

Voluntary Cleanup Program

Progress Report

April 2010

Former Churchville Ford Site (#V00658-8)
111 South Main Street
Village of Churchville
Monroe County, New York

This progress report covers the month of April 2010.

Activities Relative to Site for Period

On January 15, 2010 the final chemox injection event was conducted. Following the injection process, monitoring wells MW-JCL-2, MW-JCL-3 and MW-13 were purged and sampled as outlined in the Remedial Action Work Plan (RAWP). Samples were sent to an accredited laboratory for analysis of VOCs (8260B) and TAL Metals.

On February 24, 2010 monitoring wells MW-JCL-2, MW-JCL-3 and MW-13 were purged and sampled again as outlined in the RAWP. Samples were sent to an accredited laboratory for analysis of VOCs (8260B) and TAL Metals. Laboratory analytical results indicate that no VOC contaminants were detected in wells MW-13 and MW-JCL-3. In source area well MW-JCL-2, no chlorinated VOC contaminants were detected in January or February 2010. Based on the January and February 2010 groundwater results it appears that the permanganate oxidant solution is effectively destroying the contaminants of concern within the source area.

On March 17, 2010, a total of six Soil Vapor Intrusion (SVI) air samples were collected as outlined in the RAWP in an effort to monitor for vapor intrusion within the site building. Two sub-slab samples were collected from the same locations that they were previously collected from in April 2007. The indoor ambient air samples were collected adjacent to each respective sub-slab sample, including an indoor ambient duplicate (IA-JCL-02b Dup.). One outdoor ambient sample was also collected north of the site building. All six samples were collected over an 8 hour period and were sent to an accredited laboratory for analysis of TCL VOCs by EPA Method TO-15. An inventory was conducted of all pertinent chemicals used at the site in the main workshop portion of the site building where the samples were collected.

No Site activities were conducted in April 2010.

Activities Anticipated for Next Period

Site activities planned for next month include continued review and interpretation of SVI sample analytical results.

Approved Site Activity Modifications

There were no modifications made to Site activities during this period.

Sampling/Testing Results

Analytical results of the March 2010 SVI sampling event revealed detectable concentrations of halocarbons, aromatics and keytones (VOCs) in all six samples collected. Sample results were compared to OSHA PEL regulatory standards and the decision matrices described in *NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, dated October 2006. OSHA PELs were used for analytical comparison due to significant background readings of VOCs and active use of many products within the workshop that contained the same chemical compounds (VOCs) as were detected in the 2007 and 2010 SVI sampling rounds. The products and chemicals found in the workshop were inventoried as part of the sampling event and screened with a PID (ppB RAE). An inventory table which includes PID readings is included as

an attachment to this report. Table 1 presents a comparison of the SVI sample results from April 2007 to March 2010 and is included as an attachment to this report. Table 2 illustrates decision Matrix 1 and Matrix 2 of recommended actions found within the *NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, dated October 2006 and is included as an attachment.

During the product inventory in March 2010 background PID readings within the workshop and product storage cabinets and benches ranged from 275 ppb to 476,000 ppb. A metal storage cabinet in Bay 5 containing many chemical based products revealed a reading of 95,000 ppb with the doors closed.

Contaminant trichloroethene (TCE) was not detected in the March 2010 indoor ambient, outdoor ambient or SVS-JCL-02b sub-slab air samples. It was detected at a concentration of 305 ug/m³ in sub-slab sample SVS-JCL-03b, located in the known source area of this contaminant. This detection is higher than it was in 2007, likely due to the release of this contaminant as a result of the recent in-situ chemox process that has taken place in the source area. Vinyl chloride was also detected in this source area sub-slab sample at a concentration of 2,490 ug/ m³ but not in any of the indoor air samples. This lesser chlorinated compound is a known intermediate byproduct of TCE as it degrades and is likely a result of the recent in-situ chemox injection program that was conducted in this area. The increase in concentration of cis-1,2-Dichloroethene in the sub-slab sample SVS-JCL-03b is also likely a result of degradation of TCE from the recent in-situ chemox injection program.

The only indoor ambient exceedence of the OSHA PEL was for benzene, which was detected in all air samples in 2007 and 2010. It is noted that prior to sample collection in March 2010, three containers of gasoline were being stored within the shop as well as other products, vehicles and boats that contain fuel. The gasoline containers were removed from the building prior to sample collection but it is likely that residual vapors were present from these items. Table 1 and the attached product inventory form indicate that the majority of BTEX compounds detected were found in products stored and being used within the workshop.

Methylene chloride was detected in all air samples in March 2010 and above the applicable OSHA PEL for an 8-hr time weighted average (TWA) in indoor air sample IA-JCL-2b. It is noted that the contaminant concentration in the indoor ambient sample (IA-JCL-2b) was higher than the respective sub-slab sample (SVS-JCL-2b) collected from same location. This compound was found within products stored inside the workshop as indicated on the attached inventory form and is likely the source of the detections.

Elevated interior background readings of VOCs were detected throughout the workshop space during the March 2010 sampling event, especially in the vicinity of the storage cabinet on the west side of the shop and the bench located along the east side of the shop. These interferences and daily use of chemically related products make it appropriate to compare sample results to OSHA PELs for an 8-hr TWA.

attachments

Table 1
Former Churchville Ford Site
Soil Vapor Intrusion Sample Results
April 2007 and March 2010

DETECTED ANALYTES	OSHA TWA (ug/m ³)	SVS ¹ -JCL-01	IA ² -JCL-01	SVS ¹ -JCL-02	SVS ¹ -JCL-02b	IA ² -JCL-02	IA ² -JCL-2b
Alcohol							
Isopropyl Alcohol	980	ND	ND	113	NS	23.5	NS
Halocarbons							
Bromomethane	80	ND	ND	0.434 J	ND	ND	ND
Carbon Tetrachloride	62.9	ND	ND	ND	ND	ND	ND
Chloroethane	2,600	ND	ND	0.376 J	ND	ND	ND
Chloroform	240	0.645 J	ND	0.39	ND	ND	ND
Chloromethane	207	ND	ND	ND	ND	0.651	ND
Cyclohexane	1505	31.1	9.45	271	ND	137	ND
Dichlorodifluoromethane	4950	3.42	3.52	88.5	NS	5.08	NS
1,1-Dichloroethane	400	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (1,1-DCE)	NA	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (cis-1,2-TCE)	NA	ND	ND	0.443 J	ND	ND	ND
trans-1,2-Dichloroethene(trans-1,2-TCE)	NA	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	7600	0.779 J	0.779 J	ND	ND	ND	ND
Heptane (l)	2000	37.9	30.8	390	NS	124	NS
Hexane	1800	38.7	6.77	567	NS	58	NS
Methylene Chloride (l)	86.75	1.91	1.69	2.37	81.1	ND	90.4
Tetrachloroethene (PCE) (l)	678	3.31	1.7	86.9	97.3	12.1	285
1,1,1-Trichloroethane (TCA)	1900	ND	ND	26.6	12.3	1.11	ND
1,1,2-Trichloroethane	45	ND	ND	ND	ND	ND	ND
Trichloroethene (TCE)	537	0.765	0.546	16.4	ND	6.39	ND
Trichlorofluoromethane	5600	1.83	2.17	1.43	ND	1.14	ND
2,2,4-trimethylpentane	NA	1.14	8.98	24.7	ND	29.4	ND
Vinyl Chloride	2.56	ND	ND	ND	ND	ND	ND
Aromatics							
Benzene (l)	3.19	8.44	3.73	77.3	29.3	27.3	23.3
1,4-Dichlorobenzene	NA	ND	ND	ND	ND	0.978	ND
Ethylbenzene (l)	435	11.5	4.19	21.2	ND	23.8	23
4-ethyltoluene (l)	NA	6.85	3.55	4.75	NS	16	NS
Styrene	426	15.2	9.53	9.53	ND	2.44 J	ND
1,2,4-Trimethylbenzene (l)	NA	10.5	8.24	8.74	NS	42	NS
1,3,5-Trimethylbenzene (l)	NA	6.7	2.95	3.75	NS	11 J	NS
Toluene (l)	754	36.4	43.7	142	51.6	152	266
m,p-Xylene (l)	435	26	14.9	27.4	ND	77.7	85
o-Xylene (l)	435	8.56	5.16	10.6	ND	28.2	23.8
Keytones							
Acetone (l)	2,400	50.9	36.5	ND	289	213	172
2-Butanone (MEK) (l)	590	ND	ND	ND	ND	19.8	ND
4-Methyl-2-Pentanone	410	ND	ND	ND	ND	ND	ND
Miscellaneous							
Carbon Disulfide	62.2	2.69	ND	14.6	ND	0.57	ND
Methyl tert-butyl Ether (MTBE)	NA	ND	ND	ND	ND	0.696	ND

BOLD	Exceeds OSHA PEL regulations
NS	Analyte not sampled
ND	Analyte not detected at or above the limit of quantitation
J	Estimated value, the result is > the method detection limit and < the quantitation limit
(l)	Analyte was found within the inventory of the building (March 17,2010)
OSHA TWA	OSHA Permissible Exposure Limits based on an 8-hour time weighted average (TWA). NOTE: OSHA PELs are generally applicable only when the chemical is actively used at the facility.
	Sampled on March 17, 2010
	Sampled on April 4, 2007

1:Sub-slab soil vapor sample
2:Indoor air sample
3:Outdoor air sample

Table 1
Former Churchville Ford Site
Soil Vapor Intrusion Sample Results
April 2007 and March 2010

DETECTED ANALYTES	OSHA TWA (ug/m ³)	SVS ¹ -JCL-03	SVS ¹ -JCL-03b	IA ² -JCL-03	IA ² -JCL-03b	OA ³ -JCL-04	OA ³ -JCL-04b
Alcohol							
Isopropyl Alcohol	980	ND	NS	ND	NS	ND	NS
Halocarbons							
Bromomethane	80	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	62.9	ND	ND	ND	ND	ND	0.615
Chloroethane	2,600	43.7	592	ND	ND	ND	ND
Chloroform	240	1.29	ND	ND	ND	ND	ND
Chloromethane	207	ND	ND	ND	ND	ND	1.3
Cyclohexane	1505	202	ND	88.2	ND	1.96	ND
Dichlorodifluoromethane	4950	1630	NS	5.48	NS	3.42	NS
1,1-Dichloroethane	400	75.3	208	ND	ND	ND	ND
1,1-Dichloroethene (1,1-DCE)	NA	2.54	60.5	ND	ND	ND	ND
cis-1,2-Dichloroethene (cis-1,2-TCE)	NA	1570	18,500	ND	ND	ND	ND
trans-1,2-Dichloroethene(trans-1,2-TCE)	NA	ND	204	ND	ND	ND	2.9
1,1,2-Trichloro-1,2,2-trifluoroethane	7600	ND	ND	ND	ND	ND	ND
Heptane (l)	2000	371 J	NS	360	NS	8.29	NS
Hexane	1800	360	NS	55.9	NS	ND	NS
Methylene Chloride (l)	86.75	2.54	83.1	2.93	67	1.09	9.86
Tetrachloroethene (PCE) (l)	678	31	313	11.9	236	ND	ND
1,1,1-Trichloroethane (TCA)	1900	41	256	1.39	ND	ND	ND
1,1,2-Trichloroethane	45	ND	ND	ND	ND	ND	ND
Trichloroethene (TCE)	537	45.3	305	6.39	ND	ND	ND
Trichlorofluoromethane	5600	1.09	ND	1.83	ND	1.54	1.42
2,2,4-trimethylpentane	NA	15.2	ND	ND	ND	ND	ND
Vinyl Chloride	2.56	12	2,490	ND	ND	ND	ND
Aromatics							
Benzene (l)	3.19	49	77.8	26.3	53.6	0.422 J	0.833
1,4-Dichlorobenzene	NA	ND	ND	1.04	ND	ND	ND
Ethylbenzene (l)	435	65.3	86.7	24.7	31.2	ND	ND
4-ethyltoluene (l)	NA	12.5	NS	15.5	NS	ND	NS
Styrene	426	10.8	ND	13	ND	ND	ND
1,2,4-Trimethylbenzene (l)	NA	21	NS	34.5	NS	ND	NS
1,3,5-Trimethylbenzene (l)	NA	8.74	NS	8.49	NS	ND	NS
Toluene (l)	754	323	137	386	343 J	3.6	1.79
m,p-Xylene (l)	435	189	112	85.6	122	ND	1.5
o-Xylene (l)	435	50.8	34.1	27.8	34.9	ND	0.533
Keytones							
Acetone (l)	2,400	1020	811 J	498	150	15.5	20.7 J
2-Butanone (MEK) (l)	590	ND	ND	ND	ND	ND	1.68
4-Methyl-2-Pentanone	410	ND	189	ND	ND	ND	ND
Miscellaneous							
Carbon Disulfide	62.2	2.44	ND	0.348 J	ND	ND	ND
Methyl tert-butyl Ether (MTBE)	NA	ND	ND	ND	ND	ND	ND

BOLD	Exceeds OSHA PEL regulations
NS	Analyte not sampled
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J	Estimated value, the result is > the method detection limit and < the quantitation limit
(l)	Analyte was found within the inventory of the building (March 17,2010)
OSHA TWA	OSHA Permissible Exposure Limits based on an 8-hour time weighted average (TWA). NOTE: OSHA PELs are generally applicable only when the chemical is actively used at the facility.
	Sampled on March 17, 2010
	Sampled on April 4, 2007

1:Sub-slab soil vapor sample
2:Indoor air sample
3:Outdoor air sample

Table 2
Former Churchville Ford Site
Soil Vapor Intrusion Sample Results
April 2007 and March 2010

DETECTED ANALYTES	OSHA TWA (ug/m ³)	SVS ¹ -JCL-01	IA ² -JCL-01	SVS ¹ -JCL-02	IA ² -JCL-02	SVS ¹ -JCL-02b	IA ² -JCL-2b
Carbon Tetrachloride	62.9	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	537	0.765	0.546	16.4	6.39	ND	ND
Vinyl Chloride	2.56	ND	ND	ND	ND	ND	ND
Recommended Action⁴ (Matrix 1)		Take reasonable and practical actions to identify source(s) and reduce exposures		Mitigate		No Further Action	
1,1-Dichloroethene (1,1-DCE)	NA	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (cis-1,2-TCE)	NA	ND	ND	0.443 J	ND	ND	ND
Tetrachloroethylene (PCE)	678	3.31	1.7	86.9	12.1	97.3	285
1,1,1-Trichloroethane (TCA)	1900	ND	ND	26.6	1.11	12.3	ND
Recommended Action⁵ (Matrix 2)		Take reasonable and practical actions to identify source(s) and reduce exposures		Take reasonable and practical actions to identify source(s) and reduce exposures		Mitigate	

Matrix 1 and Matrix 2 are based on Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York October 2006 (Final NYSDOH CEH BEEI Soil Vapor Intrusion Guidance)

BOLD	Exceeds OSHA PEL regulations
NS	Analyte not sampled
ND	Analyte not detected at or above the limit of quantitation
J	Estimated value, the result is > the method detection limit and < the quantitation limit
OSHA TWA	OSHA Permissible Exposure Limits based on an 8-hour time weighted average (TWA). NOTE: OSHA PELs are generally applicable only when the chemical is actively used at the facility.
	Sampled on March 17,2010
	Sampled on April 4, 2007

1:Sub-slab soil vapor sample

2:Indoor air sample

3:Outdoor air sample

4:Recommended action based on NYSDOH Soil Vapor/Indoor Air Matrix 1

5:Recommended action based on NYSDOH Soil vapor/Indoor Air Matrix 2

Table 2
Former Churchville Ford Site
Soil Vapor Intrusion Sample Results
April 2007 and March 2010

DETECTED ANALYTES	OSHA TWA (ug/m ³)	SVS ¹ -JCL-03	IA ² -JCL-03	SVS ¹ -JCL-03b	IA ² -JCL-03b	OA ³ -JCL-04	OA ³ -JCL-04b
Carbon Tetrachloride	62.9	ND	ND	ND	ND	ND	0.615
Trichloroethylene (TCE)	537	45.3	6.39	305	ND	ND	ND
Vinyl Chloride	2.56	12	ND	2,490	ND	ND	ND
Recommended Action⁴ (Matrix 1)		Mitigate		Mitigate		--	--
1,1-Dichloroethene (1,1-DCE)	NA	2.54	ND	60.5	ND	ND	ND
cis-1,2-Dichloroethene (cis-1,2-TCE)	NA	1570	ND	18,500	ND	ND	ND
Tetrachloroethylene (PCE)	678	31	11.9	313	236	ND	ND
1,1,1-Trichloroethane (TCA)	1900	41	1.39	256	ND	ND	ND
Recommended Action⁵ (Matrix 2)		Mitigate		Mitigate		--	--

Matrix 1 and Matrix 2 are based on Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York October 2006 (Final NYSDOH CEH BEEI Soil Vapor Intrusion Guidance)

BOLD	Exceeds OSHA PEL regulations
NS	Analyte not sampled
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J	Estimated value, the result is > the method detection limit and < the quantitation limit
OSHA TWA	OSHA Permissible Exposure Limits based on an 8-hour time weighted average (TWA). NOTE: OSHA PELs are generally applicable only when the chemical is actively used at the facility.
	Sampled on March 17,2010
	Sampled on April 4, 2007

1:Sub-slab soil vapor sample

2:Indoor air sample

3:Outdoor air sample

4:Recommended action based on NYSDOH Soil Vapor/Indoor Air Matrix 1

5:Recommended action based on NYSDOH Soil vapor/Indoor Air Matrix 2

Workshop Product Inventory (as of 3/17/10)

PRODUCT NAME	QUANTITY	OPENED (O) or UNOPENED (U)/ PID READING (ppb)	CONDITION	INGREDIENTS
Cabinet				
*General PID reading for cabinet of 95,000 ppb				
Spray Paint	10 x 11oz	O	Good	Toluene, Acetone, Xylene
Spray Stripper	1 x 19oz	O	Good	Methanol, Methylene Chloride
WD-40	1 x 8oz	U	Good	Petroleum distillates
Self Etching Primer	1 x 11oz	O	Good	Acetone, Toluene, MEK
Glass Cleaner	6 x 19oz	O	Good	Butoxyethanol, Ethyl Alcohol, Methane, Propane
Monster Spay Wax	7 x 11oz	O	Good	Aliphatic hydrocarbon, cyclo methyl chloro, 1,1-difluoroethene
Engine Fogging Fluid	4 x 13oz	O	Good	Petroleum distillates, Isobutene, n-Butane
Brakleen	1 x 19oz	O	Good	Tetrachloroethylene
Zep Sheen Furniture Cleaner	1 x 16oz	O	Good	Isoparaffinic solvent, Isobutane, Propane
Monster Spray Foam	8 x 19oz	O	Good	Liquefied petroleum gas, monobutyl ether
Zep Silicone Spray	7 x 1lb	O	Good	Heptane, Polydimethyl, solokane
Spray Adhesive	1 x 13oz	O	Good	Methylene Chloride, MEK, Hexane, Isobutane
Napa Carborator Cleaner	1 x 12oz	O	Good	Xylene, Methyl alcohol, Acetone, Ethylbenzene
Dapt Contact Cement	1 x 32oz	O	Good	Petroleum, Naphthalene, MEK, Toluene
Stripeeze	1 x 1 quart	O	Good	Petroleum distillates, Toluene, Methanol, Acetone
Adhesive Remover solvent	1 x 1 gal	O	No Lid	Naphthalene petroleum, Petroleum distillates, Aromatic hydro carbons
South End (Bay 3)				
Spray Adhesive		O / 1616	Good	Methyl Chloride, Hydrocarbon mixture
Napa Silicone Spray		O / 275	Good	Acetone, Hexane Propane 2,3-Dimethylbutane, Cyclohexane, Dimethylbutane
Once Over		O / 1515	Good	Propane, Isobutane, Dipropylene glycol, Methyl ether
Di-Electric Grease		O / 1560	Good	Dimethylpolysiloxane
East Wall-Bench				
Motor Oil	2 x 1 qt.	O	Good	-
2-26 electric Cleaner	1 x 11 oz	O / 1550	Good	Petroleum Distillates, Butyl Sterates
Di-Electric Grease	1 x 33 oz	O	Good	Petroleum Distillates, Butyl Sterates
Once Over		O / 1360	Good	Petroleum Distillates, Butyl Sterates
Spray Paint	1 x 11 oz	O / 2664	Good	Hydrocarbon, Keytone, Toluene
Aratari Auto Finisher Cleaner/Wax	1 x 32 oz	O / 260,000	Good	-
Yamaha Silicon Protectant and Lube	1 x 12.5 oz	O / 476,000	Good	Perchloroethylene, Paraffin, Petroleum Distillates
Zep 40 Cleaner	1 x 24 oz	O / 1362	Good	Alcone, Ether
Parts Washing Bin	1 x 35 gal	O / 54,000	Good	Petroleum Distillates, Tetrachloroethylene
CCR Tyme-1 Carbonator Cleaner	1 x 5 gal	O / 3773	Good	Cyclohexanol, Potassium oleate, Tetrachloroethylene
Parts Supply Room				
Zep Formula 3000	1 x 1 gal	U / 3050	Good	1,1,1-Benzene, Carbon tetrachloride
South Wall (Bay 4)				
Spray Paint	1 x 11 oz	O / 1241	Good	Toluene, Naphthalene, Acetone, Propane, n-Butane
Brakleen (Brake Cleaner)	2 x 22 oz	O / 1458	Good	Tetrachloroethylene (PCE)
Brake Fluid	1 x 32 oz	O	-	-
Disc Brake Fluid	1 x 9 oz	O / 95,000	-	-
Motor Oil	15 x 32 oz	O	Good	-

PRODUCT NAME	QUANTITY	OPENED (O) or UNOPENED (U)/ PID READING (ppb)	CONDITION	INGREDIENTS
South Wall (Bay 4) cont.				
Zeppunch	1 24 oz	O / 1122	Good	Light aromatic Naphthalene, Tetrachloroethylene, Mono Isopropyl Biphenyls, Nonionic surfactant, CO ₂
Wrestley's Bleach-Wile	1 x 32 oz	O	Good	-
White Lithium Greaser	1 x 10 oz	O	Good	-
Gear Lube	2 x 55 gal +/- 5 gal	1700	-	-
Waste Oil Tank	300-400 gal	1126	Spillage on floor	
Bathroom				
Excelon Floor Polish	1 x 2 gal	O	Good	Ethyl Ether, Dipropylene glycol methyl ether