UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

3/19/2020

MEMORANDUM

SUBJECT: US EPA Sampling Results – October 2019
Former SMV Industries Facility, Council Bluffs, Iowa
EPA ID No. IAD984566034

FROM: Lisa Messinger, Project Manager
RCRA Oversight, Authorization Grants
& PCB Branch
Land, Chemical & Redevelopment Division

LISA MESSINGER Digitally signed by LISA MESSINGER Date: 2020.03.19 14:06:44 -05'00'

THRU: Don Lininger, Branch Chief
RCRA Oversight, Authorization Grants
& PCB Branch
Land, Chemical & Redevelopment Division

DONALD LININGER Digitally signed by DONALD LININGER Date: 2020.03.19 14:20:07 -05'00'

TO: File; IAD984566034
Former SMV Industries, Council Bluffs, Iowa

On October 21, 2019, the U.S. Environmental Protection Agency Region 7 conducted soil and groundwater sampling at the Former SMV Industries facility located at 1103 South 6th Street in Council Bluffs, Iowa. All field activities were performed by Ms. Lisa Messinger, Mr. Lorenzo Sena and Mr. James Regehr for the EPA including collecting grab soil and groundwater samples from temporary, direct-push borings with which the results are summarized below.

Background

The Former SMV Industries facility is located at 1103 South 6th Street in Council Bluffs, Iowa, (Figure 1 and 2 attached). The former facility manufactured and distributed a variety of metal products such as posts for electric fences, slow-moving vehicles and decorative windmills for lawns and gardens up until the mid-2000s. During a 1994 closure of a former hazardous waste storage onsite, the EPA inspector noted additional potential sources of contamination including an area of oil staining reportedly associated wth equipment oil changes, as well as a pallet of opened containers reportedly containing an unknown solvent. These two areas were targeted for sampling during this event, as the other unit was provided a clean closure certification.

The former site owners conducted clean closure of a former hazardous waste storage unit in 1994. The current property owner, PACE Harvesters, also conducted a Phase 1 and Phase II Environmental Assessments in 2006-2007 as part of a Brownfields development project discussed below. These

investigations discovered volatile organic compounds and semi-volatile organic compounds above drinking water standards in groundwater at the site; however, it is likely that this contamination is due to an upgradient, offsite source. Previous Phase II sampling did not, however, target areas of concern noted in the sampling compliance evaluation inspection report developed during closure of the clean-closed unit.

PACE intends to develop the property into a parking lot structure (Figure 3 attached) for the proposed Hoff Family Arts and Culture Center currently being constructed adjacent and north of the former SMV Industries property.

The purpose of the sampling was to identify whether a source of contamination exists at the former SMV Industries property at areas reported to have had potential sources of contamination during the 1994 closure activities. Additionally, upgradient groundwater samples were collected to identify constituents in groundwater that may be emanating from an upgradient, off-site source. Downgradient groundwater samples were collected to evaluate downgradient boundary conditions at the facility.

Soil and Groundwater Sampling Activities

On October 21, 2019, the EPA personnel mobilized to the subject site to perform environmental soil and groundwater sampling. A total of seven direct-push borings were advanced to an approximate depth of 20 feet below ground surface. Soil samples were collected from three of these boring locations (SMV-1, SMV-2 and SMV-3) at both shallow and deep soil sampling intervals. Soil samples were collected via grab sampling methods. Groundwater samples were collected from these three borings in addition to four more borings (GW-1, GW-2, GW-3 and GW-4) where soil sampling was not conducted.

Sample locations were determined by using historical diagrams available from the 1994 closure reporting activities which depict approximate locations of the potential source areas relative to onsite structures at the time. Since these structures were razed long ago, no current markers were available at the property to rely on locating the potential source areas. Instead, figures from these reports were georeferenced and overlaid on current aerial photography using a GIS system. Geographic coordinates were then obtained from this system, and a GPS unit was used to locate these coordinates in the field.

Upon retrieval to the surface in 5-foot acetate liners, the soil cores were visually examined and logged for lithology on boring log sheets. The unconsolidated lithology generally consisted of clayey silty soil with some sand and gravel to approximately 5 feet below ground surface underlain by clay with increasing sand with depth to approximately 15 feet below ground surface underlain by a fine sand to boring termination. Saturation was generally encountered at approximately 15-feet below ground surface. Bedrock was not encountered in any of the borings advanced. No recovery was encountered at boring location SMV-2 within the top 5 feet of drilling. Indications of brick and debris were observed within the bottom of the direct-push rod upon retrieval of the upper 5 feet core which may be indicative of similar brick and debris encountered within this interval during the June 2019 sampling event. However, because a sufficient amount of material was not retrieved, a sample was not collected from the upper 5 feet soil at this location.

The soil sampling program generally consisted of submitting two soil samples per boring location based on field observations (visual and olfactory), elevated photoionization detector measurements and indications of preferential pathway such as sand/gravel seams and increased moisture. If evidence of impacts were not observed, soil samples were targeted at the .5 – 1.5 foot and 4-5 foot below ground surface depth intervals, or just above the capillary fringe. Samples were targeted to be sampled within a

1-foot interval; however, it was necessary to sample larger intervals to provide enough sample volume for laboratory analysis. The soil samples were placed in properly labeled sample containers, preserved, and transported to the EPA Region 7 laboratory for analysis under proper chain-of-custody procedures.

The groundwater sampling program consisted of collecting one grab sample from each boring location. Samples were collecting using a screen-point sampler at the bottom of the direct-push rod. Groundwater was retrieved by inserting polyethylene tubing fitted with a check valve at the bottom down the rod assembly and an inertial lift pump was used to draw water up through the tube. Samples were collected at the bottom of the tube as to minimize volatilization and were poured directly into the laboratory-provided containers.
At the completion of all sampling activities, each boring location was properly sealed and abandoned with hydrated bentonite and where concrete was cored, a concrete patch was installed.

Soil samples were analyzed for the following:

- Volatile Organic Compounds (VOCs) by EPA Method 8260;
- Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270; and,
- RCRA 8 metals by ICP-AES (potential for used motor oil contamination and June 2019 sampling results).

Groundwater samples were analyzed for the following:

- Volatile Organic Compounds (VOCs) by EPA Method 8260;
- Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270; and,

Table 1 attached summarizes the laboratory analytical results for soil samples collected and analyzed. Table 2 attached summarizes the laboratory analytical results for groundwater samples collected and analyzed. Only the constituents that were reported above the method detection limits are shown. Figure 3 attached depicts the soil and groundwater sampling locations.

Soil Results

Based on a review of the analytical results provided in the laboratory report attached to this memo, several metals (aluminum, arsenic, iron and manganese) constituents were detected above the applicable EPA Residential Soil Risk-Based Soil Level values. Arsenic was also detected in all soil samples collected above the applicable EPA Residential and Industrial RSL values. Except for lead, metals concentrations appear to be consistent across all soil samples locations and intervals collected and do not appear to be indicative of source area contamination. Lead was not detected above EPA Residential or Industrial RSL values in any of the soil samples collected during the October 2019 sampling event; however, as discussed above, a sample was not collected at SMV-2 due to poor recovery in the upper 5-foot sampling interval. SMV-2 was advanced adjacent and to the east of the stormwater retention system where samples collected in June 2019 indicated elevated lead in the upper 5 feet associated with buried debris. It is also worth noting that the direct-push sampling equipment hit resistance at approximately 2 feet below ground surface at GW-4 as well which adjacent and east of the stormwater retention system. No other constituents were detected in soil above applicable Residential or Industrial Soil RSL values.

Groundwater Results

Based on a review of the analytical results provided in the laboratory report attached to this memo, naphthalene was the only constituent detected above the applicable EPA Tapwater RSL value at SMV-3. No Maximum Contaminant Level drinking water standard has been set for naphthalene. Additionally, several VOCs and SVOCs were detected above applicable EPA Tapwater RSL values at sampling location GW-3 including naphthalene, 2-methylnaphthalene, cyclohexane, isopropylbenzene (Cumene), methylcyclohexane and xylene. Benzene and ethylbenzene were both detected at GW-3 at concentrations of above the MCL of 5 ug/L and 700 ug/L, respectively. No other VOCs or SVOCs were detected above applicable EPA Tapwater RSL values or MCLs.

SMV-3 and GW-3 were advanced near the downgradient facility boundaries and within or near the road rights-of-way. Constituents detected in the groundwater samples collected from these locations were not detected in either soil or groundwater samples collected upgradient during this sampling event which targeted potential source areas. Additionally, these constituents were not detected in groundwater samples collected near the upgradient facility boundary. However, other VOCs and SVOCs were detected at low levels below RSL or MCL values in groundwater during this sampling event at upgradient sampling locations including phenol at SMV-2 and toluene at GW-1. Based on this information, it does not appear that detections of constituents in groundwater above the RSL or MCL values are emanating from an onsite source area but may be indicative of widespread groundwater contamination within an industrial setting or contamination emanating from other offsite sources.

References

EPA. 1994. Report of RCRA Closure Sampling Investigation at SMV Industries, 1103 S. 6th Street, Council Bluffs, Iowa 51502. November 28.

EPA. 1994. Memorandum: OSWER Directive: Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. Washington, DC. OSWER Directive 9355.4-12. August.

EPA. 1998. Clarification to the 1994 Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. Washington, DC. OSWER Directive 9200.4-27. August.

EPA. 2010. Recommended Chromium (VI) Toxicity Values. Memo from Jeffery Robichaud to RCRA and Superfund Branch Chiefs. Environmental Services Division, EPA Region 7, Kansas City, KS.

EPA. 2016. OLEM Policy Directive: Updated Scientific Considerations for Lead in Soil Cleanups. OLEM Directive 9200.2-167. December.

EPA 2019. US EPA Sampling Results – June 2019 Memo. August.

EPA. 2019. Regional Screening Level Calculator. May. https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search?tool=rml

NTP. 2012. National Toxicology Program Monograph on Health Effects of Low-Level Lead. National Institute of Environmental Health Sciences. June.

Figure 1: Site Location

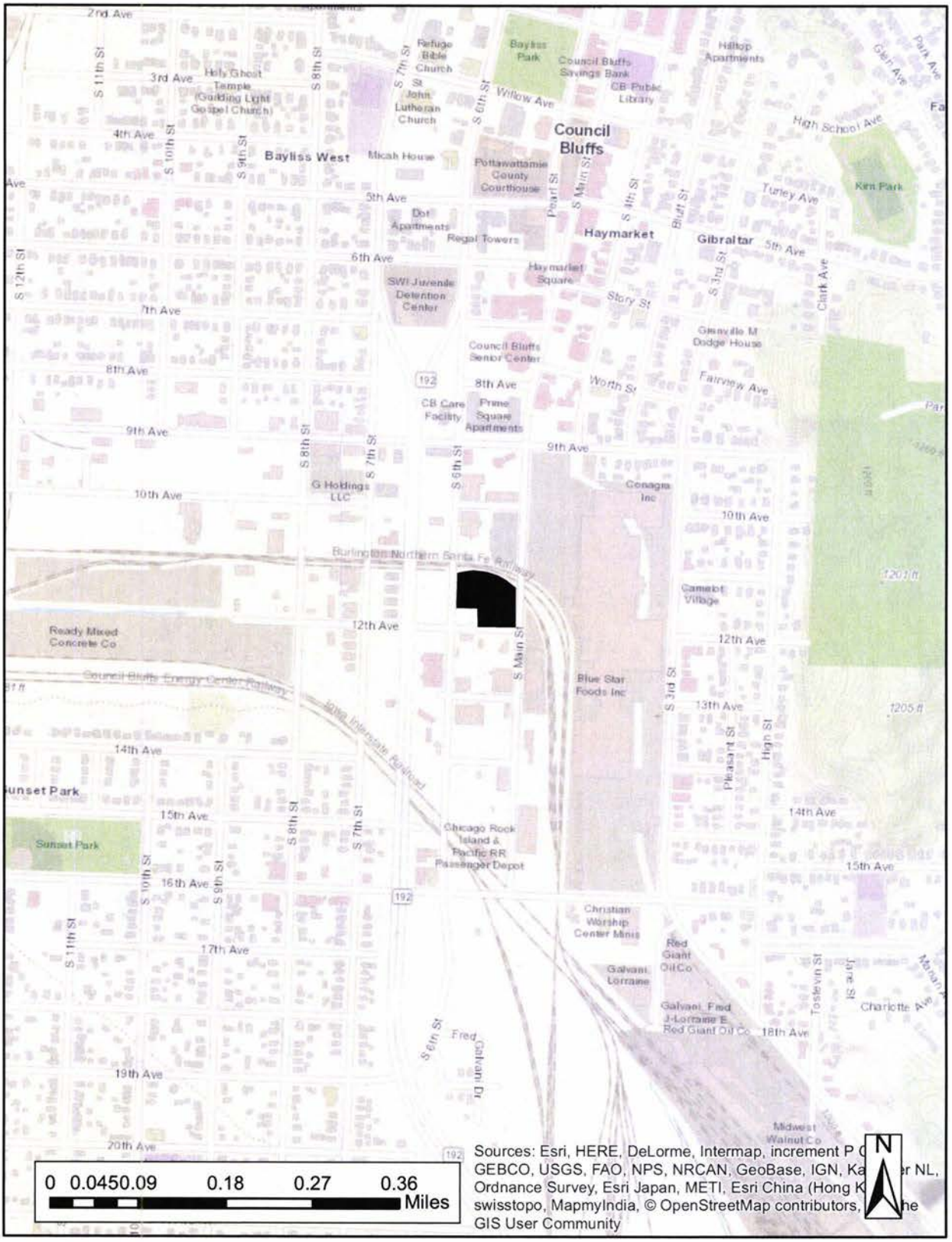

Figure 2: Facility Boundary

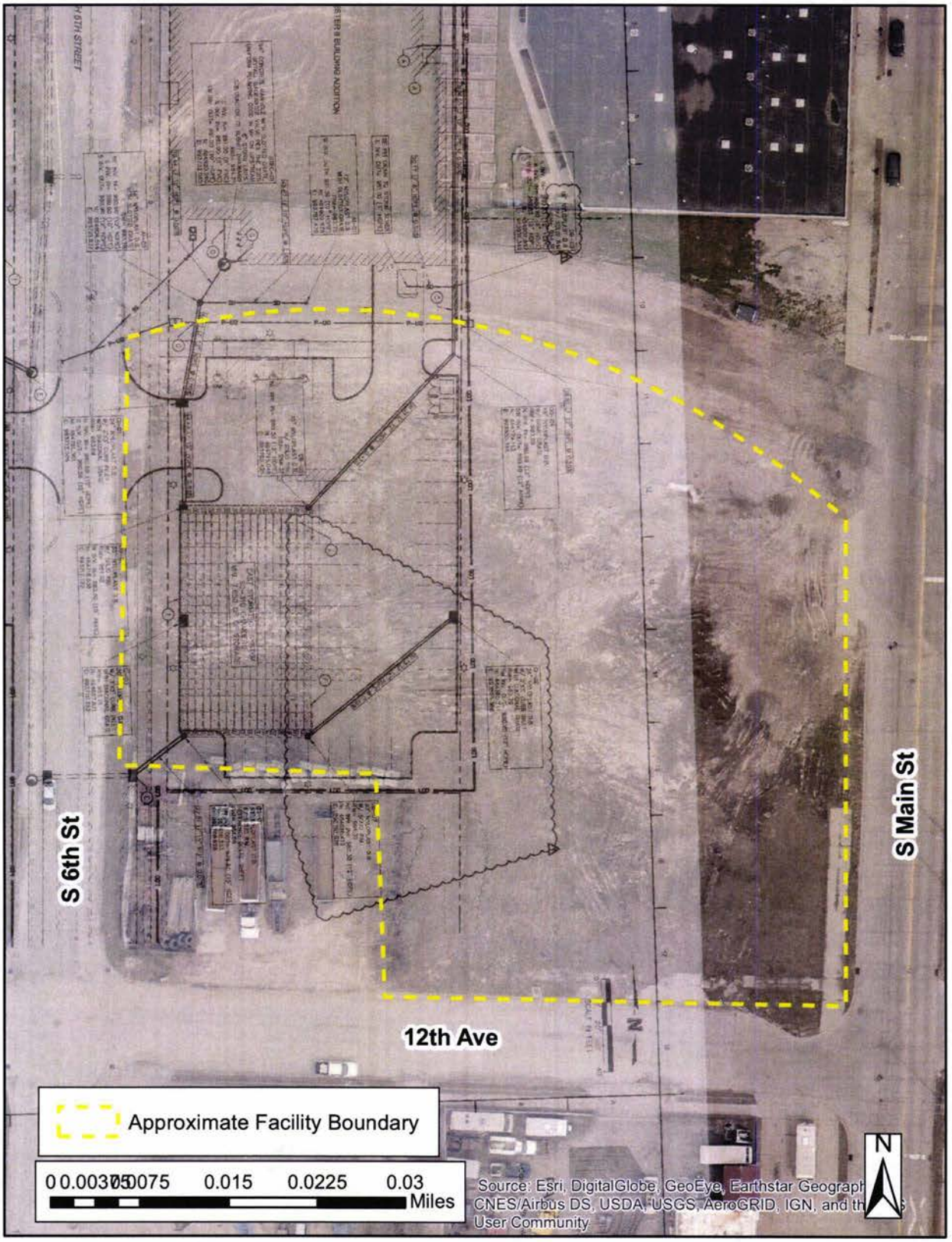

Figure 3: Former SMV Industries
October 2019 Sampling Locations

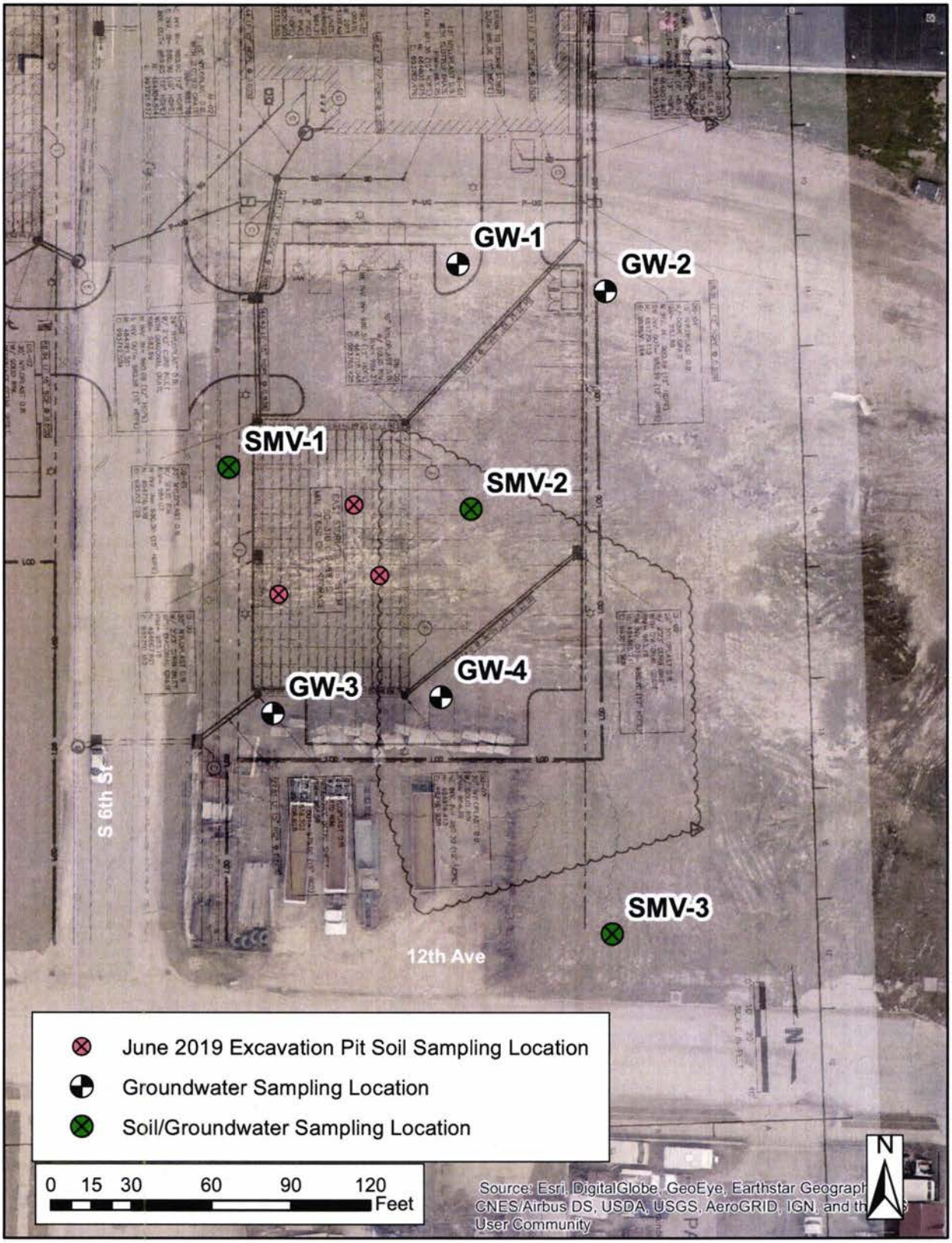

Table 1: Soil Sampling Analytical Results

	SMV-1-A (0.5 - 2.5' bgs)	SMV-1-B (8 - 10' bgs)	SMV-2-A (5 - 7' bgs)	SMV-2-A (Duplicate) (5 - 7' bgs)	SMV-2-B (13 - 15' bgs)	SMV-3-A (3 - 5' bgs)	SMV-3-B (8 - 10' bgs)	EPA RSL (Residential)	EPA RSL (Industrial)
Lead, Total (mg/kg)	43.2	13.1	11.8	13.6	14.2	12.4	17.2	400*	800*
Aluminum, Total (mg/kg)	**9,970**	**14,900**	**12,300**	**13,800**	**13,800**	**12,700**	**13,500**	7,700	110,000
Arsenic, Total (mg/kg)	**11.9**	**9.4**	**6.2**	**9.6**	**10.2**	**7.6**	**8**	0.68	3
Iron, Total (mg/kg)	**19,400**	**23,000**	**18,400**	**21,100**	**21,000**	**18,600**	**19,600**	5,500	82,000
Manganese, Total (mg/kg)	**643**	**609**	**444**	**606**	**605**	**820**	**543**	180	2,600
Benzo(a)anthracene (ug/kg)	99	ND	ND	ND	ND	ND	ND	1,100	21,000
Benzo(a)pyrene (ug/kg)	**110**	ND	ND	ND	ND	ND	ND	110	2,100
Benzo(b)fluoranthene (ug/kg)	140	ND	ND	ND	ND	ND	ND	1,100	21,000
Benzo(g,h,i)perylene (ug/kg)	120	ND	ND	ND	ND	ND	ND	N/A	N/A
Benzo(k)fluoranthene (ug/kg)	ND	ND	ND	ND	ND	ND	ND	11,000	210,000
Bis(2-Ethylhexyl)phthalate (ug/kg)	ND	ND	ND	ND	ND	ND	910J	39,000	160,000
Chrysene (ug/kg)	120	ND	ND	ND	ND	ND	ND	110,000	2,100,000
Fluoranthene (ug/kg)	190	ND	ND	ND	ND	ND	ND	240,000	3,000,000
Indeno(1,2,3-cd)pyrene (ug/kg)	100	ND	ND	ND	ND	ND	ND	1,100	21,000
Phenanthrene (ug/kg)	140	ND	ND	ND	ND	ND	ND	N/A	N/A
Pyrene (ug/kg)	170	ND	ND	ND	ND	ND	ND	180,000	2,300,000
Acetone (ug/kg)	ND	ND	ND	ND	ND	ND	84J	6,100,000	67,000,000
Toluene (ug/kg)	ND	ND	ND	ND	ND	ND	ND	490,000	4,700,000

ND = Constituent not detected above laboratory detection limits.

mg/kg = milligrams/kilograms

ug/kg = micrograms/kilograms

bgs = below ground surface

N/A = EPA RSLs not available

J = The identification of the analyte is acceptable; the reported value is an estimate.

Bold = Detected at or above EPA RSLs for Residential exposure pathway.

Yellow-highlighted = Detected at or above EPA RSLs for Industrial exposure pathway.

* EPA has no consensus RfD or SFO for inorganic lead, so it is not possible to calculate SLs as we have done for other chemicals. EPA considers lead to be a special case because of the difficulty in identifying the classic "threshold" needed to develop an RfD. EPA therefore evaluates lead exposure by using blood-lead modeling. The EPA Office of Solid Waste has also released a detailed directive on risk assessment and cleanup of residential soil lead. The directive recommends that soil lead levels less than 400 mg/kg are generally safe for residential use. See https://www.epa.gov/risk/regional-screening-levels-rsls-users-guide#lead for more details.

Table 2: Groundwater Sampling Analytical Results										
	SMV-1	**SMV-2**	**SMV-3**	**GW-1**	**GW-1 (duplicate)**	**GW-2**	**GW-3**	**GW-4**	**EPA RSL (Tapwater)**	**EPA MCL**
Naphthalene (ug/L) via 8270	ND	ND	**6.9**	ND	ND	ND	**1,000**	ND	0.17	N/A
2-Methylnaphthalene (ug/L)	ND	ND	ND	ND	ND	ND	**240**	ND	3.6	N/A
Phenol (ug/L)	ND	2.1J	ND	ND	ND	ND	ND	ND	580	N/A
Acetone (ug/L)	6.5	ND	ND	ND	ND	ND	ND	ND	1,400	N/A
Benzene (ug/L)	ND	ND	ND	ND	ND	ND	**7.1J**	ND	0.46	5
Cyclohexane (ug/L)	ND	ND	ND	ND	ND	ND	410	ND	1,300	N/A
Ethylbenzene (ug/L)	ND	ND	ND	ND	ND	ND	**1,600J**	ND	1.5	700
Isopropylbenzene (ug/L) (Cumene)	ND	ND	2.1J	ND	ND	ND	**270J**	ND	45	N/A
Methylcyclohexane (ug/L)	ND	ND	ND	ND	ND	ND	**420**	ND	N/A	N/A
Naphthalene (ug/L) via 8260	ND	ND	**8.0J**	ND	ND	ND	**470J**	ND	0.17	N/A
Toluene (ug/L)	ND	ND	ND	1.1J	ND	ND	3.8J	ND	110	1,000
m and/or p-Xylene (ug/L)	ND	ND	ND	ND	ND	ND	**930J**	ND	19	N/A
o-Xylene (ug/L)	ND	ND	ND	ND	ND	ND	**44J**	ND	19	N/A
Total Xylene (ug/L)	ND	ND	ND	ND	ND	ND	**974J**	ND	19	10,000

ND = Constituent not detected above laboratory detection limits.

ug/L = micrograms/liter

N/A = EPA RSLs or MCL not available for this constituent.

J = The identification of the analyte is acceptable; the reported value is an estimate.

Bold = Detected at or above EPA RSLs for tapwater.

Yellow-highlighted = Detected at or above EPA Maximum Contaminant Level (MCL) for drinking water.

Project: Former SMV Industries	EPA ID: IAD984566034	Program: RCRA Corrective Action	Boring No. SMV-1
Address, City, State 1103 S. 6th Street, Council Bluffs, IA		Driller: L. Sena	Drill Rig Type: Geoprobe
Logged By: L. Messinger	Date: Started: 10/21/2019	Bit Type:	Diameter: 2-inch
Drill Crew: L. Sena, J. Regehr	Date: Completed: 10/21/2019	Latitude:	
USA Ticket Number:	Date: Backfilled: 10/21/2019	Longitude:	Hammer Drop:
	Groundwater Depth: 15'	Elevation:	Total Depth of Boring: 20'

Depth (feet)	Sample Type	Sample Number	% Recovery	Water Level	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Well Construction	Moisture Content (%)	PID (ppb)
		SMV-1-A	75		clayey silt with gravel, brown, dry, no odor clay silt with sand, orange-brown, moist, no odor wet, no odor			0.0
5			25		clay with silt, brown, moist-wet, no odor			0.0
10		SMV-1-B						

Boring Log: Sheet _1of _2_

Standard Penetration Slit Spoon Sampler (SPT)

California Sampler

Shelby Tube

CPP Sampler

Grab Sample

Stabllized Ground water

Groundwater At time of Drilling

Groundwater Sample

Project: Former SMV Industries	EPA ID: IAD984566034	Program: RCRA Corrective Action	Boring No. SMV-1
Address, City, State 1103 S. 6th Street, Council Bluffs, IA		Driller: L. Sena	Drill Rig Type: Geoprobe
Logged By: L. Messinger	Date: Started: 10/21/2019	Bit Type:	Diameter: 2-inch
Drill Crew: L. Sena, J. Regehr	Date: Completed: 10/21/2019	Latitude:	
USA Ticket Number:	Date: Backfilled: 10/21/2019	Longitude:	Hammer Drop:
	Groundwater Depth: 15'	Elevation:	Total Depth of Boring: 20'

Depth (feet)	Sample Type	Sample Number	% Recovery	Water Level	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Well Construction	Moisture Content (%)	PID (ppb)
			50	▽	clay, gray-brown, dry, no odor moist			0.0
15			100		clay with sand, brown, wet grading to more sand			0.0
20								

Boring Log: Sheet _2of _2_

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling
- Groundwater Sample

Project: Former SMV Industries	EPA ID: IAD984566034	Program: RCRA Corrective Action	Boring No. SMV-2
Address, City, State 1103 S. 6th Street, Council Bluffs, IA		Driller: L. Sena	Drill Rig Type: Geoprobe
Logged By: L. Messinger	Date: Started: 10/21/2019	Bit Type:	Diameter: 2-inch
Drill Crew: L. Sena, J. Regehr	Date: Completed: 10/21/2019	Latitude:	
USA Ticket Number:	Date: Backfilled: 10/21/2019	Longitude:	Hammer Drop:
	Groundwater Depth: 15'	Elevation:	Total Depth of Boring: 20'

Depth (feet)	Sample Type	Sample Number	% Recovery	Water Level	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Well Construction	Moisture Content (%)	PID (ppb)
			0		no recovery, refusal, brick/debris in bottom of rod			N/A
5		SMV-2-A	100		clay, brown, dry-moist, no odor duplicate sample (FD)			0.0
10								

Boring Log: Sheet _1of _2_

Standard Penetration Slit Spoon Sampler (SPT)

California Sampler

Shelby Tube

CPP Sampler

Grab Sample

Stabllized Ground water

Groundwater At time of Drilling

Groundwater Sample

Project: Former SMV Industries	EPA ID: IAD984566034	Program: RCRA Corrective Action	Boring No. SMV-2
Address, City, State 1103 S. 6th Street, Council Bluffs, IA		Driller: L. Sena	Drill Rig Type: Geoprobe
Logged By: L. Messinger	Date: Started: 10/21/2019	Bit Type:	Diameter: 2-inch
Drill Crew: L. Sena, J. Regehr	Date: Completed: 10/21/2019	Latitude:	
USA Ticket Number:	Date: Backfilled: 10/21/2019	Longitude:	Hammer Drop:
	Groundwater Depth: 15'	Elevation:	Total Depth of Boring: 20'

Depth (feet)	Sample Type	Sample Number	% Recovery	Water Level	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Well Construction	Moisture Content (%)	PID (ppb)
			50		clay, brown-gray, dry, no odor moist			0.0
15		SMV-2-B	100	▽	fine sand with clay, brown, wet, no odor clay, brown, wet			0.0
20								

Boring Log: Sheet _2of _2_

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling
- Groundwater Sample

Project: Former SMV Industries	EPA ID: IAD984566034	Program: RCRA Corrective Action	Boring No. SMV-3
Address, City, State 1103 S. 6th Street, Council Bluffs, IA		Driller: L. Sena	Drill Rig Type: Geoprobe
Logged By: L. Messinger	Date: Started: 10/21/2019	Bit Type:	Diameter: 2-inch
Drill Crew: L. Sena, J. Regehr	Date: Completed: 10/21/2019	Latitude:	
USA Ticket Number:	Date: Backfilled: 10/21/2019	Longitude:	Hammer Drop:
	Groundwater Depth: 15'	Elevation:	Total Depth of Boring: 20'

Depth (feet)	Sample Type	Sample Number	% Recovery	Water Level	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Well Construction	Moisture Content (%)	PID (ppb)
					silty clay, dark brown, dry			
					gravel			
			90					N/A
		SMV-3-A			light brown, increase in silt/sand with some brick, dry			
5								
					silty clay, dark brown, dark staining, moist, no odor			
			50					N/A
		SMV-3-B						
10					darker stain, slight odor that is not indicative of petroleum hydrocarbons			

Boring Log: Sheet _1of _2_

Standard Penetration Slit Spoon Sampler (SPT)

California Sampler

Shelby Tube

CPP Sampler

Grab Sample

Stabllized Ground water

Groundwater At time of Drilling

Groundwater Sample

Project: Former SMV Industries	EPA ID: IAD984566034	Program: RCRA Corrective Action	Boring No. SMV-3
Address, City, State 1103 S. 6th Street, Council Bluffs, IA		Driller: L. Sena	Drill Rig Type: Geoprobe
Logged By: L. Messinger	Date — Started: 10/21/2019	Bit Type:	Diameter: 2-inch
Drill Crew: L. Sena, J. Regehr	Date — Completed: 10/21/2019	Latitude:	
USA Ticket Number:	Date — Backfilled: 10/21/2019	Longitude:	Hammer Drop:
	Groundwater Depth: 15'	Elevation:	Total Depth of Boring: 20'

Depth (feet)	Sample Type	Sample Number	% Recovery	Water Level	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Well Construction	Moisture Content (%)	PID (ppb)
			100		clay, gray, dry grading to green/gray			N/A
15					strong petroleum hydrocarbon odor, moist			
			100	▽	fine sand, dark gray, strong petroleum hydrocarbon odor typical of a diesel or kerosene, wet grading to sandy clay, wet, odor			N/A
20								

Boring Log: Sheet _2of _2_

- Standard Penetration Slit Spoon Sampler (SPT)
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- Groundwater Sample

Photo Log: October 2019 EPA Soil/Groundwater Sampling
Former SMV Industries, Council Bluffs, IA EPA ID: IAD984566034

Photo #1: SMV-2 soil boring location looking northwest.

Photo #2: SMV-2 soil boring location looking north.

Photo Log: October 2019 EPA Soil/Groundwater Sampling
Former SMV Industries, Council Bluffs, IA EPA ID: IAD984566034

Photo #3: GW-4 groundwater sampling location looking south.

Photo #4: (Foreground) GW-4 groundwater sampling location looking north. (Background) SMV-2 soil boring location.

Photo Log: October 2019 EPA Soil/Groundwater Sampling
Former SMV Industries, Council Bluffs, IA EPA ID: IAD984566034

Photo #5: GW-3 groundwater sampling location looking west.

Photo #6: GW-3 groundwater sampling location.

Photo Log: October 2019 EPA Soil/Groundwater Sampling
Former SMV Industries, Council Bluffs, IA EPA ID: IAD984566034

Photo #7: GW-4 groundwater sampling location looking south.

Photo #8: SMV-1 soil boring location looking northwest.

Photo Log: October 2019 EPA Soil/Groundwater Sampling
Former SMV Industries, Council Bluffs, IA EPA ID: IAD984566034

Photo #9: GW-1 groundwater sampling location looking northeast.

Photo #10: SMV-3 soil boring location looking northwest.

Photo Log: October 2019 EPA Soil/Groundwater Sampling
Former SMV Industries, Council Bluffs, IA EPA ID: IAD984566034

Photo #11: SMV-3 soil boring location looking northeast.

Photo #12: GW-2 groundwater sampling location looking northwest.

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue
Kansas City, KS 66101

Date: 12/06/2019

Subject: Transmittal of Sample Analysis Results for ASR #: 8277

Project ID: RCRA_LMSMV

Project Description: Former SMV Industries Sampling

From: Margaret E.W. St. Germain, Chief
FOR Laboratory Technology & Analysis Branch
Laboratory Services and Applied Sciences Division

To: Lisa Messinger
LCARD/ROAG

Enclosed are the analytical data for the above-referenced Analytical Services Request (ASR) and Project. These results are based on samples as received at the Science and Technology Center. The Regional Laboratory has reviewed and verified the results in accordance with procedures described in our Quality Manual (QM). In addition to all of the analytical results, this transmittal contains pertinent information that may have influenced the reported results and documents any deviations from the established requirements of the QM.

Please ensure that you file this electronic (.pdf only) transmittal in your records management system. The Regional Laboratory will now retain all of the original hardcopy documentation (e.g. COC[s] and the R7LIMS field sheet[s], etc.) according to our LSASD records management system.

Please contact us within 14 days of receipt of this package if you determine there is a need for any changes. Please complete the Online ASR Sample/Data Disposition and Customer Survey for this ASR as soon as possible. The process of disposing of the samples for this ASR will be initiated 30 days from the date of this transmittal unless an alternate release date is specified on the Online ASR Sample/Data Disposition and Customer Survey. It is critical that we receive your response in accordance to RCRA and the laboratory accreditation.

If you have any questions or concerns relating to this data package, contact our customer service line at 913-551-5295.

Project Manager: Lisa Messinger **Org:** LCARD/ROAG **Phone:** 913-551-7403

Project ID: RCRA_LMSMV **QAPP Number:** 2019126

Project Desc: Former SMV Industries Sampling

Location: Council Bluffs **State:** Iowa **Program:** RCRA Corrective Action

Purpose: Site Cleanup Support **GPRA PRC:** 000D11

RCRA ID: IAD984566034
Assess subsurface conditions and contamination at a facility subject to corrective action.

EPA PM (LM) noted on the submitted ASR that this ASR is not part of a litigation hold at this time.

Explanation of Codes, Units and Qualifiers used on this report

Sample QC Codes: QC Codes identify the type of sample for quality control purpose.

__ = Field Sample
FB = Field Blank
FD = Field Duplicate

Units: Specific units in which results are reported.

ug/L = Micrograms per Liter
ug/kg = Micrograms per Kilogram
mg/kg = Milligrams per Kilogram
% = Percent

Data Qualifiers: Specific codes used in conjunction with data values to provide additional information on the quality of reported results, or used to explain the absence of a specific value.

(Blank)= Values have been reviewed and found acceptable for use.
J = The identification of the analyte is acceptable; the reported value is an estimate.
UJ = The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
U = The analyte was not detected at or above the reporting limit.

ASR Number: 8277 **Sample Information Summary** **12/06/2019**

Project ID: RCRA_LMSMV **Project Desc:** Former SMV Industries Sampling

Sample No	QC Code	Matrix	Location Description	External Sample No	Start Date	Start Time	End Date	End Time	Receipt Date
1	- __	Solid	SMV-1-A		10/21/2019	13:15	10/21/2019	13:15	10/22/2019
2	- __	Solid	SMV-1-B		10/21/2019	13:25	10/21/2019	13:25	10/22/2019
3	- __	Solid	SMV-2-A		10/21/2019	10:50	10/21/2019	10:50	10/22/2019
3	- FD	Solid	SMV-2-A		10/21/2019	10:50	10/21/2019	10:50	10/22/2019
4	- __	Solid	SMV-2-B		10/21/2019	11:10	10/21/2019	11:10	10/22/2019
5	- __	Solid	SMV-3-A		10/21/2019	15:50	10/21/2019	15:50	10/22/2019
6	- __	Solid	SMV-3-B		10/21/2019	16:10	10/21/2019	16:10	10/22/2019
101	- __	Water	SMV-1		10/21/2019	14:40	10/21/2019	14:40	10/22/2019
102	- __	Water	SMV-2		10/21/2019	11:20	10/21/2019	11:20	10/22/2019
103	- __	Water	SMV-3		10/21/2019	16:30	10/21/2019	16:30	10/22/2019
104	- __	Water	GW-1		10/21/2019	14:00	10/21/2019	14:00	10/22/2019
104	- FD	Water	GW-1		10/21/2019	14:00	10/21/2019	14:00	10/22/2019
105	- __	Water	GW-2		10/21/2019	14:20	10/21/2019	14:20	10/22/2019
106	- __	Water	GW-3		10/21/2019	12:50	10/21/2019	12:50	10/22/2019
107	- __	Water	GW-4		10/21/2019	11:50	10/21/2019	11:50	10/22/2019
111	- FB	Water	Water LDL VOA Trip Blank sample		10/21/2019	11:30	10/21/2019	11:30	10/22/2019

Analysis	Comments About Results For This Analysis

1 Metals in Solids by ICP-AES

Lab: Region 7 EPA Laboratory - Kansas City, Ks.

Method: EPA Region 7 RLAB Method 3122.3G

Basis: Dry

Samples: 1-__ 2-__ 3-__ 3-FD 4-__ 5-__ 6-__

Comments:

1 Percent Solid

Lab: Region 7 EPA Laboratory - Kansas City, Ks.

Method: EPA Region 7 RLAB Method 3142.9H

Basis: N/A

Samples: 1-__ 2-__ 3-__ 3-FD 4-__ 5-__ 6-__

Comments:
(N/A)

1 Semi-Volatile Organic Compounds in Soil

Lab: Region 7 EPA Laboratory - Kansas City, Ks.

Method: EPA Region 7 RLAB Method 3230.2I

Basis: Dry

Samples: 1-__ 2-__ 3-__ 3-FD 4-__ 5-__ 6-__

Comments:
Due to the percent solid of each sample the reporting limtis have been raised (X times) by the following factors: 1.1X for sample 1, 1.3X for sample 2, 1.1X for sample 3, 1.3X for sample 3-FD, 1.2X for sample 4, 1.1X for sample 5, and 1.3X for sample 6.

Di-n-octylphthalate was UJ-coded in samples 1, 2, 3, 3-FD, 4, and 5. This analyte was not found in the samples at or above the reporting limits, however, the reporting limits are estimates (UJ-coded) due to the initial instrument calibration curve not meeting linearity specifications. The actual reporting limits may be higher than the reported values.

Hexachlorocyclopentadiene, 2,4-Dinitrophenol, 4-Nitrophenol, and Pentachlorophenol were UJ-coded in sample 6. These analytes were not found in the sample at or above the reporting limits, however, the reporting limits are estimates (UJ-coded) due to the initial instrument calibration curve not meeting linearity specifications. The actual reporting limits may be higher than the reported values.

Isophorone (79.4%) was UJ-coded in samples 1, 2, 3, 3-FD, 4, and 5. This analyte was not found in the samples at or above the reporting limits, however, the reporting limits are estimates (UJ-coded) due to low recovery (less than 80%) of this analyte in the second source calibration verification. The actual reporting limits for this analyte may be higher

Analysis **Comments About Results For This Analysis**

than the reported values.

Isophorone (78.1%) and 4-Nitrophenol (76%) were UJ-coded in sample 6. These analytes were not found in the sample at or above the reporting limits, however, the reporting limits are estimates (UJ-coded) due to low recoveries (less than 80%) of these analytes in the second source calibration verification. The actual reporting limits for these analytes may be higher than the reported values.

Dibenz(a,h)anthracene (78.5%) was UJ-coded in samples 1, 2, 3, 3-FD, 4, and 5. This analyte was not found in the samples at or above the reporting limits, however, the reporting limits are estimates (UJ-coded) due to the continuing calibration check not meeting accuracy specifications (80-120%). The actual reporting limits for this analyte may be higher than the reported values.

Nitrobenzene (67%), Isophorone (64%), 2,4-Dimethylphenol (68%), 4-Chloroaniline (52%), Hexachlorocyclopentadiene (63%), 2,4,6-Trichlorophenol (68%), 2-Nitroaniline (68%), and 3-Nitroaniline (67%) were UJ-coded in all field samples. These analytes were not found in the samples at or above the reporting limits, however, the reporting limits are estimates (UJ-coded) due to low recoveries (less than 70%) of these analytes in the cleanup check sample. The actual reporting limits for these analytes may be higher than the reported values.

2,4-Dimethylphenol (69%), Benzoic Acid (65%), 4-Chloroaniline (67%), Hexachlorocyclopentadiene (65%), 2,4-Dinitrophenol (65%), and Pentachlorophenol (69%) were UJ-coded in all field samples. These analytes were not found in the samples at or above the reporting limits, however, the reporting limits are estimates (UJ-coded) due to low recoveries (less than 70%) of these analytes in the cleanup check sample. The actual reporting limits for these analytes may be higher than the reported values.

4-Chloroaniline (3% with 10% lower limit), 3,3'-Dichlorobenzidine (22% with 31% lower limit), 2,4-Dimethylphenol (30% with 32% lower limit), and 4-Nitroaniline (37% with 46% lower limit) were UJ-coded in all field samples. These analytes were not found in the samples at or above the reporting limits, however, the reporting limits are estimates (UJ-coded) due to the low recoveries of these analytes in the laboratory control sample. The actual reporting limits for these analytes may be higher than the reported values.

Bis(2-Ethylhexyl)phthalate (-17% in MS, -14% in MSD, 18% is lower limit) was J-coded in sample 6. Although the analyte in question has been positively identified in the sample, the quantitation is an estimate (J-coded) due to low recovery of this analyte in the laboratory matrix spike (MS) and laboratory matrix spike duplicate (MSD). The actual concentration for this analyte may be higher than the reported value.

4-Chloroaniline (2% in MS, 4% in MSD, 10% is lower limit), 3,3'-Dichlorobenzidine (6% in MS, 9% in MSD, 10% is lower limit), 4,6-Dinitro-2-methylphenol (31% in MSD, 34% is lower limit), Hexachlorocyclopentadiene (7% in MS, 8% in MSD, 10% is lower limit), and Hexachloroethane (7% in MS, 7% in MSD, 10% is lower limit) were UJ-coded in sample 6. These analytes were not found in the sample at or above the reporting limit, however, the reporting limits are estimates (UJ-coded) due to low recoveries of these analytes in the laboratory matrix spike and/or laboratory matrix spike duplicate. The actual reporting

Analysis	Comments About Results For This Analysis

limits for these analytes may be higher than the reported values.

1 VOCs in Solid Matrices by GC/MS

Lab: Region 7 EPA Laboratory - Kansas City, Ks.

Method: EPA Region 7 RLAB Method 3230.15F

Basis: Dry

Samples: 1-__ 2-__ 3-__ 3-FD 4-__ 5-__ 6-__

Comments:

Samples were analyzed 1 day past the 14-day holding time, due to instrument malfunction. As samples were preserved and non-detect for all analytes (except Acetone in sample 6), data should be considered minimally affected. Per protocol, all analytes have been UJ-coded in each sample, except Acetone, which was J-coded in sample 6. All comments below are included as reference to other QC related to these samples, and no additional coding has been applied.

Chloroethane, Trichlorofluoromethane and 2-Hexanone were UJ-coded in samples 1, 2, 3, 3FD, 4, 5 and 6. These analytes were not found in the samples at or above the reporting limit, however, the reporting limit is an estimate (UJ-coded) due to the initial instrument calibration curve not meeting linearity specifications. The actual reporting limit may be higher than the reported values.

The reporting limit (RL) had been raised to 20ug/kg for the analytes 2-Butanone, 4-Methyl-2-Pentanone, 2-Hexanone and 1,2-Dibromo-3-Chloropropane, due to linearity issues at the lowest calibration standards.

Cyclohexane was UJ-coded in samples 1, 2, 3, 3FD, 4, 5 and 6. This analyte was not found in the samples at or above the reporting limit, however, the reporting limit is an estimate (UJ-coded) due to low recovery of this analyte in the laboratory control sample. The actual reporting limit for this analyte may be higher than the reported value.

Chlorobenzene (51 and 56%, Lower control limit (LCL): 69%), 1,2-Dichloroethane (80%, LCL: 81%), Ethyl Benzene (45 and 55%, LCL: 71%), Isopropylbenzene (34%, LCL: 43%), Styrene (45%, LCL: 46%), Tetrachloroethene (47 and 58%, LCL: 63%), Toluene (53 and 61%, LCL: 64%), Trichloroethene (68%, LCL: 69%), m- and/or p-Xylene (44 and 55%, LCL: 69%) and o-Xylene (45 and 53%, LCL: 67%) had low recovery in the matrix spikes of sample 6. These analytes were not found in the original sample at or above the reporting limit, however, and were UJ-coded in the original sample. The actual reporting limit for these analytes may be higher than the reported value.

1 Semi-Volatile Organic Compounds in Water

Lab: Region 7 EPA Laboratory - Kansas City, Ks.

Method: EPA Region 7 RLAB Method 3230.2I

Samples: 101-__ 102-__ 103-__ 104-__ 104-FD 105-__ 106-__ 107-__

Comments:

Analysis **Comments About Results For This Analysis**

Due to strong fuel smell at sample prep, samples 103 and 106 were not analyzed at the normal aliquot amount in order to avoid instrument damage. The reporting limits have been raised for all compounds by 2x for sample 103; and by 4x for sample 106.

Hexachlorocyclopentadiene, 2,4-Dinitrophenol, 4-Nitrophenol, and Pentachlorophenol were UJ-coded in all samples. These analytes were not found in the samples at or above the reporting limit, however, the reporting limit is an estimate (UJ-coded) due to the initial instrument calibration curve not meeting linearity specifications. The actual reporting limits may be higher than the reported values.

Isophorone and 4-Nitrophenol were UJ-coded in all samples. These analytes were not found in the samples at or above the reporting limit, however, the reporting limit is an estimate (UJ-coded) due to the initial instrument calibration curve not meeting accuracy specifications. The actual reporting limits may be higher than the reported values.

Slight Diethylphthalate contamination was found in the laboratory method blank. Only samples containing this analyte at a level greater than ten times the contamination level of the blank are reported without being qualified. All samples that contained this analyte but at a level less than ten times the contamination in the blank have the result U-coded indicating that the reporting limit has been raised to the level found in the sample. Samples affected were: 102, 104FD, and 105.

4-Methylphenol and 4-Nitrophenol were UJ-coded in all samples. These analytes were not found in the samples at or above the reporting limit, however, the reporting limit is an estimate (UJ-coded) due to low recovery (67% and 25%, respectively, with lower limits of 76% and 32%, respectively) of these analytes in the laboratory control sample. The actual reporting limit for these analytes may be higher than the reported values.

Benzoic Acid, Benzyl Alcohol, 4-Chloro-3-methylphenol, 2-Chlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 4,6-Dinitro-2-methylphenol, 2,4-Dinitrophenol, 2-Methylphenol, 4-Methylphenol, 2-Nitrophenol, 4-Nitrophenol, Pentachlorophenol, 2,4,5-Trichlorophenol, and 2,4,6-Trichlorophenol were UJ-coded in all samples. Phenol was UJ-coded in samples 101, 103, 104, 104FD, 105, 106, and 107. These analytes were not found in the sample at or above the reporting limit, however, the reporting limit is an estimate (UJ-coded) due to low recovery of the surrogate analytes. The actual reporting limit for these analytes may be higher than the reported values.

Phenol was J-coded in sample 102. Although the analyte in question has been positively identified in the sample, the quantitation is an estimate (J-coded) due to low recovery of a surrogate analyte in this sample. The actual concentration for this analyte may be higher than the reported value.

Benzoic Acid, 4-Chloro-3-methylphenol, 2-Chlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 4,6-Dinitro-2-methylphenol, 2,4-Dinitrophenol, 2-Methylphenol, 4-Methylphenol, 2-Nitrophenol, 4-Nitrophenol, N-nitrosodiphenylamine, Pentachlorophenol, Phenol, 2,4,5-Trichlorophenol, and 2,4,6-Trichlorophenol were UJ-coded in sample 107. These analytes were not found in the sample at or above the reporting limit, however, the reporting limit is an estimate (UJ-coded) due to low recovery of these analytes in the laboratory matrix spike. The actual reporting limit for these analytes may be higher than

Analysis	Comments About Results For This Analysis

the reported values.

4-Chloro-3-methylphenol, Diethylphthalate, 4-Methylphenol, N-nitrosodiphenylamine, and Phenol were UJ-coded in sample 107. These analytes were not found in the sample at or above the reporting limit, however, the reporting limit is an estimate (UJ-coded) due to poor precision obtained for these analytes in the laboratory matrix spike and matrix spike duplicate. The actual reporting limit for these analytes may be higher than the reported values.

1 VOCs in Water by GC/MS for Low Detection Limits

Lab: Region 7 EPA Laboratory - Kansas City, Ks.

Method: EPA Region 7 RLAB Method 3230.13F

Samples: 101-__ 102-__ 103-__ 104-__ 104-FD 105-__ 106-__ 107-__ 111-FB

Comments:

Samples 101, 102, 103, 104, 104FD, 106 and 107 had excessive amounts of sediment. These samples were also not preserved to pH of less than 2. As samples were analyzed 1 day past the 7-day holding time established for unpreserved samples, the following analytes were UJ-coded for non-detects and J-coded for hits in these samples: Benzene, Chlorobenzene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Ethyl Benzene, Isopropylbenzene, Naphthalene, Styrene, Toluene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, m- and/or p-Xylene and o-Xylene.

Ethyl Benzene was reported above the calibration range in sample 106 (value 1600ug/L, top of curve: 800ug/L). There was not sufficient sample volume to perform an additional dilution, due to auto-sampler error. The value has been reported with a J-code as an estimate, but should be usable for it's intended purpose.

Due to inaccuracy issues at the lowest calibration retrofit checks, the reporting limit (RL) for Dibromochloromethane has been raised to 5ug/L, while the RL for Bromoform has been raised to 2 ug/L.

1,2-Dibromo-3-Chloropropane was UJ-coded in samples 101-104, 104FD, 105-107 and 111FB. This analyte was not found in the samples at or above the reporting limit, however, the reporting limit is an estimate (UJ-coded) due to the initial instrument calibration curve not meeting linearity specifications. The actual reporting limit may be higher than the reported value.

Acetone (9%, LCL: 10%), Bromomethane (75%, LCL: 78%), 2-Butanone (46 and 21%, LCL: 57%), Chloromethane (73%, LCL: 78%), 1,2-Dichloroethane (76%, LCL: 89%), 2-Hexanone (46%, LCL: 67%), Methyl Acetate (45%, LCL: 71%), 4-Methyl-2-Pentanone (63%, LCL: 85%), Trichlorofluoromethane (74%, LCL: 81%) and Vinyl Chloride (65%, LCL: 81%) had low recovery in the matrix spikes of sample 107. These analytes were UJ-coded in the original sample. These analytes were not found in the sample at or above the reporting limit, however, the reporting limit is an estimate and the actual reporting limit for these analytes may be higher than the reported value.

Analysis	Comments About Results For This Analysis
	Bromomethane (32 Relative percent difference (RPD), Precision control limit (PCL): 11), Bromodichloromethane (RPF: 9.4, PCL: 6.5), Carbon Disulfide (RPD: 28, PCL: 15), Carbon Tetrachloride (RPD: 26, PCL: 10), Chloroethane (RPD: 42, PCL: 10), Chloroform (RPD: 12, PCL: 6.8), Chloromethane (RPD: 34, PCL: 9.8), Cyclohexane (RPD: 30, PCL: 11), 1,2-Dibromo-3-Chloropropane (RPD: 28, PCL: 12), Dibromochloromethane (RPD: 5.2, PCL: 5.0), 1,2-Dibromoethane (RPD: 15, PCL: 5), 1,4-Dichlorobenzene (RPD: 5.8, PCL: 5.0), Dichlorodifluoromethane (RPD: 32, PCL: 13), 1,1-Dichloroethane (RPD: 15, PCL: 8.2), 1,2-Dichloroethane (RPD: 19, PCL: 5.4), 1,1-Dichoroethene (RPD: 30, PCL: 10), cis-1,2-Dichloroethene (RPD: 11, PCL: 6.9), trans-1,2-Dichloroethene (RPD: 18, PCL: 9.2), Methylene Chloride (RPD: 17, PCL: 7.4), 4-Methyl-2-Pentanone (RPD: 33, PCL: 7.1), 1,1,2,2-Tetrachloroethane (RPD: 19, PCL: 6.7), 1,1,1-Trichloroethane (RPD: 23, PCL: 9.2), 1,1,2-Trichloroethane (RPD: 12, PCL: 5.1), Trichlorofluoromethane (RPD: 33, PCL: 9.9), 1,1,2-Trichlorotrifluoroethane (RPD: 30, PCL: 11) and Vinyl Chloride (RPD: 37, PCL: 12) had poor precision between the matrix spike and spike duplicate of sample 107. If not already coded, these analytes were UJ-coded in sample 107. These analytes were not found in the sample at or above the reporting limit, however, the reporting limit is an estimate and the actual reporting limit for these analytes may be higher than the reported value.

Analysis/ Analyte	Units	1-__	2-__	3-__	3-FD
1 Metals in Solids by ICP-AES					
Aluminum	mg/kg	9970	14900	12300	13800
Arsenic	mg/kg	11.9	9.4	6.2	9.6
Barium	mg/kg	298	236	202	267
Beryllium	mg/kg	1.0 U	1.0 U	1.0 U	1.0 U
Cadmium	mg/kg	1.5	1.0 U	1.0 U	1.0 U
Chromium	mg/kg	14.7	20.7	17.4	18.8
Iron	mg/kg	19400	23000	18400	21100
Lead	mg/kg	43.2	13.1	11.8	13.6
Manganese	mg/kg	643	609	444	606
Nickel	mg/kg	19.2	27.0	21.4	23.9
Silver	mg/kg	2.0 U	2.0 U	2.0 U	2.0 U
1 Percent Solid					
Solids, percent	%	80.5	74.2	79.4	78.6
1 Semi-Volatile Organic Compounds in Soil					
Acenaphthene	ug/kg	87 U	100 U	92 U	100 U
Acenaphthylene	ug/kg	87 U	100 U	92 U	100 U
Anthracene	ug/kg	87 U	100 U	92 U	100 U
Benzo(a)anthracene	ug/kg	99	100 U	92 U	100 U
Benzo(a)pyrene	ug/kg	110	100 U	92 U	100 U
Benzo(b)fluoranthene	ug/kg	140	100 U	92 U	100 U
Benzo(g,h,i)perylene	ug/kg	120	100 U	92 U	100 U
Benzo(k)fluoranthene	ug/kg	87 U	100 U	92 U	100 U
Benzoic acid	ug/kg	440 UJ	520 UJ	460 UJ	500 UJ
Benzyl alcohol	ug/kg	220 U	260 U	230 U	250 U
bis(2-Chloroethoxy)methane	ug/kg	87 U	100 U	92 U	100 U
bis(2-Chloroethyl)ether	ug/kg	87 U	100 U	92 U	100 U
bis(2-Chloroisopropyl)ether	ug/kg	87 U	100 U	92 U	100 U
bis(2-Ethylhexyl)phthalate	ug/kg	220 U	260 U	230 U	250 U
4-Bromophenyl-phenylether	ug/kg	87 U	100 U	92 U	100 U
Butylbenzylphthalate	ug/kg	220 U	260 U	230 U	250 U
Carbazole	ug/kg	220 U	260 U	230 U	250 U
4-Chloro-3-methylphenol	ug/kg	220 U	260 U	230 U	250 U
4-Chloroaniline	ug/kg	440 UJ	520 UJ	460 UJ	500 UJ
2-Chloronaphthalene	ug/kg	87 U	100 U	92 U	100 U
2-Chlorophenol	ug/kg	220 U	260 U	230 U	250 U
4-Chlorophenyl-phenylether	ug/kg	87 U	100 U	92 U	100 U
Chrysene	ug/kg	120	100 U	92 U	100 U
Di-n-butylphthalate	ug/kg	220 U	260 U	230 U	250 U
Di-n-octylphthalate	ug/kg	220 UJ	260 UJ	230 UJ	250 UJ
Dibenz(a,h)anthracene	ug/kg	87 UJ	100 UJ	92 UJ	100 UJ
Dibenzofuran	ug/kg	87 U	100 U	92 U	100 U
1,2-Dichlorobenzene	ug/kg	87 U	100 U	92 U	100 U
1,3-Dichlorobenzene	ug/kg	87 U	100 U	92 U	100 U
1,4-Dichlorobenzene	ug/kg	87 U	100 U	92 U	100 U
3,3'-Dichlorobenzidine	ug/kg	440 UJ	520 UJ	460 UJ	500 UJ

Analysis/ Analyte	Units	1-__	2-__	3-__	3-FD
2,4-Dichlorophenol	ug/kg	220 U	260 U	230 U	250 U
Diethylphthalate	ug/kg	87 U	100 U	92 U	100 U
2,4-Dimethylphenol	ug/kg	87 UJ	100 UJ	92 UJ	100 UJ
Dimethylphthalate	ug/kg	87 U	100 U	92 U	100 U
4,6-Dinitro-2-methylphenol	ug/kg	440 U	520 U	460 U	500 U
2,4-Dinitrophenol	ug/kg	440 UJ	520 UJ	460 UJ	500 UJ
2,4-Dinitrotoluene	ug/kg	87 U	100 U	92 U	100 U
2,6-Dinitrotoluene	ug/kg	87 U	100 U	92 U	100 U
Fluoranthene	ug/kg	190	100 U	92 U	100 U
Fluorene	ug/kg	87 U	100 U	92 U	100 U
Hexachlorobenzene	ug/kg	87 U	100 U	92 U	100 U
Hexachlorobutadiene	ug/kg	87 U	100 U	92 U	100 U
Hexachlorocyclopentadiene	ug/kg	87 UJ	100 UJ	92 UJ	100 UJ
Hexachloroethane	ug/kg	87 U	100 U	92 U	100 U
Indeno(1,2,3-cd)pyrene	ug/kg	100	100 U	92 U	100 U
Isophorone	ug/kg	87 UJ	100 UJ	92 UJ	100 UJ
2-Methylnaphthalene	ug/kg	87 U	100 U	92 U	100 U
2-Methylphenol	ug/kg	220 U	260 U	230 U	250 U
4-Methylphenol	ug/kg	220 U	260 U	230 U	250 U
Naphthalene	ug/kg	87 U	100 U	92 U	100 U
2-Nitroaniline	ug/kg	220 UJ	260 UJ	230 UJ	250 UJ
3-Nitroaniline	ug/kg	220 UJ	260 UJ	230 UJ	250 UJ
4-Nitroaniline	ug/kg	440 UJ	520 UJ	460 UJ	500 UJ
Nitrobenzene	ug/kg	87 UJ	100 UJ	92 UJ	100 UJ
2-Nitrophenol	ug/kg	220 U	260 U	230 U	250 U
4-Nitrophenol	ug/kg	440 U	520 U	460 U	500 U
N-nitroso-di-n-propylamine	ug/kg	220 U	260 U	230 U	250 U
N-nitrosodiphenylamine	ug/kg	87 U	100 U	92 U	100 U
Pentachlorophenol	ug/kg	220 UJ	260 UJ	230 UJ	250 UJ
Phenanthrene	ug/kg	140	100 U	92 U	100 U
Phenol	ug/kg	87 U	100 U	92 U	100 U
Pyrene	ug/kg	170	100 U	92 U	100 U
1,2,4-Trichlorobenzene	ug/kg	87 U	100 U	92 U	100 U
2,4,5-Trichlorophenol	ug/kg	220 U	260 U	230 U	250 U
2,4,6-Trichlorophenol	ug/kg	220 UJ	260 UJ	230 UJ	250 UJ
1 VOCs in Solid Matrices by GC/MS					
Acetone	ug/kg	12 UJ	12 UJ	12 UJ	12 UJ
Benzene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Bromodichloromethane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Bromoform	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Bromomethane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
2-Butanone	ug/kg	24 UJ	25 UJ	24 UJ	24 UJ
Carbon Disulfide	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Carbon Tetrachloride	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Chlorobenzene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ

Analysis/ Analyte	Units	1-__	2-__	3-__	3-FD
Chloroethane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Chloroform	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Chloromethane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Cyclohexane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,2-Dibromo-3-Chloropropane	ug/kg	24 UJ	25 UJ	24 UJ	24 UJ
Dibromochloromethane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,2-Dibromoethane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,2-Dichlorobenzene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,3-Dichlorobenzene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,4-Dichlorobenzene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Dichlorodifluoromethane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,1-Dichloroethane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,2-Dichloroethane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,1-Dichloroethene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
cis-1,2-Dichloroethene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
trans-1,2-Dichloroethene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,2-Dichloropropane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
cis-1,3-Dichloropropene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
trans-1,3-Dichloropropene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Ethyl Benzene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
2-Hexanone	ug/kg	24 UJ	25 UJ	24 UJ	24 UJ
Isopropylbenzene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Methyl Acetate	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Methyl tert-butyl ether	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Methylcyclohexane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Methylene Chloride	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
4-Methyl-2-Pentanone	ug/kg	24 UJ	25 UJ	24 UJ	24 UJ
Naphthalene	ug/kg	12 UJ	12 UJ	12 UJ	12 UJ
Styrene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,1,2,2-Tetrachloroethane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Tetrachloroethene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Toluene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,2,3-Trichlorobenzene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,2,4-Trichlorobenzene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,1,1-Trichloroethane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,1,2-Trichloroethane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Trichloroethene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Trichlorofluoromethane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
1,1,2-Trichlorotrifluoroethane	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
Vinyl Chloride	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ
m and/or p-Xylene	ug/kg	12 UJ	12 UJ	12 UJ	12 UJ
o-Xylene	ug/kg	6.0 UJ	6.2 UJ	6.1 UJ	6.0 UJ

Analysis/ Analyte	Units	4-__	5-__	6-__	101-__
1 Metals in Solids by ICP-AES					
Aluminum	mg/kg	13800	12700	13500	
Arsenic	mg/kg	10.2	7.6	8.0	
Barium	mg/kg	268	152	246	
Beryllium	mg/kg	1.0 U	1.0 U	1.0 U	
Cadmium	mg/kg	1.0 U	1.0 U	1.1	
Chromium	mg/kg	18.9	17.3	18.3	
Iron	mg/kg	21000	18600	19600	
Lead	mg/kg	14.2	12.4	17.2	
Manganese	mg/kg	605	820	543	
Nickel	mg/kg	24.0	25.7	23.7	
Silver	mg/kg	2.0 U	2.0 U	2.0 U	
1 Percent Solid					
Solids, percent	%	79.1	81.4	75.0	
1 Semi-Volatile Organic Compounds in Soil					
Acenaphthene	ug/kg	93 U	88 U	100 U	
Acenaphthylene	ug/kg	93 U	88 U	100 U	
Anthracene	ug/kg	93 U	88 U	100 U	
Benzo(a)anthracene	ug/kg	93 U	88 U	100 U	
Benzo(a)pyrene	ug/kg	93 U	88 U	100 U	
Benzo(b)fluoranthene	ug/kg	93 U	88 U	100 U	
Benzo(g,h,i)perylene	ug/kg	93 U	88 U	100 U	
Benzo(k)fluoranthene	ug/kg	93 U	88 U	100 U	
Benzoic acid	ug/kg	460 UJ	440 UJ	510 UJ	
Benzyl alcohol	ug/kg	230 U	220 U	260 U	
bis(2-Chloroethoxy)methane	ug/kg	93 U	88 U	100 U	
bis(2-Chloroethyl)ether	ug/kg	93 U	88 U	100 U	
bis(2-Chloroisopropyl)ether	ug/kg	93 U	88 U	100 U	
bis(2-Ethylhexyl)phthalate	ug/kg	230 U	220 U	910 J	
4-Bromophenyl-phenylether	ug/kg	93 U	88 U	100 U	
Butylbenzylphthalate	ug/kg	230 U	220 U	260 U	
Carbazole	ug/kg	230 U	220 U	260 U	
4-Chloro-3-methylphenol	ug/kg	230 U	220 U	260 U	
4-Chloroaniline	ug/kg	460 UJ	440 UJ	510 UJ	
2-Chloronaphthalene	ug/kg	93 U	88 U	100 U	
2-Chlorophenol	ug/kg	230 U	220 U	260 U	
4-Chlorophenyl-phenylether	ug/kg	93 U	88 U	100 U	
Chrysene	ug/kg	93 U	88 U	100 U	
Di-n-butylphthalate	ug/kg	230 U	220 U	260 U	
Di-n-octylphthalate	ug/kg	230 UJ	220 UJ	260 U	
Dibenz(a,h)anthracene	ug/kg	93 UJ	88 UJ	100 U	
Dibenzofuran	ug/kg	93 U	88 U	100 U	
1,2-Dichlorobenzene	ug/kg	93 U	88 U	100 U	
1,3-Dichlorobenzene	ug/kg	93 U	88 U	100 U	
1,4-Dichlorobenzene	ug/kg	93 U	88 U	100 U	
3,3'-Dichlorobenzidine	ug/kg	460 UJ	440 UJ	510 UJ	

Analysis/ Analyte	Units	4-__	5-__	6-__	101-__
2,4-Dichlorophenol	ug/kg	230 U	220 U	260 U	
Diethylphthalate	ug/kg	93 U	88 U	100 U	
2,4-Dimethylphenol	ug/kg	93 UJ	88 UJ	100 UJ	
Dimethylphthalate	ug/kg	93 U	88 U	100 U	
4,6-Dinitro-2-methylphenol	ug/kg	460 U	440 U	510 UJ	
2,4-Dinitrophenol	ug/kg	460 UJ	440 UJ	510 UJ	
2,4-Dinitrotoluene	ug/kg	93 U	88 U	100 U	
2,6-Dinitrotoluene	ug/kg	93 U	88 U	100 U	
Fluoranthene	ug/kg	93 U	88 U	100 U	
Fluorene	ug/kg	93 U	88 U	100 U	
Hexachlorobenzene	ug/kg	93 U	88 U	100 U	
Hexachlorobutadiene	ug/kg	93 U	88 U	100 U	
Hexachlorocyclopentadiene	ug/kg	93 UJ	88 UJ	100 UJ	
Hexachloroethane	ug/kg	93 U	88 U	100 UJ	
Indeno(1,2,3-cd)pyrene	ug/kg	93 U	88 U	100 U	
Isophorone	ug/kg	93 UJ	88 UJ	100 UJ	
2-Methylnaphthalene	ug/kg	93 U	88 U	100 U	
2-Methylphenol	ug/kg	230 U	220 U	260 U	
4-Methylphenol	ug/kg	230 U	220 U	260 U	
Naphthalene	ug/kg	93 U	88 U	100 U	
2-Nitroaniline	ug/kg	230 UJ	220 UJ	260 UJ	
3-Nitroaniline	ug/kg	230 UJ	220 UJ	260 UJ	
4-Nitroaniline	ug/kg	460 UJ	440 UJ	510 UJ	
Nitrobenzene	ug/kg	93 UJ	88 UJ	100 UJ	
2-Nitrophenol	ug/kg	230 U	220 U	260 U	
4-Nitrophenol	ug/kg	460 U	440 U	510 UJ	
N-nitroso-di-n-propylamine	ug/kg	230 U	220 U	260 U	
N-nitrosodiphenylamine	ug/kg	93 U	88 U	100 U	
Pentachlorophenol	ug/kg	230 UJ	220 UJ	260 UJ	
Phenanthrene	ug/kg	93 U	88 U	100 U	
Phenol	ug/kg	93 U	88 U	100 U	
Pyrene	ug/kg	93 U	88 U	100 U	
1,2,4-Trichlorobenzene	ug/kg	93 U	88 U	100 U	
2,4,5-Trichlorophenol	ug/kg	230 U	220 U	260 U	
2,4,6-Trichlorophenol	ug/kg	230 UJ	220 UJ	260 UJ	
1 VOCs in Solid Matrices by GC/MS					
Acetone	ug/kg	12 UJ	11 UJ	84 J	
Benzene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Bromodichloromethane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Bromoform	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Bromomethane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
2-Butanone	ug/kg	24 UJ	22 UJ	26 UJ	
Carbon Disulfide	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Carbon Tetrachloride	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Chlorobenzene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	

Analysis/ Analyte	Units	4-__	5-__	6-__	101-__
Chloroethane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Chloroform	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Chloromethane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Cyclohexane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,2-Dibromo-3-Chloropropane	ug/kg	24 UJ	22 UJ	26 UJ	
Dibromochloromethane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,2-Dibromoethane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,2-Dichlorobenzene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,3-Dichlorobenzene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,4-Dichlorobenzene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Dichlorodifluoromethane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,1-Dichloroethane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,2-Dichloroethane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,1-Dichloroethene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
cis-1,2-Dichloroethene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
trans-1,2-Dichloroethene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,2-Dichloropropane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
cis-1,3-Dichloropropene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
trans-1,3-Dichloropropene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Ethyl Benzene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
2-Hexanone	ug/kg	24 UJ	22 UJ	26 UJ	
Isopropylbenzene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Methyl Acetate	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Methyl tert-butyl ether	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Methylcyclohexane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Methylene Chloride	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
4-Methyl-2-Pentanone	ug/kg	24 UJ	22 UJ	26 UJ	
Naphthalene	ug/kg	12 UJ	11 UJ	13 UJ	
Styrene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,1,2,2-Tetrachloroethane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Tetrachloroethene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Toluene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,2,3-Trichlorobenzene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,2,4-Trichlorobenzene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,1,1-Trichloroethane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,1,2-Trichloroethane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Trichloroethene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Trichlorofluoromethane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1,1,2-Trichlorotrifluoroethane	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
Vinyl Chloride	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
m and/or p-Xylene	ug/kg	12 UJ	11 UJ	13 UJ	
o-Xylene	ug/kg	5.9 UJ	5.6 UJ	6.4 UJ	
1 Semi-Volatile Organic Compounds in Water					
Acenaphthene	ug/L				2.0 U
Acenaphthylene	ug/L				2.0 U

Analysis/ Analyte	Units	4-__	5-__	6-__	101-__
Anthracene	ug/L				2.0 U
Benzo(a)anthracene	ug/L				2.0 U
Benzo(a)pyrene	ug/L				2.0 U
Benzo(b)fluoranthene	ug/L				2.0 U
Benzo(g,h,i)perylene	ug/L				2.0 U
Benzo(k)fluoranthene	ug/L				2.0 U
Benzoic acid	ug/L				10 UJ
Benzyl alcohol	ug/L				5.0 UJ
bis(2-Chloroethoxy)methane	ug/L				2.0 U
bis(2-Chloroethyl)ether	ug/L				2.0 U
bis(2-Chloroisopropyl)ether	ug/L				2.0 U
bis(2-Ethylhexyl)phthalate	ug/L				5.0 U
4-Bromophenyl-phenylether	ug/L				2.0 U
Butylbenzylphthalate	ug/L				5.0 U
Carbazole	ug/L				5.0 U
4-Chloro-3-methylphenol	ug/L				5.0 UJ
4-Chloroaniline	ug/L				10 U
2-Chloronaphthalene	ug/L				2.0 U
2-Chlorophenol	ug/L				5.0 UJ
4-Chlorophenyl-phenylether	ug/L				2.0 U
Chrysene	ug/L				2.0 U
Di-n-butylphthalate	ug/L				5.0 U
Di-n-octylphthalate	ug/L				5.0 U
Dibenz(a,h)anthracene	ug/L				2.0 U
Dibenzofuran	ug/L				2.0 U
1,2-Dichlorobenzene	ug/L				2.0 U
1,3-Dichlorobenzene	ug/L				2.0 U
1,4-Dichlorobenzene	ug/L				2.0 U
3,3'-Dichlorobenzidine	ug/L				10 U
2,4-Dichlorophenol	ug/L				5.0 UJ
Diethylphthalate	ug/L				2.0 U
2,4-Dimethylphenol	ug/L				2.0 UJ
Dimethylphthalate	ug/L				2.0 U
4,6-Dinitro-2-methylphenol	ug/L				10 UJ
2,4-Dinitrophenol	ug/L				10 UJ
2,4-Dinitrotoluene	ug/L				2.0 U
2,6-Dinitrotoluene	ug/L				2.0 U
Fluoranthene	ug/L				2.0 U
Fluorene	ug/L				2.0 U
Hexachlorobenzene	ug/L				2.0 U
Hexachlorobutadiene	ug/L				2.0 U
Hexachlorocyclopentadiene	ug/L				2.0 UJ
Hexachloroethane	ug/L				2.0 U
Indeno(1,2,3-cd)pyrene	ug/L				2.0 U
Isophorone	ug/L				2.0 UJ

Analysis/ Analyte	Units	4-__	5-__	6-__	101-__
2-Methylnaphthalene	ug/L				2.0 U
2-Methylphenol	ug/L				5.0 UJ
4-Methylphenol	ug/L				5.0 UJ
Naphthalene	ug/L				2.0 U
2-Nitroaniline	ug/L				5.0 U
3-Nitroaniline	ug/L				5.0 U
4-Nitroaniline	ug/L				10 U
Nitrobenzene	ug/L				2.0 U
2-Nitrophenol	ug/L				5.0 UJ
4-Nitrophenol	ug/L				10 UJ
N-nitroso-di-n-propylamine	ug/L				5.0 U
N-nitrosodiphenylamine	ug/L				2.0 U
Pentachlorophenol	ug/L				5.0 UJ
Phenanthrene	ug/L				2.0 U
Phenol	ug/L				2.0 UJ
Pyrene	ug/L				2.0 U
1,2,4-Trichlorobenzene	ug/L				2.0 U
2,4,5-Trichlorophenol	ug/L				5.0 UJ
2,4,6-Trichlorophenol	ug/L				5.0 UJ
1 VOCs in Water by GC/MS for Low Detection Limits					
Acetone	ug/L				6.5
Benzene	ug/L				1.0 UJ
Bromodichloromethane	ug/L				1.0 U
Bromoform	ug/L				2.0 U
Bromomethane	ug/L				1.0 U
2-Butanone	ug/L				5.0 U
Carbon Disulfide	ug/L				1.0 U
Carbon Tetrachloride	ug/L				1.0 U
Chlorobenzene	ug/L				1.0 UJ
Chloroethane	ug/L				1.0 U
Chloroform	ug/L				1.0 U
Chloromethane	ug/L				1.0 U
Cyclohexane	ug/L				1.0 U
1,2-Dibromo-3-Chloropropane	ug/L				5.0 UJ
Dibromochloromethane	ug/L				5.0 U
1,2-Dibromoethane	ug/L				1.0 U
1,2-Dichlorobenzene	ug/L				1.0 UJ
1,3-Dichlorobenzene	ug/L				1.0 UJ
1,4-Dichlorobenzene	ug/L				1.0 UJ
Dichlorodifluoromethane	ug/L				1.0 U
1,1-Dichloroethane	ug/L				1.0 U
1,2-Dichloroethane	ug/L				1.0 U
1,1-Dichloroethene	ug/L				1.0 U
cis-1,2-Dichloroethene	ug/L				1.0 U
trans-1,2-Dichloroethene	ug/L				1.0 U

Analysis/ Analyte	Units	4-__	5-__	6-__	101-__
1,2-Dichloropropane	ug/L				1.0 U
cis-1,3-Dichloropropene	ug/L				1.0 U
trans-1,3-Dichloropropene	ug/L				1.0 U
Ethyl Benzene	ug/L				1.0 UJ
2-Hexanone	ug/L				5.0 U
Isopropylbenzene	ug/L				1.0 UJ
Methyl Acetate	ug/L				5.0 U
Methyl tert-butyl ether	ug/L				1.0 U
Methylcyclohexane	ug/L				1.0 U
Methylene Chloride	ug/L				1.0 U
4-Methyl-2-Pentanone	ug/L				5.0 U
Naphthalene	ug/L				2.0 UJ
Styrene	ug/L				1.0 UJ
1,1,2,2-Tetrachloroethane	ug/L				1.0 U
Tetrachloroethene	ug/L				1.0 U
Toluene	ug/L				1.0 UJ
1,2,3-Trichlorobenzene	ug/L				1.0 UJ
1,2,4-Trichlorobenzene	ug/L				1.0 UJ
1,1,1-Trichloroethane	ug/L				1.0 U
1,1,2-Trichloroethane	ug/L				1.0 U
Trichloroethene	ug/L				1.0 U
Trichlorofluoromethane	ug/L				1.0 U
1,1,2-Trichlorotrifluoroethane	ug/L				1.0 U
Vinyl Chloride	ug/L				1.0 U
m and/or p-Xylene	ug/L				2.0 UJ
o-Xylene	ug/L				1.0 UJ

Analysis/ Analyte	Units	102-__	103-__	104-__	104-FD
1 Semi-Volatile Organic Compounds in Water					
Acenaphthene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Acenaphthylene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Anthracene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Benzo(a)anthracene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Benzo(a)pyrene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Benzo(b)fluoranthene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Benzo(g,h,i)perylene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Benzo(k)fluoranthene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Benzoic acid	ug/L	10 UJ	20 UJ	10 UJ	10 UJ
Benzyl alcohol	ug/L	5.0 UJ	10 UJ	5.0 UJ	5.0 UJ
bis(2-Chloroethoxy)methane	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
bis(2-Chloroethyl)ether	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
bis(2-Chloroisopropyl)ether	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
bis(2-Ethylhexyl)phthalate	ug/L	5.0 U	10 U	5.0 U	5.0 U
4-Bromophenyl-phenylether	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Butylbenzylphthalate	ug/L	5.0 U	10 U	5.0 U	5.0 U
Carbazole	ug/L	5.0 U	10 U	5.0 U	5.0 U
4-Chloro-3-methylphenol	ug/L	5.0 UJ	10 UJ	5.0 UJ	5.0 UJ
4-Chloroaniline	ug/L	10 U	20 U	10 U	10 U
2-Chloronaphthalene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
2-Chlorophenol	ug/L	5.0 UJ	10 UJ	5.0 UJ	5.0 UJ
4-Chlorophenyl-phenylether	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Chrysene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Di-n-butylphthalate	ug/L	5.0 U	10 U	5.0 U	5.0 U
Di-n-octylphthalate	ug/L	5.0 U	10 U	5.0 U	5.0 U
Dibenz(a,h)anthracene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Dibenzofuran	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	ug/L	10 U	20 U	10 U	10 U
2,4-Dichlorophenol	ug/L	5.0 UJ	10 UJ	5.0 UJ	5.0 UJ
Diethylphthalate	ug/L	3.2 U	4.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	ug/L	2.0 UJ	4.0 UJ	2.0 UJ	2.0 UJ
Dimethylphthalate	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
4,6-Dinitro-2-methylphenol	ug/L	10 UJ	20 UJ	10 UJ	10 UJ
2,4-Dinitrophenol	ug/L	10 UJ	20 UJ	10 UJ	10 UJ
2,4-Dinitrotoluene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Fluoranthene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Fluorene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Hexachlorobenzene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Hexachlorobutadiene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	ug/L	2.0 UJ	4.0 UJ	2.0 UJ	2.0 UJ
Hexachloroethane	ug/L	2.0 U	4.0 U	2.0 U	2.0 U

Analysis/ Analyte	Units	102-__	103-__	104-__	104-FD
Indeno(1,2,3-cd)pyrene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Isophorone	ug/L	2.0 UJ	4.0 UJ	2.0 UJ	2.0 UJ
2-Methylnaphthalene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
2-Methylphenol	ug/L	5.0 UJ	10 UJ	5.0 UJ	5.0 UJ
4-Methylphenol	ug/L	5.0 UJ	10 UJ	5.0 UJ	5.0 UJ
Naphthalene	ug/L	2.0 U	6.9	2.0 U	2.0 U
2-Nitroaniline	ug/L	5.0 U	10 U	5.0 U	5.0 U
3-Nitroaniline	ug/L	5.0 U	10 U	5.0 U	5.0 U
4-Nitroaniline	ug/L	10 U	20 U	10 U	10 U
Nitrobenzene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
2-Nitrophenol	ug/L	5.0 UJ	10 UJ	5.0 UJ	5.0 UJ
4-Nitrophenol	ug/L	10 UJ	20 UJ	10 UJ	10 UJ
N-nitroso-di-n-propylamine	ug/L	5.0 U	10 U	5.0 U	5.0 U
N-nitrosodiphenylamine	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Pentachlorophenol	ug/L	5.0 UJ	10 UJ	5.0 UJ	5.0 UJ
Phenanthrene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
Phenol	ug/L	2.1 J	4.0 UJ	2.0 UJ	2.0 UJ
Pyrene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	ug/L	2.0 U	4.0 U	2.0 U	2.0 U
2,4,5-Trichlorophenol	ug/L	5.0 UJ	10 UJ	5.0 UJ	5.0 UJ
2,4,6-Trichlorophenol	ug/L	5.0 UJ	10 UJ	5.0 UJ	5.0 UJ
1 VOCs in Water by GC/MS for Low Detection Limits					
Acetone	ug/L	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	ug/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	ug/L	5.0 U	5.0 U	5.0 U	5.0 U
Carbon Disulfide	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Chloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-Chloropropane	ug/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Dibromochloromethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromoethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
1,3-Dichlorobenzene	ug/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
1,4-Dichlorobenzene	ug/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Dichlorodifluoromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U

Analysis/ Analyte	Units	102-__	103-__	104-__	104-FD
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Benzene	ug/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
2-Hexanone	ug/L	5.0 U	5.0 U	5.0 U	5.0 U
Isopropylbenzene	ug/L	1.0 UJ	2.1 J	1.0 UJ	1.0 UJ
Methyl Acetate	ug/L	5.0 U	5.0 U	5.0 U	5.0 U
Methyl tert-butyl ether	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Methylcyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-Pentanone	ug/L	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	ug/L	2.0 UJ	8.0 J	2.0 UJ	2.0 UJ
Styrene	ug/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1.0 UJ	1.0 UJ	1.1 J	1.0 UJ
1,2,3-Trichlorobenzene	ug/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
1,2,4-Trichlorobenzene	ug/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichlorotrifluoroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl Chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
m and/or p-Xylene	ug/L	2.0 UJ	2.0 UJ	2.0 UJ	2.0 U
o-Xylene	ug/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ

Analysis/ Analyte	Units	105-__	106-__	107-__	111-FB
1 Semi-Volatile Organic Compounds in Water					
Acenaphthene	ug/L	2.0 U	8.0 U	2.0 U	
Acenaphthylene	ug/L	2.0 U	8.0 U	2.0 U	
Anthracene	ug/L	2.0 U	8.0 U	2.0 U	
Benzo(a)anthracene	ug/L	2.0 U	8.0 U	2.0 U	
Benzo(a)pyrene	ug/L	2.0 U	8.0 U	2.0 U	
Benzo(b)fluoranthene	ug/L	2.0 U	8.0 U	2.0 U	
Benzo(g,h,i)perylene	ug/L	2.0 U	8.0 U	2.0 U	
Benzo(k)fluoranthene	ug/L	2.0 U	8.0 U	2.0 U	
Benzoic acid	ug/L	10 UJ	40 UJ	10 UJ	
Benzyl alcohol	ug/L	5.0 UJ	20 UJ	5.0 UJ	
bis(2-Chloroethoxy)methane	ug/L	2.0 U	8.0 U	2.0 U	
bis(2-Chloroethyl)ether	ug/L	2.0 U	8.0 U	2.0 U	
bis(2-Chloroisopropyl)ether	ug/L	2.0 U	8.0 U	2.0 U	
bis(2-Ethylhexyl)phthalate	ug/L	5.0 U	20 U	5.0 U	
4-Bromophenyl-phenylether	ug/L	2.0 U	8.0 U	2.0 U	
Butylbenzylphthalate	ug/L	5.0 U	20 U	5.0 U	
Carbazole	ug/L	5.0 U	20 U	5.0 U	
4-Chloro-3-methylphenol	ug/L	5.0 UJ	20 UJ	5.0 UJ	
4-Chloroaniline	ug/L	10 U	40 U	10 U	
2-Chloronaphthalene	ug/L	2.0 U	8.0 U	2.0 U	
2-Chlorophenol	ug/L	5.0 UJ	20 UJ	5.0 UJ	
4-Chlorophenyl-phenylether	ug/L	2.0 U	8.0 U	2.0 U	
Chrysene	ug/L	2.0 U	8.0 U	2.0 U	
Di-n-butylphthalate	ug/L	5.0 U	20 U	5.0 U	
Di-n-octylphthalate	ug/L	5.0 U	20 U	5.0 U	
Dibenz(a,h)anthracene	ug/L	2.0 U	8.0 U	2.0 U	
Dibenzofuran	ug/L	2.0 U	8.0 U	2.0 U	
1,2-Dichlorobenzene	ug/L	2.0 U	8.0 U	2.0 U	
1,3-Dichlorobenzene	ug/L	2.0 U	8.0 U	2.0 U	
1,4-Dichlorobenzene	ug/L	2.0 U	8.0 U	2.0 U	
3,3'-Dichlorobenzidine	ug/L	10 U	40 U	10 U	
2,4-Dichlorophenol	ug/L	5.0 UJ	20 UJ	5.0 UJ	
Diethylphthalate	ug/L	3.4 U	8.0 U	2.0 UJ	
2,4-Dimethylphenol	ug/L	2.0 UJ	8.0 UJ	2.0 UJ	
Dimethylphthalate	ug/L	2.0 U	8.0 U	2.0 U	
4,6-Dinitro-2-methylphenol	ug/L	10 UJ	40 UJ	10 UJ	
2,4-Dinitrophenol	ug/L	10 UJ	40 UJ	10 UJ	
2,4-Dinitrotoluene	ug/L	2.0 U	8.0 U	2.0 U	
2,6-Dinitrotoluene	ug/L	2.0 U	8.0 U	2.0 U	
Fluoranthene	ug/L	2.0 U	8.0 U	2.0 U	
Fluorene	ug/L	2.0 U	8.0 U	2.0 U	
Hexachlorobenzene	ug/L	2.0 U	8.0 U	2.0 U	
Hexachlorobutadiene	ug/L	2.0 U	8.0 U	2.0 U	
Hexachlorocyclopentadiene	ug/L	2.0 UJ	8.0 UJ	2.0 UJ	
Hexachloroethane	ug/L	2.0 U	8.0 U	2.0 U	

Analysis/ Analyte	Units	105-__	106-__	107-__	111-FB
Indeno(1,2,3-cd)pyrene	ug/L	2.0 U	8.0 U	2.0 U	
Isophorone	ug/L	2.0 UJ	8.0 UJ	2.0 UJ	
2-Methylnaphthalene	ug/L	2.0 U	240	2.0 U	
2-Methylphenol	ug/L	5.0 UJ	20 UJ	5.0 UJ	
4-Methylphenol	ug/L	5.0 UJ	20 UJ	5.0 UJ	
Naphthalene	ug/L	2.0 U	1000	2.0 U	
2-Nitroaniline	ug/L	5.0 U	20 U	5.0 U	
3-Nitroaniline	ug/L	5.0 U	20 U	5.0 U	
4-Nitroaniline	ug/L	10 U	40 U	10 U	
Nitrobenzene	ug/L	2.0 U	8.0 U	2.0 U	
2-Nitrophenol	ug/L	5.0 UJ	20 UJ	5.0 UJ	
4-Nitrophenol	ug/L	10 UJ	40 UJ	10 UJ	
N-nitroso-di-n-propylamine	ug/L	5.0 U	20 U	5.0 U	
N-nitrosodiphenylamine	ug/L	2.0 U	8.0 U	2.0 UJ	
Pentachlorophenol	ug/L	5.0 UJ	20 UJ	5.0 UJ	
Phenanthrene	ug/L	2.0 U	8.0 U	2.0 U	
Phenol	ug/L	2.0 UJ	8.0 UJ	2.0 UJ	
Pyrene	ug/L	2.0 U	8.0 U	2.0 U	
1,2,4-Trichlorobenzene	ug/L	2.0 U	8.0 U	2.0 U	
2,4,5-Trichlorophenol	ug/L	5.0 UJ	20 UJ	5.0 UJ	
2,4,6-Trichlorophenol	ug/L	5.0 UJ	20 UJ	5.0 UJ	
1 VOCs in Water by GC/MS for Low Detection Limits					
Acetone	ug/L	5.0 U	5.0 U	5.0 UJ	5.0 U
Benzene	ug/L	1.0 U	7.1 J	1.0 UJ	1.0 U
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
Bromoform	ug/L	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
2-Butanone	ug/L	5.0 U	5.0 U	5.0 UJ	5.0 U
Carbon Disulfide	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
Carbon Tetrachloride	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
Chlorobenzene	ug/L	1.0 U	1.0 UJ	1.0 UJ	1.0 U
Chloroethane	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
Chloroform	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
Chloromethane	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
Cyclohexane	ug/L	1.0 U	410	1.0 UJ	1.0 U
1,2-Dibromo-3-Chloropropane	ug/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Dibromochloromethane	ug/L	5.0 U	5.0 U	5.0 UJ	5.0 U
1,2-Dibromoethane	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 UJ	1.0 UJ	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 UJ	1.0 UJ	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 UJ	1.0 UJ	1.0 U
Dichlorodifluoromethane	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U

Analysis/ Analyte	Units	105-__	106-__	107-__	111-FB
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Benzene	ug/L	1.0 U	1600 J	1.0 UJ	1.0 U
2-Hexanone	ug/L	5.0 U	5.0 U	5.0 UJ	5.0 U
Isopropylbenzene	ug/L	1.0 U	270 J	1.0 UJ	1.0 U
Methyl Acetate	ug/L	5.0 U	5.0 U	5.0 UJ	5.0 U
Methyl tert-butyl ether	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Methylcyclohexane	ug/L	1.0 U	420	1.0 U	1.0 U
Methylene Chloride	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
4-Methyl-2-Pentanone	ug/L	5.0 U	5.0 U	5.0 UJ	5.0 U
Naphthalene	ug/L	2.0 UJ	470 J	2.0 UJ	2.0 U
Styrene	ug/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1.0 U	3.8 J	1.0 UJ	1.0 U
1,2,3-Trichlorobenzene	ug/L	1.0 U	1.0 UJ	1.0 UJ	1.0 U
1,2,4-Trichlorobenzene	ug/L	1.0 U	1.0 UJ	1.0 UJ	1.0 U
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
Trichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
1,1,2-Trichlorotrifluoroethane	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
Vinyl Chloride	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
m and/or p-Xylene	ug/L	2.0 U	930 J	2.0 UJ	2.0 U
o-Xylene	ug/L	1.0 U	44 J	1.0 UJ	1.0 U

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII

EPA PROJECT MANAGER (Print)	SITE OR SAMPLING EVENT	DATE OF SAMPLE COLLECTION(S) (MONTH DAY YEAR)	SHEET
Lisa Messinger	SMV Industries	10 21 19	1 of 1

CONTENTS OF SHIPMENT

ASR AND SAMPLE NUMBER	1 L PLASTIC BOTTLE	40 mL BOTTLE	8oz BOTTLE	8oz BOTTLE	VOA SET (3 VIALS EA)	WATER	SOLID	HAZ WASTE	AIR	OTHER	RECEIVING LABORATORY REMARKS OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)
	NUMBER(S) OF CONTAINERS PER SAMPLE NUMBER										
8277-1	2			1			X				
-2	2			1			X				
-3	2			1			X				
-3-FD	2			1			X				
-4	2			1			X				
-5	2			1			X				
-6	3	01 22/19		1			X				MS/MSD
-101			1		1	X					8oz not full, Insufficient recharge
-102			1		1	X					
-103			1		1	X					Strong petro odor
-104			1		1	X					
-105			1		1	X					
-106			1		1	X					odor, Sheen
-107			3		3	X					MS/MSD
~~-108FD~~											
-104FD			1		1	X					
-111-FR					1	X					All VOAs have some air bubbles, visible + heavy sediment lab informed to note upon receipt accordingly Email sent to [illegible] on 10/22/19
											Clr. Temps. Recd but not within 2 to cool to 4°C 10/22/19
											9.5 ~~14.8~~°C 10/22/19

Complete

DESCRIPTION OF SHIPMENT

68 37 10/22/19

_____ CONTAINER(S) CONSISTING OF _____ CRATE(S)

2 ICE CHEST(S): OTHER _____

MODE OF SHIPMENT

_____ COMMERCIAL CARRIER 10/22/19

X SAMPLER CONVEYED

_____ (SHIPPING AIRBILL NUMBER)

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (PM/SAMPLER)	DATE	TIME	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
Lisa Messinger SEALED X UNSEALED	10/21/19	1200	Nick Rowe SEALED X UNSEALED	10/22	1200	Analysis
RELINQUISHED BY (PM/SAMPLER) SEALED UNSEALED	DATE	TIME	RECEIVED BY SEALED UNSEALED	DATE	TIME	REASON FOR CHANGE OF CUSTODY
RELINQUISHED BY (PM/SAMPLER) SEALED UNSEALED	DATE	TIME	RECEIVED BY SEALED UNSEALED	DATE	TIME	REASON FOR CHANGE OF CUSTODY
RELINQUISHED BY (PM/SAMPLER) SEALED UNSEALED	DATE	TIME	RECEIVED BY SEALED UNSEALED	DATE	TIME	REASON FOR CHANGE OF CUSTODY

7-EPA-9262 (REV 4/17) Other Versions Are Obsolete WHITE ORIGINAL - EPA LAB • YELLOW - EPA PROJECT MANAGER

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8277 **Sample Number:** 1 **QC Code:** __ **Matrix:** Solid **Tag ID:** 8277-1-__

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: SMV-1

Storet ID: _____ **External Sample Number:** SMV-1-A

Expected Conc: (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: ___ ___ ___ **Sample Collection: Start:** ~~08~~ 10/21/2019 13:15

Longitude: ___ ___ ___ **End:** ~~8~~ 10/21/19 13:15

Laboratory Analyses:

Container	Preservative	Holding Time		Analysis
2 - 40mL VOA vial	4 Deg C	14	Days	1 VOCs in Solid Matrices by GC/MS
1 - 8 oz glass	4 Deg C	180	Days	1 Metals in Solids by ICP-AES
1 - 8 oz glass	4 Deg C	14	Days	1 Semi-Volatile Organic Compounds in Soil
0 -	4 Deg C	0	Days	1 Percent Solid

Sample Comments:

(N/A) SMV-1 Soil @ 0.5'-2.5'

Shallow

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8277 **Sample Number:** 2 **QC Code:** __ **Matrix:** Solid **Tag ID:** 8277-2-__

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: SMV-1

Storet ID: _____ **External Sample Number:** SMV-1-B

Expected Conc: (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: ___ ___ ___ **Sample Collection: Start:** 10/21/19 13:25
Longitude: ___ ___ ___ **End:** 10/21/19 13:25

Laboratory Analyses:

Container	Preservative	Holding Time		Analysis
2 - 40mL VOA vial	4 Deg C	14	Days	1 VOCs in Solid Matrices by GC/MS
1 - 8 oz glass	4 Deg C	180	Days	1 Metals in Solids by ICP-AES
1 - 8 oz glass	4 Deg C	14	Days	1 Semi-Volatile Organic Compounds in Soil
0 -	4 Deg C	0	Days	1 Percent Solid

Sample Comments:
(N/A)

SMV-1 soil @ 8'-10' deep

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8277 **Sample Number:** 3 **QC Code:** __ **Matrix:** Solid **Tag ID:** 8277-3-__

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: SMV - 2

Storet ID: _____ **External Sample Number:** SMV-2-A

Expected Conc: (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: ___ ___ ___ **Sample Collection: Start:** 10/21/19 10:50
Longitude: ___ ___ ___ **End:** 10/21/19 10:50

Laboratory Analyses:

Container	Preservative	Holding Time		Analysis
2 - 40mL VOA vial	4 Deg C	14	Days	1 VOCs in Solid Matrices by GC/MS
1 - 8 oz glass	4 Deg C	180	Days	1 Metals in Solids by ICP-AES
1 - 8 oz glass	4 Deg C	14	Days	1 Semi-Volatile Organic Compounds in Soil
0 -	4 Deg C	0	Days	1 Percent Solid

Sample Comments:
(N/A)

SMV-2 soil @ 5'-7'

shallow

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet

US EPA Region 7
Kansas City, KS

10/21/19

ASR Number: 8277 **Sample Number:** ~~8~~ 3 **QC Code:** FD **Matrix:** Solid **Tag ID:** 8277-~~8~~ 3-FD

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: _____

Storet ID: _____ **External Sample Number:** Dup-1

Expected Conc: (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: ___ ___ ___ **Sample Collection: Start:** 10/21/19 10:50
Longitude: ___ ___ ___ **End:** 10/21/19 10:50

Laboratory Analyses:

Container	Preservative	Holding Time		Analysis
2 - 40mL VOA vial	4 Deg C	14	Days	1 VOCs in Solid Matrices by GC/MS
1 - 8 oz glass	4 Deg C	180	Days	1 Metals in Solids by ICP-AES
1 - 8 oz glass	4 Deg C	14	Days	1 Semi-Volatile Organic Compounds in Soil
0 -	4 Deg C	0	Days	1 Percent Solid

Sample Comments:

(N/A)

Dup of SMU-3 @ 5'-7'
Shallow

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8277 **Sample Number:** 4 **QC Code:** __ **Matrix:** Solid **Tag ID:** 8277-4-__

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: SMV - 2

Storet ID: _____ **External Sample Number:** SMV-2-B

Expected Conc: (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: ___ ___ ___ **Sample Collection: Start:** 10/21/19 11:10
Longitude: ___ ___ ___ **End:** 10/21/19 11:10

Laboratory Analyses:

Container	Preservative	Holding Time		Analysis
2 - 40mL VOA vial	4 Deg C	14	Days	1 VOCs in Solid Matrices by GC/MS
1 - 8 oz glass	4 Deg C	180	Days	1 Metals in Solids by ICP-AES
1 - 8 oz glass	4 Deg C	14	Days	1 Semi-Volatile Organic Compounds in Soil
0 -	4 Deg C	0	Days	1 Percent Solid

Sample Comments:
(N/A)

SMV-2 soil @ 13'-15'
Deep

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8277 **Sample Number:** 5 **QC Code:** __ **Matrix:** Solid **Tag ID:** 8277-5-__

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: SMV-3

Storet ID: _____ **External Sample Number:** SMV-3-A

Expected Conc: (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: ___ ___ ___ **Sample Collection: Start:** 10/21/19 15:50
Longitude: ___ ___ ___ **End:** 10/21/19 15:50

Laboratory Analyses:

Container	Preservative	Holding Time		Analysis
2 - 40mL VOA vial	4 Deg C	14	Days	1 VOCs in Solid Matrices by GC/MS
1 - 8 oz glass	4 Deg C	180	Days	1 Metals in Solids by ICP-AES
1 - 8 oz glass	4 Deg C	14	Days	1 Semi-Volatile Organic Compounds in Soil
0 -	4 Deg C	0	Days	1 Percent Solid

Sample Comments:
(N/A)

SMV-3 soil @ 3'-5'
Shallow

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8277 **Sample Number:** 6 **QC Code:** __ **Matrix:** Solid **Tag ID:** 8277-6-__

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: SMV-3

Storet ID: _____ **External Sample Number:** SMV-3-B

Expected Conc: (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: __ __ __ **Sample Collection: Start:** 10/21/19 16:10
Longitude: __ __ __ **End:** 10/21/19 16:10

Laboratory Analyses:

Container	Preservative	Holding Time		Analysis
2 - 40mL VOA vial	4 Deg C	14	Days	1 VOCs in Solid Matrices by GC/MS
1 - 8 oz glass	4 Deg C	180	Days	1 Metals in Solids by ICP-AES
1 - 8 oz glass	4 Deg C	14	Days	1 Semi-Volatile Organic Compounds in Soil
0 -	4 Deg C	0	Days	1 Percent Solid

Sample Comments:
(N/A)

SMV-3 Soil @ 8'-10' deep
Triple volume for MS/MSD

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8277 **Sample Number:** 101 **QC Code:** __ **Matrix:** Water **Tag ID:** 8277-101-__

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: SMV-1

Storet ID: _____ **External Sample Number:** SMV-1

Expected Conc: (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: ___ ___ ___ **Sample Collection: Start:** 10/21/19 14:40
Longitude: ___ ___ ___ **End:** 10/21/19 14:40

Laboratory Analyses:

Container	Preservative	Holding Time		Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14	Days	1 VOCs in Water by GC/MS for Low Detection Limits
1 - 80 oz amber glass	4 Deg C	7	Days	1 Semi-Volatile Organic Compounds in Water

Sample Comments:
(N/A) Water @ SMV-1

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8277 **Sample Number:** 102 **QC Code:** __ **Matrix:** Water **Tag ID:** 8277-102-__

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: SMV-2

Storet ID: _____ **External Sample Number:** SMV-2

Expected Conc: (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: ___ ___ ___ **Sample Collection: Start:** 10/24/19 11:20
Longitude: ___ ___ ___ **End:** 10/24/19 11:20

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Water by GC/MS for Low Detection Limits
1 - 80 oz amber glass	4 Deg C	7 Days	1 Semi-Volatile Organic Compounds in Water

Sample Comments:
(N/A)

Water @ SMV-2

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8277 **Sample Number:** 103 **QC Code:** __ **Matrix:** Water **Tag ID:** 8277-103-__

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: SMW-3

Storet ID: _____ **External Sample Number:** SMV-3

Expected Conc: (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: ___ ___ ___ **Sample Collection: Start:** 10/21/19 16:30
Longitude: ___ ___ ___ **End:** 10/21/19 16:30

Laboratory Analyses:

Container	Preservative	Holding Time		Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14	Days	1 VOCs in Water by GC/MS for Low Detection Limits
1 - 80 oz amber glass	4 Deg C	7	Days	1 Semi-Volatile Organic Compounds in Water

Sample Comments:
(N/A)

Water @ SMV-3

petro odor

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8277 **Sample Number:** 104 **QC Code:** __ **Matrix:** Water **Tag ID:** 8277-104-__

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: GW-1

Storet ID: _____ **External Sample Number:** GW-1

Expected Conc: (or Circle One: Low Medium High)

		Date	Time(24 hr)
Latitude: ___ ___ ___	**Sample Collection: Start:**	10/21/19	14:00
Longitude: ___ ___ ___	**End:**	10/21/19	14:00

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Water by GC/MS for Low Detection Limits
1 - 80 oz amber glass	4 Deg C	7 Days	1 Semi-Volatile Organic Compounds in Water

Sample Comments:

(N/A)

Water @ GW-1

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

104 10/22/19

ASR Number: 8277 **Sample Number:** ~~108~~ 104 **QC Code:** FD **Matrix:** Water **Tag ID:** 8277-~~108~~ 104-FD

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: GW-Dup-1

Storet ID: _____ **External Sample Number:** GW-Dup-1

Expected Conc: (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: ___ ___ ___ **Sample Collection: Start:** 10/21/19 14:00

Longitude: ___ ___ ___ **End:** 10/21/19 14:00

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Water by GC/MS for Low Detection Limits
1 - 80 oz amber glass	4 Deg C	7 Days	1 Semi-Volatile Organic Compounds in Water

Sample Comments:

(N/A)

Duplicate of GW-1

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8277 **Sample Number:** 105 **QC Code:** __ **Matrix:** Water **Tag ID:** 8277-105-__

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: GW-2

Storet ID: _____ **External Sample Number:** GW-2

Expected Conc: (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: ___ ___ ___ **Sample Collection: Start:** 10/21/19 14:20
Longitude: ___ ___ ___ **End:** 10/21/19 14:20

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Water by GC/MS for Low Detection Limits
1 - 80 oz amber glass	4 Deg C	7 Days	1 Semi-Volatile Organic Compounds in Water

Sample Comments:

(N/A)

Water @ GW-2

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8277 **Sample Number:** 106 **QC Code:** __ **Matrix:** Water **Tag ID:** 8277-106-__

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: GW-3

Storet ID: _____ **External Sample Number:** GW-3

Expected Conc: (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: ___ ___ ___ **Sample Collection: Start:** 10/21/19 12:50
Longitude: ___ ___ ___ **End:** 10/21/19 12:50

Laboratory Analyses:

Container	Preservative	Holding Time		Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14	Days	1 VOCs in Water by GC/MS for Low Detection Limits
1 - 80 oz amber glass	4 Deg C	7	Days	1 Semi-Volatile Organic Compounds in Water

Sample Comments:

(N/A)

Water @ GW-3

Petroleum Odor, Sheen

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8277 **Sample Number:** 107 **QC Code:** __ **Matrix:** Water **Tag ID:** 8277-107-__

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: GW-4

Storet ID: _____ **External Sample Number:** GW-4

Expected Conc: (or Circle One: Low Medium High)

			Date	Time(24 hr)
Latitude:	___ ___ ___	**Sample Collection: Start:**	10/21/19	11:50
Longitude:	___ ___ ___	**End:**	10/21/19	11:50

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Water by GC/MS for Low Detection Limits
1 - 80 oz amber glass	4 Deg C	7 Days	1 Semi-Volatile Organic Compounds in Water

Sample Comments:
(N/A)

Water @ GW-4
10/22/19
MS/MSD volume

Sample Collected By: EPA PM (LM)

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8277 **Sample Number:** 111 **QC Code:** FB **Matrix:** Water **Tag ID:** 8277-111-FB

Project ID: RCRA_LMSMV **Project Manager:** Lisa Messinger
Project Desc: Former SMV Industries Sampling
City: Council Bluffs **State:** Iowa
Program: RCRA Corrective Action

Location Desc: Water LDL VOA Trip Blank sample

Storet ID: _____ **External Sample Number:** Trip Blank

Expected Conc: (or Circle One: Low Medium High)

		Date	Time(24 hr)
Latitude: ___ ___ ___	**Sample Collection: Start:**	10/21/19	11:30
Longitude: ___ ___ ___	**End:**	10/21/19	11:30

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Water by GC/MS for Low Detection Limits

Sample Comments:

Prepared by the LTAB. Provided & left in the dock refrig. at the STC for EPA PM (LM) to retrieve, take to the sampling site, label with the LIMS provided sample tags and submit with field samples & COC for this ASR.

Trip Blank

Sample Collected By: EPA PM (LM)