless the appropriate PPE is donned. The location of this zone will change as the ISCO activities are performed. The boundary of the EZ will be marked with cones and caution tapes.

5.2 Contaminant Reduction Zone (CRZ)

It is within this zone that the decontamination process is undertaken. Personnel and their equipment must be adequately decontaminated before leaving this zone for the support zone. This zone will be set up between the EZ (no less than 100 feet away) and the site boundary.

5.3 Support Zone (SZ)

The support zone is considered to be uncontaminated; as such, protective clothing and equipment are not required but should be available for use in emergencies. All equipment and materials are stored and maintained within this zone. Protective clothing is put on within the SZ before entering the EZ or the CRZ. The SZ will be established in a safe environment at least 50 feet away from the EZ.

6.Permanganate Neutralization Solutions

During the course of the application of permanganate, there is the chance that the neutralization and/or disposal of excess permanganate may be required. Regardless of whether the need is for the clean up and removal of a small spill, the neutralization of excess permanganate solution from equipment, the rinse water produced when cleaning buckets and drums or any other activity where excess permanganate may cause a concern, following a few simple rules will ensure that the process will be safe and easy.

If neutralization is required because of a spill, the first step is to contain or collect the spill. Prior to any neutralization, sodium permanganate **MUST BE DILUTED** with water to a concentration of 6% or less. Once the product has been diluted, it can be safely neutralized.

Permanganate solutions can be neutralized using the following solution which consists of products that can be purchased from a local food or drug store. This solution is especially effective for removal of brown stains on skin; however, it has also been used as a neutralization solution for small spills. It would not be economical for anything but the smallest volumes of dilute permanganate.

30 parts water: 40 parts white vinegar: 30 parts 3% hydrogen peroxide

Appendix A

Material Safety Data Sheet



RemOx® L ISCO Reagent

EC- SAFETY DATA SHEET according to Regulation (EC) № 1907/2006 of the European Parliament and of the Council, of 18 December 2006 concerning REACH

Material Safety Data Sheet
Page 1 of 8

Section 1 Chemical Product and Company Identification

PRODUCT NAME: RemOx® L ISCO Reagent	Revision Date: April 2008
TRADE NAME: RemOx® L ISCO Reagent	

USES OF SUBSTANCE: RemOx® L ISCO Reagent is a liquid oxidant recommended for in-situ and ex-situ remediation of sites that require a strong oxidant.

COMPANY NAME (Europe): CARUS NALON S.L.	COMPANY ADDRESS: Carus Nalon S.L. Barrio Nalon, s/n 33100 Trubia-Oviedo Espana, Spain
COMPANY NAME (US): CARUS CORPORATION	INFORMATION: (34) 985-785-513 (34) 985-785-513 www.caruseurope.com (Web) carus@carusnalon.com (Email)
	EMERGENCY TELEPHONE: (34) 985-785-513
	COMPANY ADDRESS: 315 Fifth Street Peru, IL 61354, USA
	INFORMATION: (815)-223-1500 www.caruscorporation.com (Web) salesmkt@caruscorporation.com (Email)
	EMERGENCY TELEPHONE: (800) 435-6856 (USA) (800) 424-9300 (CHEMTREC, USA) (815)-223-1500 (Other countries)

Section 2 Hazards Identification

- 1. Eye Contact**
RemOx® L ISCO Reagent is damaging to eye tissue on contact. It may cause burns that result in damage to the eye.
- 2. Skin Contact**
Momentary contact of solution at room temperature may be irritating to the skin, leaving brown stains. Prolonged contact is damaging to the skin.
- 3. Inhalation**
Acute inhalation toxicity data are not available. However, airborne concentrations of RemOx® L ISCO Reagent in the form of mist may cause irritation to the respiratory tract.
- 4. Ingestion**
RemOx® L ISCO Reagent if swallowed, may cause burns to mucous membranes of the mouth, throat, esophagus, and stomach.



RemOx® L

ISCO Reagent

EC- SAFETY DATA SHEET according to Regulation (EC) № 1907/2006 of the European Parliament and of the Council, of 18 December 2006 concerning REACH

Material Safety Data Sheet
Page 2 of 8

Section 3 Hazardous Ingredients

<u>Material or Component</u>	<u>CAS No.</u>	<u>%</u>	<u>Hazard Data</u>
Sodium Permanganate	10101-50-5	40	PEL/C 5 mg Mn per cubic meter of air TLV-TWA 0.2 mg Mn per cubic meter of air
<u>HAZARD SYMBOLS:</u>			
			
<u>RISK PHRASES:</u>			
8 Contact with combustibles may cause fire.			
22 Harmful if swallowed.			
50/53 Very toxic to aquatic organisms, may cause long-term effects in the aquatic environment.			
<u>SAFETY PHRASES:</u>			
17 Keep away from combustible materials.			
24/25 Avoid contact with skin and eyes.			
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice			

Section 4 First Aid Measures

1. Eyes

Immediately flush eyes with large amounts of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Do not attempt to neutralize chemically. Seek medical attention immediately. Note to physician: Decomposition products are alkaline.

2. Skin

Immediately wash contaminated areas with water. Remove contaminated clothing and footwear. (Caution: Solution may ignite certain textiles). Wash clothing and decontaminate footwear before reuse. Seek medical attention immediately if irritation is severe and persistent.

3. Inhalation

Remove person from contaminated area to fresh air. If breathing has stopped, resuscitate and administer oxygen if readily available. Seek medical attention immediately.

4. Ingestion

Never give anything by mouth to an unconscious or convulsing person. If person is conscious, give large quantities of water or milk. Seek medical attention immediately.

Section 5 Fire Fighting Measures

NFPA* HAZARD SIGNS:

Health Hazard 1 = Materials which under fire conditions would give off irritating combustion products. (less than 1 hour exposure) Materials which on the skin could cause irritation.

Flammability Hazard 0 = Materials that will not burn.

Reactivity Hazard 0 = Materials which in themselves are normally stable, even under fire exposure



RemOx® L

ISCO Reagent

EC- SAFETY DATA SHEET according to Regulation (EC) № 1907/2006 of the European Parliament and of the Council, of 18 December 2006 concerning REACH

Material Safety Data Sheet
Page 3 of 8

Special Hazard OX = conditions, and which are not reactive with water.
Oxidizer

***National Fire Protection Association 704**

FIRST RESPONDERS:

Wear protective gloves, boots, goggles, and respirator. In case of fire, wear positive pressure breathing apparatus. Approach incident with caution. Use 2004 Emergency Response Guidebook (U.S. DOT RSPA, TC and STC). Guide No. 140. (<http://hazmat.dot.gov/pubs/erg2004/erg2004.pdf>).

FLASHPOINT

None

FLAMMABLE OR EXPLOSIVE LIMITS

Lower: Nonflammable Upper: Nonflammable

EXTINGUISHING MEDIA

Use large quantities of water.
Water will turn pink to purple if in contact with RemOx® L ISCO Reagent. Dike to contain.
Do not use dry chemicals, CO₂Halon® or foams.

SPECIAL FIREFIGHTING PROCEDURES

If material is involved in fire, flood with water. Cool all affected containers with large quantities of water. Apply water from as far as a distance as possible. Wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION

Powerful oxidizing material. May decompose spontaneously if exposed to heat (135°C/275°F). May be explosive in contact with certain other chemicals (Section 10). May react violently with finely divided and readily oxidizable substances. Increases burning rate of combustible material. May ignite wood and cloth.

Section 6 Accidental Release Measures

PERSONAL PRECAUTIONS

Personnel should wear protective clothing suitable for the task. Remove all ignition sources and incompatible materials before attempting clean up.

ENVIRONMENTAL PRECAUTIONS:

Do not flush into sanitary sewer system or surface water. If accidental release into the environment occurs, inform the responsible authorities. Keep the product away from drains, sewers, surface and ground water and soil.

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Contain spill by collecting the liquid in a pit or holding behind a dam (sand or soil). Dilute to approximately 6% with water, and then reduce with sodium thiosulfate, a bisulfite or ferrous salt solution. The bisulfite or ferrous



RemOx® L ISCO Reagent

EC- SAFETY DATA SHEET according to Regulation (EC) № 1907/2006 of the European Parliament and of the Council, of 18 December 2006 concerning REACH

Material Safety Data Sheet
Page 4 of 8

salt may require some dilute sulfuric acid (10% w/w) to promote reduction. Neutralize with sodium carbonate to neutral pH, if acid was used. Decant or filter and deposit sludge in approved landfill. Where permitted, the sludge may be drained into sewer with large quantities of water. To clean contaminated floors, flush with abundant quantities of water into sewer, if permitted by federal, state, and local regulations. If not, collect water and treat as above.

Section 7 Handling and Storage

WORK/HYGIENIC PRACTICES

Wash hands thoroughly with soap and water after handling RemOx® L ISCO Reagent. Do not eat, drink or smoke when working with RemOx® L ISCO Reagent. Wear proper protective equipment. Remove clothing, if it becomes contaminated.

VENTILATION REQUIREMENTS

Provide sufficient mechanical and/or local exhaust to maintain exposure below the TLV/TWA.

CONDITIONS FOR SAFE STORAGE

Store in accordance with NFPA 430 requirements for Class II oxidizers. Protect containers from physical damage. Store in a cool, dry area in closed containers. Segregate from acids, peroxides, formaldehyde, and all combustible, organic, or easily oxidizable materials including antifreeze and hydraulic fluid.

Section 8 Exposure Controls and Personal Protection

RESPIRATORY PROTECTION

In cases where overexposure to mist may occur, the use of an approved NIOSH-MSHA mist respirator or an air supplied respirator is advised. Engineering or administrative controls should be implemented to control mist.

EYE

Faceshield, goggles, or safety glasses with side shields should be worn. Provide eyewash in working area.

GLOVES

Rubber or plastic gloves should be worn.

OTHER PROTECTIVE EQUIPMENT

Normal work clothing covering arms and legs, and rubber, or plastic apron should be worn. Caution: If clothing becomes contaminated, wash off immediately. Spontaneous ignition may occur with cloth or paper.

Section 9 Physical and Chemical Properties

APPEARANCE AND ODOR	Dark purple solution, odorless
BOILING POINT, 760 mm Hg	105 °C
VAPOR PRESSURE (mm Hg)	760 mm at 105°C
SOLUBILITY IN WATER % BY SOLUTION	Miscible in all proportions
PERCENT VOLATILE BY VOLUME	61% (as water)
EVAPORATION RATE	Same as water
FREEZING POINT	-15.0 °C
SPECIFIC GRAVITY	1.36-1.39



RemOx® L

ISCO Reagent

EC- SAFETY DATA SHEET according to Regulation (EC) № 1907/2006 of the European Parliament and of the Council, of 18 December 2006 concerning REACH

Material Safety Data Sheet
Page 5 of 8

pH	5-9
OXIDIZING PROPERTIES	Strong oxidizer. May ignite wood and cloth.
EXPLOSIVE PROPERTIES	Explosive in contact with sulfuric acid or peroxides, or readily oxidizable substances.

Section 10 Stability and Reactivity

STABILITY	Under normal conditions, the material is stable.
CONDITIONS TO AVOID could	Contact with incompatible materials or heat (135°C / 275°F) result in violent exothermic chemical reaction.
INCOMPATIBLE MATERIALS	Acids, peroxides, formaldehyde, antifreeze, hydraulic fluids, and all combustible organic or readily oxidizable materials, including metal powders. With hydrochloric acid, toxic chlorine gas is liberated.
HAZARDOUS DECOMPOSITION PRODUCTS	When involved in a fire, liquid permanganate may form corrosive fumes.
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION	Material is not known to polymerize.

Section 11 Toxicological Information

SODIUM PERMANGANATE: Acute oral LD₅₀ not known.

1. Acute toxicity

Irritating to body tissue with which it comes into contact. No acute toxicity data is available for sodium permanganate. Toxicity is expected to be similar to that of potassium permanganate. The toxicity data for potassium permanganate is given below:

Ingestion:

LD 50 oral rat: 780 mg/kg male (14 days); 525 mg/kg female (14 days).

Harmful if swallowed. ALD: 10g. Ingestion may cause nausea, vomiting, sore throat, stomach-ache and eventually lead to a perforation of the intestine. Liver and kidney injuries may occur.

Skin contact:

LD 50 dermal no data available.

The product may be absorbed into the body through the skin. Major effects of exposure: severe irritation, brown staining of skin.

Inhalation:

LC 50 inhal. no data available.

The product may be absorbed into the body by inhalation. Major effects of exposure: respiratory disorder, cough.

2. Chronic toxicity

No known cases of chronic poisoning due to permanganates have been reported. Prolonged exposure, usually



RemOx® L

ISCO Reagent

EC- SAFETY DATA SHEET according to Regulation (EC) № 1907/2006 of the European Parliament and of the Council, of 18 December 2006 concerning REACH

Material Safety Data Sheet
Page 6 of 8

over many years, to heavy concentrations of manganese oxides in the form of dust and fumes may lead to chronic manganese poisoning, chiefly involving the central nervous system.

3. Carcinogenicity

Sodium permanganate has not been classified as a carcinogen by ACGIH, NIOSH, OSHA, NTP, or IARC.

4. Medical Conditions Generally Aggravated by Exposure

Sodium permanganate solution will cause further irritation of tissue, open wounds, burns or mucous membranes.

Section 12 Ecological Information

Entry to the Environment

Permanganate has a low estimated lifetime in the environment, being readily converted by oxidizable materials to insoluble MnO_2 .

Bioconcentration Potential

In non-reducing and non-acidic environments MnO_2 is insoluble and has a very low bioaccumulative potential.

Aquatic Toxicity

No data.

Section 13 Disposal Considerations

Waste Disposal

RemOx® L ISCO Reagent, once it becomes a waste, is considered a D001 hazardous (ignitable) waste. For disposal of RemOx® L ISCO Reagent solutions, follow procedures in Section 6 and deactivate the permanganate to insoluble manganese dioxide. Dispose of it in a permitted landfill. Contact Carus Chemical Company for additional recommendations.

Section 14 Transport Information

USA (land, D.O.T.)	Proper Shipping Name: 49 CFR172.101 Permanganates, inorganic, aqueous solution, n.o.s. (contains sodium permanganate) Hazard Class: 49 CFR172.101....Oxidizer ID Number: 49 CFR172.101....UN 3214 Packing Group: 49 CFR172.101....II Division: 49 CFR172.101....5.1
European Labeling in accordance Road/Rail Transport (ADR/RID)	ID Number: UN 3214 ADR/RID Class 5.1 Description of Goods: Permanganates, inorganic, aqueous solution, n.o.s (contains sodium permanganate) Hazard Identification No. 50
European Labeling in accordance with EC directive (Water, I.M.O.)	Proper Shipping Name: Permanganates, inorganic, aqueous solution, n.o.s (contains sodium permanganate) Hazard Class: Oxidizer ID Number: UN 3214



RemOx® L ISCO Reagent

EC- SAFETY DATA SHEET according to Regulation (EC) № 1907/2006 of the European Parliament and of the Council, of 18 December 2006 concerning REACH

Material Safety Data Sheet
Page 7 of 8

	Packing Group: II Division: 5.1 Marine Pollutant: No
European Labeling in accordance with EC directive (Air, I.C.A.O.)	Proper Shipping Name: Permanganates, inorganic, aqueous solution, n.o.s (contains sodium permanganate) Hazard Class: Oxidizer ID Number: UN 3214 Packing Group: II Division: 5.1

Section 15 Regulatory Information (Sodium Permanganate)

TSCA	Listed in the Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
CERCLA	Not listed.
RCRA	Oxidizers such as RemOx® L ISCO Reagent solution meet the criteria of ignitable waste. 40 CFR 261.21.
SARA TITLE III Information	
Section 302/303	Extremely hazardous substance: Not listed
Section 311/312	Hazard categories: Fire, acute and chronic toxicity.
Section 313	RemOx® L ISCO Reagent contains 40% manganese compounds as part of the chemical and is subject to the reporting requirements of Section 313 of Title III, Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372.
FOREIGN LIST	Canadian Non-Domestic Substance List , EINECS

Section 16 Other Information

NIOSH	National Institute for Occupational Safety and Health
MSHA	Mine Safety and Health Administration
OSHA	Occupational Safety and Health Administration
NTP	National Toxicology Program
IARC	International Agency for Research on Cancer
PEL	Permissible Exposure Limit
C	Ceiling Exposure Limit
TLV-TWA	Threshold Limit Value-Time Weighted Average
CAS	Chemical Abstract Service
EINECS	Inventory of Existing Chemical Substances (European)

Chithambarathanu Pillai (S.O.F.)
April 2008

The information contained herein is accurate to the best of our knowledge. However, data, safety standards and government regulations are subject to change and, therefore, holders and users should satisfy themselves that they are aware of all current data and regulations relevant to their particular use of product. CARUS CORPORATION DISCLAIMS ALL LIABILITY FOR RELIANCE ON THE COMPLETENESS OR ACCURACY OR THE INFORMATION INCLUDED HEREIN. CARUS CORPORATION MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR USE OR PURPOSE OF THE PRODUCT DESCRIBED HEREIN. All conditions relating to storage, handling, and use of the product are beyond the control of Carus Corporation, and shall be the sole responsibility of the holder or user of the product.



RemOx® L ISCO Reagent

EC- SAFETY DATA SHEET according to Regulation (EC) № 1907/2006 of the European Parliament and of the Council, of 18 December 2006 concerning REACH

Material Safety Data Sheet
Page 8 of 8



(Carus and Design) is a registered service mark of Carus Corporation. CARUS® is a registered trademark of Carus Corporation. RemOx® is a trademark of Carus Corporation. Responsible Care® is a registered service mark of the American Chemistry Council.



Responsible Care®
Good Chemistry at Work