PERFORMANCE MONITORING PLAN

MAPLE ROAD INTERIM RESPONSE

PALL LIFE SCIENCES

February 3, 2006

BACKGROUND

The following is a Performance Monitoring Plan (PMP) for the PLS Corporation (PLS) Maple Road Interim Response (IR). The IR involves the initial extraction of approximately 200 gallons per minute of groundwater from TW-19, offsite treatment of the extraction water, and the injection of the treated groundwater into two wells (IW-3 and IW-4). The proposed extraction and injection well locations are shown, along with other relevant geographic features, on Figure 1.

As outlined in the Washtenaw County Opinion and Order Regarding the Remediation and Contamination of the Unit E Aquifer (Order) of December 2004, the objective of the IR is to intercept 1,4-dioxane concentrations at or above 2,800 parts per billion (ppb) (the Michigan Department of Environmental Quality (MDEQ) Groundwater Surface Water Interface criterion for 1,4-dioxane).

LISTING OF WELLS TO BE USED IN THE PMP

A listing of the wells to be used and a proposed monitoring schedule for the Maple Road PMP is provided as Attachment 1.

PROPOSED PLAN FOR INSTALLATION OF ADDITIONAL WELLS

The MDEQ has commented on the need for an additional well near MW-79, but screened in a different zone. MW-79 is screened in the Unit E aquifer from 127 to 132 feet below the ground surface (ft bgs). PLS recognizes the presence of a sand unit encountered in MW-79 from 178 to 207 ft bgs. This lower sand is separated from the screened sand by a 31 foot diamicton. A Simulprobe sample from 180 ft bgs and 199 to 200 ft bgs showed 39 microgram per liter (µg/l) and 69 µg/l, respectively, in the lower sand. PLS appreciates the concern expressed by the MDEQ. As part of the PMP, PLS proposes to install one additional well in close proximity to MW-79, but screened at a different depth within the lower sand aquifer. The well location will be positioned as close as feasible to MW-79 so the pair may be considered MW-79 s and d. PLS is proposing the installation of a well in the area shown on Figure 1.

The proposed well will be drilled using hollow-stem auger drilling methods to depths sufficient to penetrate the lower sand unit (encountered from 178 to 207 ft bgs in MW-79).

Given the proposed close proximity to MW-79, PLS proposes advancing the soil boring to a depth equivalent to the top of the screened aquifer in MW-79 without collecting soil or groundwater samples. Starting at a depth approximately 10 feet into the upper screened aquifer, soil/groundwater samples will be collected using Simulprobe techniques and continue through the aquifer(s) to the total depth of the boring/well. All soil samples will be described/classified based on their physical characteristics. Simulprobe sampling will be performed at a maximum frequency of every 10 feet. If it is not possible to collect a representative groundwater sample (i.e., not able to drive the Simulprobe sampler into undisturbed soil), a temporary well constructed of galvanized riser and stainless steel screen will be installed. The temporary well screen will be set into the aquifer and a K packer assembly will be used to allow for the collection of a representative groundwater sample. The groundwater samples will be analyzed for 1,4-dioxane by PLS. Upon reaching the total depth of the boring, a monitoring well will be installed at the soil boring location for the primary purpose of obtaining representative water-level data and water-quality data (1,4-dioxane concentrations). PLS will discuss all well installation plans with the MDEQ. Water quality data will also be considered in the selection of a representative screen zone.

The proposed well will be constructed of galvanized-steel casing and equipped with a 5-foot stainless-steel well screen. The well will be gravel packed and grouted. The wells will likely be completed as flush mounts, equipped with locking caps and locks.

Soil cuttings derived from the drilling and development water will be transported to PLS for appropriate management.

DATA EVALUATION PLAN

The performance of the IR will be judged by an evaluation of water level and water quality data from selected wells (see Attachment 1). PLS will submit PMP monitoring data and an analysis of the data as part of the current quarterly reporting process.

Water level data collected as part of the PMP will be used to prepare potentiometric surface maps. These maps will be supplemented with more comprehensive water level data collection currently being conducted by PLS.

Water quality data collected as part of the PMP will be tabulated and graphed by PLS. The data will be reviewed to establish water quality trends. Appropriate statistical methods such as the Mann-Kendall Test will be employed, as necessary, to quantify water quality trends.

The mass of 1,4-dioxane removed by the IR will be monitored and also reported by PLS in quarterly reports.

PERFORMANCE STANDARDS

PLS proposes the following performance standards for the IR: (1) TW-19 will establish a capture zone area sufficient to capture concentrations of 1,4-dioxane that are greater than or equal to 2,800 µg/l, (2) groundwater sampled from all wells downgradient of the TW-19 capture zone will remain below 2,800 µg/l and (3) treated-injection water will contain 1,4-dioxane at concentrations below 85 µg/l.

PERFORMANCE MONITORING

A listing of the monitoring wells to be monitored for water quality and/or water levels is provided as Attachment 1.

Water level data will be used to prepare potentiometric surface maps. The potentiometric surface maps will be used to examine the flow field around the extraction/injection well and resulting capture zone of TW-19. These data will also be compared to capture zone estimates made by PLS.

Downgradient monitoring wells listed in Attachment 1 include MW-76s, MW-76i, MW-76d, MW-79s, MW-79d (proposed), MW-81, MW-83s, MW-83d, MW-84s, MW-84d, MW-86, MW-89, MW-90, and MW-91. PLS believes these wells are well positioned and provide a comprehensive network to monitor groundwater quality trends downgradient of the Maple Road area. Water quality trends in groundwater collected from these wells will be carefully monitored to detect any groundwater quality trends that would suggest the IR is not meeting its designed objective.

MW-87s, MW-87d, and MW-88 are in close proximity to the injection wells. PLS proposes to monitor these wells monthly for 3 months then quarterly thereafter. The purpose of the initial monthly monitoring is to assess the early mounding affects within the injection zones. PLS believes these wells are well positioned to monitor groundwater quality trends in close proximity to the Maple Road injection wells.

PLS proposes that MW-81, MW-89, and MW-90, plus the proposed Prohibition Zone Monitoring Well north of the Maple Road extraction system (PMW-2) be monitored monthly for 3 months then quarterly thereafter. PLS believes these wells are well positioned to monitor groundwater quality trends for unexpected lateral expansion of the plume. The purpose of the initial monthly monitoring is to assess any early changes in groundwater quality due to their proximity to the Maple Road injection wells.

MW-85, MW-72s, and MW-72d are located upgradient of the Maple Road extraction-injection system. These wells, along with other upgradient Unit E wells associated with the Wagner Road PMP and on-site areas, will serve as indicators of ungradient water quality.

PLS will work with the MDEQ to establish a frequency for monitoring treatment system effluent.

CONTINGENCY PLAN

If performance monitoring indicates the operation of TW-19 is not meeting the court-ordered objectives of capturing 1,4-dioxane at or above 2,800 ppb, PLS will do one or more of the following:

1) Install additional extraction well(s).
2) Adjust the flow rates of existing extraction-injection well system.
3) Use alternative technologies that may become available to achieve the objectives of the Order.

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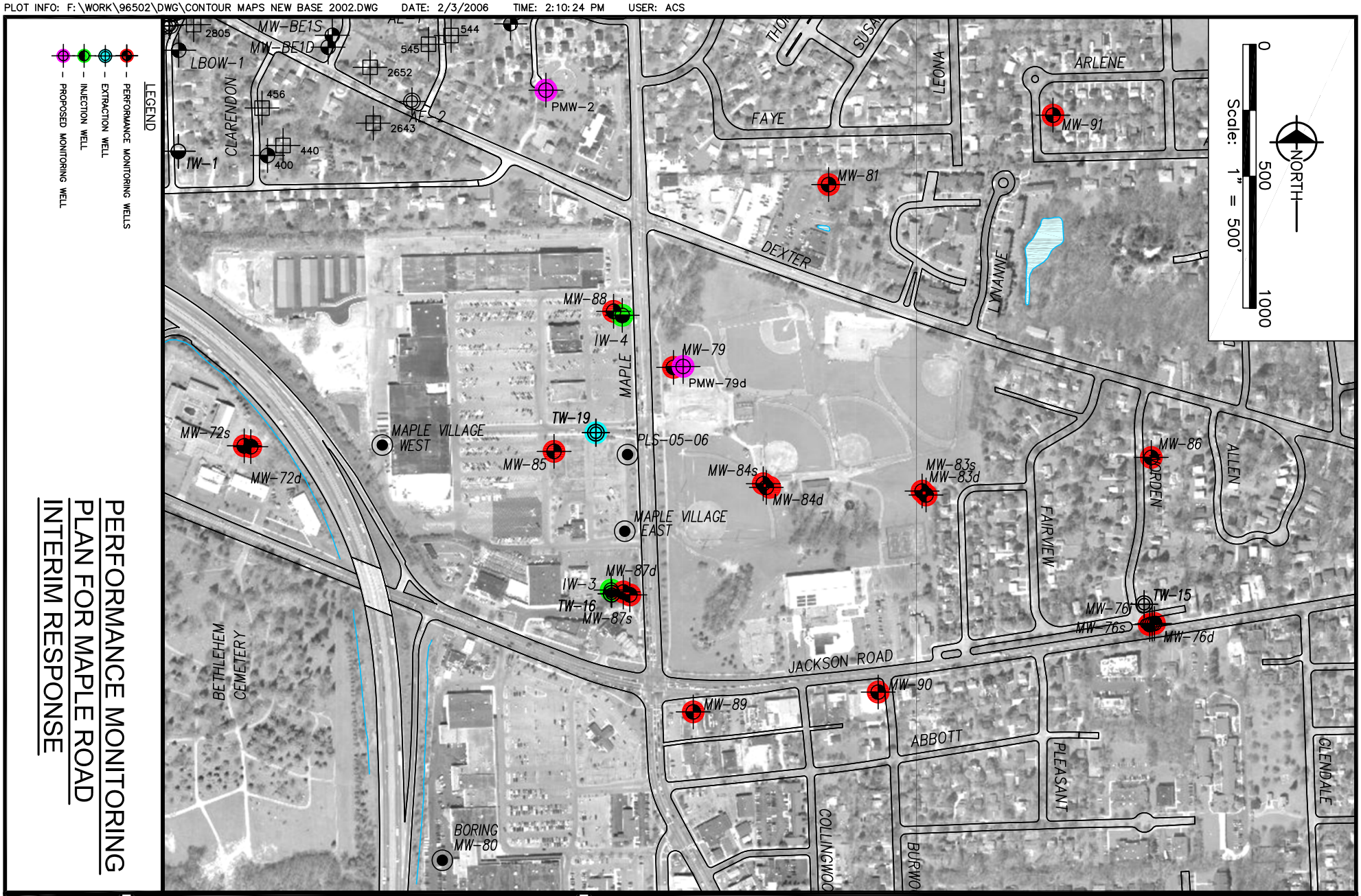

PERFORMANCE MONITORING PLAN FOR MAPLE ROAD INTERIM RESPONSE

PALL LIFE SCIENCES
SCIO TWP., WASHTENAW COUNTY, MICHIGAN

Performance Monitoring Plan

PROJECT NO. F96502
FIGURE NO. 1

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Attachment 1
Performance Monitoring - Maple Road Interim Response
Unit E System
Pall

Well I.D.	Purpose of Monitoring	Proposed Maple Road Groundwater Quality and Water Level Measurement Frequency
Extraction Well		
TW-19	Mass Removal Calculations plus Operations and Maintenance Monitoring	Weekly (water quality only)
Injection Wells		
IW-3 & IW-4	Operation and Maintenance Monitoring	Monitor Water Level/Pressure Daily
Treatment System		
Treatment system Effluent	Compliance with Injection Rules	To be determined
Monitoring Wells		
MW-72s	*3*	Quarterly
MW-72d	*3*	Quarterly
MW-76s	1	Quarterly
MW-76i	1	Quarterly
MW-76d	1	Quarterly
MW-79	1	Quarterly
MW-81	1 and 2	Monthly for 3 Months then Quarterly
MW-83s	1	Quarterly
MW-83d	1	Quarterly
MW-84s	1	Quarterly
MW-84d	1	Quarterly
MW-85	3	Quarterly
MW-86	1	Quarterly
MW-87s	2	Monthly for 3 Months then Quarterly
MW-87d	2	Monthly for 3 Months then Quarterly
MW-88	2	Monthly for 3 Months then Quarterly
MW-89	1 and 2	Monthly for 3 Months then Quarterly
MW-90	1 and 2	Monthly for 3 Months then Quarterly
MW-91	1 and 2	Quarterly
PMW-2	2	Monthly for 3 Months then Quarterly

1 = Monitor for downgradient water quality changes.
2 = Temporarily monitor for expansion of the Unit E plume.
3 = Monitor for upgradient assessment of 1,4-Dioxane concentrations.
Note: All samples will be analyzed for 1,4-dioxane by PLS.