

Table 1 - Trend Analysis of Groundwater Analytical Data

Interim Response Work Plan

Pall Life Sciences - Western System

January 2006

Well I.D	Time Period Well has Been Monitored (years)	Maximum Concentration (ug/l)	Maximum Concentration Date	Most Recent Concentration (ug/L)	Date of Most Recent Sample	General Comments/Trends on 1,4-Dioxane Concentrations
MW-21	17.33	7	6/13/1990	<1	3/14/05	This well is located south of the Honey Creek Tributary. 1,4-Dioxane concentrations at this location were nondetect except for 3 of 33 sampling events during the 17.3 years of sampling. The range of detected values were 2 to 7 ug/l.
MW-31	11.75	41	2/1/1990	33	4/5/05	This well is along the longitudinal axis of the plume. 1,4-Dioxane concentrations at this location show have been fairly stable over the 11-12 year monitoring period.
MW-40s	11.83	9	3/21/2000	<1	4/27/05	Well is located northeast of the Western System Plume and off the plume axis. 1,4-Dioxane concentrations generally non-detect with detected values ranging from 1 to 9 ug/l.
MW-40d	11.83	2	3/21/2000	<1	4/27/05	Well is located northeast of the Western System plume and off the plume axis. 1,4-Dioxane concentrations generally non-detect with detected values ranging from 1 to 2 ug/l.
MW-41s	12	30	9/22/1998	18	5/2/05	Concentrations increased from 1993 to 1999. Since 1999 have generally decreased with values oscillating over time from low of 6 to high of 20 ug/l.
MW-41d	12	60	10/29/2001	37	5/2/05	1,4-Dioxane concentrations from 1993 to 1999 showed an increase. Since 1999, the 1,4-Dioxane concentrations at this location have remained relatively level with values oscillating around the 40's with a low of 20 ug/l (1/31/01) and a high of 60 (10/29/01).
MW-42S	12	<1	NA	<1	8/15/05	Well is located north-northeast of the Western System Plume and off the plume axis. 1,4-Dioxane concentrations have all been non-detect.
MW-42d	12	<1	NA	<1	8/15/05	Well is located north-northeast of the Western System Plume and off the plume axis. 1,4-Dioxane concentrations have all been non-detect.
MW-51	5.25	<1	NA	<1	4/6/05	1,4-Dioxane concentrations remain non-detect. Data from this well supports the interpretation that there is no connection between the Western Plume and other areas of the PLS site.
MW-53s	5	2	6/7/2000	<1	4/7/05	1,4-Dioxane concentrations have ranged between <1 and 2 ug/l. The 1,4-dioxane concentrations at this location are expected to remain low.
MW-53i	5	190	9/11/2000	48	1/12/06	Concentrations range between 57 and 190 ug/l. The 1,4-dioxane concentrations in groundwater from this well have been in general decline since the 9/11/2000 high value. From 4/4/03 forward, all samples have been below the 85 ug/l Drinking Water Criterion.
MW-53d	5	23	8/16/2000	3	4/7/05	1,4-Dioxane concentrations increased from May to August 2000; concentrations show decreasing trend since August 2000. The 1,4-dioxane concentrations at this location are expected to remain low.

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A2 Cleaning Supply (Extraction Well)	2	182	3/2/2004	118	1/12/06	Well installed in September 2002. Batch Purging began at this well in February 2003. The 1,4-dioxane concentrations show a slight increasing trend.
MW-59s	4.66	4	10/30/2000	<1	4/29/05	1,4-Dioxane concentrations have ranged between <1 and 4 ug/l. The 1,4-dioxane concentrations at this location are expected to remain low.
MW-60	4.66	47	12/4/2000	18	4/5/05	1,4-Dioxane concentrations increased from September to December 2000; a general decreasing trend has been observed since that time.
MW-61s	4.66	49	2/20/2003	29	5/3/05	1,4-Dioxane concentrations have ranged between 17 and 49 ug/l.
MW-61d	4.66	7	10/23/2000	<1	5/3/05	1,4-Dioxane concentrations have showed a decreasing trend since October 2000 and have remained at non-detect since January 2002.
MW-93	0.5	49	12/2/2004	36	4/29/05	Well installed November 2004,
Artesian #1	17.08	35	5/27/1999	6	8/21/00	1,4-Dioxane concentration were on a slight increase between 1988 and 1999, decreasing since 1999. This location was last sampled in August 2000.
Artesian #2	17.08	41	4/1/1994	26	5/11/01	1,4-Dioxane concentrations have ranged between approximately 5 and 41 ug/l. This well was last sampled in May 2001.
OW-1	5.75	3	8/9/1999			Well is shallow (20 ft). No samples collected beyond August 1999.
4401 Park Road (East)	12	180	12/9/1988	25	12/14/00	1,4-Dioxane concentrations stable around 25 ug/l.
4401 Park Road (West)	18.58	185	11/9/1987	15	8/4/05	1,4-Dioxane concentrations have been on a decreasing trend since 1988.
4601 Park 4" (Swim Club)	18.58	35	12/9/1988	3	4/5/05	1,4-Dioxane concentrations have been on a decreasing trend since 1988.
4601 Park 6" (Swim Club)	18.58	111	12/9/1988	2	4/5/05	1,4-Dioxane concentrations have been on a decreasing trend since 1988.
4742 Park Road	18.58	130	1/31/1990	24	5/3/05	1,4-Dioxane concentrations have been on a decreasing trend since July 2001.
110 Parkland Plaza	18.75	18	11/9/1987	5	5/2/05	1,4-Dioxane concentrations have been on decline since January 2000.
4141 Jackson Road	18.5	57	12/1/1998	8	7/27/05	1,4-Dioxane concentrations showing increasing trend from 1993 to 1998; decreasing trend since 1998.
4470 Jackson Road	18.6	18	11/27/1990	<1	2/2/01	1,4-Dioxane concentrations have been non-detect in all but two sampling events. Last detected level was recorded in November 1990.
5005 Jackson Road	18.5	54	8/1/2003	43	7/25/05	Concentrations show increasing trend from 1994 to August 2003 then have remained relatively level.

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5115 Jackson Road	18.5	<1	All dates	<1	8/2/05	First sampled 11/01/1986 - 1,4-Dioxane concentration was non-detect.
105 Myrtle	6.1	<1	All dates	<1	5/28/03	First sampled 3/27/1999 - all samples non-detect.
131 Myrtle	6.1	<1	All dates	<1	8/21/200	First sampled 3/26/1999 - 1,4-Dioxane concentration was non-detect.

Note:

Shaded Value: Currently exceeds Part 201 Residential Drinking Water Protection Criteria

NC - Not Calculated. The model assumes the concentration in the aquifer is equal vertically. Initial conditions for the model used the highest concentration detected vertically in the aquifer.

Non-Detect - less than 1 ug/L

NA - Not Applicable

Table 2 - Contaminants of Potential Concern and Part 201 Generic Residential Criteria

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Groundwater	1,4-Dioxane
Current Max. Concentration	119 µg/L
Sampling Location	Ann Arbor Cleaning Supply Well
Collection Date	1/12/2006
Residential and Commercial I Drinking Water	85
Industrial and Commercial II, III, & IV Drinking Water	350
Groundwater Surface Water Interface	2800 (X)
Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation	NLV
Industrial and Commercial II, III, & IV Volatilization to Indoor Air Inhalation	NLV
Groundwater Contact	1,600,000
Water Solubility	900,000,000
Acute Inhalation Screening Level	ID

Bolded values indicate the contaminant exceeds the Part 201 Criteria for a potentially completed pathway.

(X) - The groundwater surface water interface criterion is not protective of surface water used as a drinking water source.

NLV - Not likely to volatilize

NA - Not available or not applicable

ID -Insufficient data to develop criterion

Table 3 - Performance Monitoring Plan
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 January 2006

Well I.D	Purpose of Monitoring	Groundwater Quality and Water Level Frequency	Most Recent Concentration (ug/L)	Date of Most Recent Sample
MW-31	Monitor downgradient water quality along plume axis.	Quarterly	33	4/5/05
MW-41S	Monitor downgradient water quality along plume axis.	Yearly	18	5/2/05
MW-41D	Monitor downgradient water quality along plume axis.	Yearly	37	5/2/05
MW-51	Monitor groundwater quality upgradient of the Western System plume	Yearly	<1	4/6/05
MW-53S	Monitor shallower groundwater in Western System plume area.	Quarterly	<1	4/7/05
MW-53I	Monitoring groundwater quality in the center of the Western Plume area.	Monthly	48	1/12/06
MW-53D	Monitor deeper groundwater in the center of the Western Plume area.	Quarterly	3	4/7/05
A2 Cleaning Supply (Extraction Well)	Monitor groundwater concentration trends in center of the Western Plume area.	Monthly	119	1/12/06
MW-60	Monitor downgradient water quality along or side-gradient to plume axis.	Quarterly	18	4/5/05
MW-61S	Monitor downgradient water quality along plume axis.	Quarterly	29	5/3/05
MW-61D	Monitor downgradient water quality along plume axis.	Yearly	<1	5/3/05
MW-93	Monitor downgradient water quality along or side-gradient to plume axis.	Quarterly	36	4/29/05
4601 Park 4" (Swim Club)	Monitor downgradient water quality along or side-gradient to plume axis.	Yearly	3	4/5/05
4601 Park 6" (Swim Club)	Monitor downgradient water quality along or side-gradient to plume axis.	Yearly	2	4/5/05

Note: All samples will be analyzed for 1,4-dioxane by PLS.