

ARCADIS

Mr. Peter Ouderkirk
15 December 2006

immediately downgradient of the former burn pit have decreased dramatically (Figure 2).

Concentrations of COCs in downgradient monitoring wells have also decreased due to the operation of the groundwater extraction well and soil removal activities (as indicated on Table 1). However, over the past few years, concentrations of COCs in site groundwater downgradient of the former source have stabilized (during the same time period that concentrations of COCs in the influent sample at PW-1 have been observed to decrease). This trend indicates that COCs in groundwater have reached equilibrium at the site. Continued pumping of the extraction well is not anticipated to greatly decrease or influence downgradient groundwater concentrations. Rather, natural attenuation of the COCs at the site has been historically observed and is expected to continue.

Based on this evaluation, it is the opinion of ARCADIS that continued operation of the groundwater extraction well (PW-1) is not providing significant remedial benefit at the site and therefore can be shut down. To confirm that the shutdown of PW-1 will not adversely affect the groundwater conditions at the site, the following will be implemented:

- § Upon approval by the NYSDEC, PW-1 will be turned off. The submersible pump will be removed from the extraction well and stored on-site.
- § Extraction well PW-1 will be transitioned to a monitoring well that will be added to the groundwater monitoring network and subsequently sampled. The first sampling event following the shutdown of PW-1 is planned for March 2007.
- Based on the results of the March 2007 groundwater sampling event, a determination will be made on the appropriateness of continuing to leave PW-1 inoperable. Should a significant increase (concentrations greater than those observed during the previous 3 years of groundwater monitoring) in COC concentrations be observed in the downgradient groundwater monitoring, an evaluation will be completed to determine the benefit of (i) reactivating the groundwater extraction well (PW-1), (ii) considering an alternative approach for groundwater remediation, or (iii) continued monitoring. ARCADIS will discuss the results of the evaluation with NYSDEC and propose further action based on the evaluation results.

ARCADIS

Mr. Peter Ouderkirk
15 December 2006

When it is determined that operation, maintenance, and monitoring (OM&M) are no longer necessary for the site, LMC will request that NYSDEC reclassify the site from Class 4 to Class 5.

Please contact the undersigned if you have questions or comments.

Sincerely,

Jeffrey J. Bonsteel Project Scientist

Christopher J. Motta, CPG Project Manager

Copies:

Greg Rys – NYSDOH, Herkimer Tina Armstrong – LMC

Table 1. Summary of VOCs in Groundwater Samples Collected 2003-2006, Lockheed Martin Corporation, West Lot Site, Utica, NY.

		NYSDEC	MW-1(DOT)							
Analyte	Units	Standard	4/30/03	7/2/03	9/30/03	12/29/03	3/16/04	6/23/04	1/4/05	6/12/06
Vinyl Chloride	ug/L	2	ND	ND	ND	ND	ND	0.26	ND	ND
trans-1,2-Dichloroethene	ug/L	5	ND	ND	ND	ND	ND	0.38	ND	ND
cis-1,2-Dichloroethene	ug/L	5	16	18	19	22	20	15	16	12
Trichloroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Tetracholoroethene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	5	0.53	0.65	0.45	0.6	0.48	1.0	0.73	0.53
1,1-Dichloroethane	ug/L	5	0.52	1	0.41	0.62	0.48	0.74	0.65	0.51
Benzene	ug/L	1	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	3	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/L	3	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	3	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
m/p-Xylene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND

ND - non-detect NS - Not Sampled

Analyzed by USEPA Method 8260

Table 1. Summary of VOCs in Groundwater Samples Collected 2003-2006, Lockheed Martin Corporation, West Lot Site, Utica, NY.

10/1/03

21

1.2

11

14

12/29/03

4.6

0.44

5.4

5.8

3/16/04

5.5

0.51

6.6

8.8

6/22/04

5.3

0.80

6.1

8.8

1/4/05

ND

ND

2.0

0.27

6/12/06

6.1

ND

2.0

 $0.72^{\,0.721.20.44}$

0.51

0.80 ND

7/2/03

7.8

1

6.9

7.2

Analysta	Units	4/29/03
Analyte		4/29/03
Vinyl Chloride	ug/L	4.6
trans-1,2-Dichloroethene	ug/L	0.56
cis-1,2-Dichloroethene	ug/L	5.1
Trichloroethene	ug/L	4.9
Chloroethane	ug/L	
Tetracholoroethene	ug/L	
1,1,1-Trichloroethane	ug/L	
1,1-Dichloroethane	ug/L	
Benzene	ug/L	
Chlorobenzene	ug/L	
1,2-Dichlorobenzene	ug/L	
1,3-Dichlorobenzene	ug/L	
1,4-Dichlorobenzene	ug/L	
Ethylbenzene	ug/L	
Toluene	ug/L	
m/p-Xylene	ug/L	
o-Xylene	ug/L	

ND - non-detect NS - Not Sampled Analyzed by USEPA Method 8260 Table 1. Summary of VOCs in Groundwater Samples Collected 2003-2006, Lockheed Martin Corporation, W

Table 1. Summary of VOCs in Groundwater Samples Collected 2003-2006, Lockheed Martin Corporation, West Lot Site, Utica, NY.

		MW-F						
Analyte	Units	4/30/03	7/2/03	9/30/03	12/29/03	3/16/04	6/22/04	6/12/06
Vinyl Chloride	ug/L	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	ND	ND	ND	ND	ND	0.62	ND
cis-1,2-Dichloroethene	ug/L	3.6	4.2	4.5	2.3	2.9	3.9	3.1
Trichloroethene	ug/L	34	40	51	20	29	37	37
Chloroethane	ug/L	ND	ND	ND	ND	ND	ND	ND
Tetracholoroethene	ug/L	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/L	1.6	2	2.3	0.98	1.3	2.4	1.5
1,1-Dichloroethane	ug/L	ND	ND	ND	ND	ND	0.68	ND
Benzene	ug/L	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/L	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/L	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/L	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/L	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/L	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	ND	ND	ND	ND	ND	ND	ND
m/p-Xylene	ug/L	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ug/L	ND	ND	ND	ND	ND	ND	ND

ND - non-detect

NS - Not Sampled

Analyzed by USEPA Method 8260

MW-B_O

MW-B_O

MW-Adr

MW-S_O

MW-C

MW-F

