



JENNIFER M. GRANHOLM  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
JACKSON DISTRICT OFFICE



STEVEN E. CHESTER  
DIRECTOR

April 7, 2005

Mr. Farsad Fotouhi  
Environmental Manager  
Pall Life Sciences, Inc.  
600 South Wagner Road  
Ann Arbor, MI 48103-9019

Mr. Alan D. Wasserman  
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2430 First National Bank  
Building  
Detroit, MI 48226-3535

Mr. Michael L. Caldwell  
Zausmer, Kaufman,  
August & Caldwell, P.C.  
31700 Middlebelt Road,  
Suite 150  
Farmington Hills, MI 48334

Dear Sirs:

SUBJECT: Gelman Sciences, Inc. Remedial Action  
Maple Road Area Work Plan, January 17, 2005

We have completed our review of the above referenced work plan after discussing some of our concerns with Pall Life Sciences (PLS). We had mutually agreed to defer our response until these discussions could take place. Attached are Interoffice Communications from Rick Mandle and Leonard Lipinski, dated February 25, 2005 and April 6, 2005, respectively.

As we discussed during our March 21, 2005 meeting, we recommend that two extraction wells be installed to allow greater flexibility and a better chance of capturing the targeted contamination. In an e-mail dated March 30, 2005, Mr. Fotouhi indicated that PLS has agreed to install a second extraction well. Mr. Fotouhi also indicated that he would submit a map with the proposed extraction well locations for our review. As Mr. Lipinski states, the extraction wells should be located upgradient of the transition area that he describes.

The work plan states that the depth at which the extraction wells and injection wells will be screened will be determined based on the geology and results of vertical sampling during drilling of the test borings. We agree with this rationale; however, we believe there is adequate data available to estimate these depths, so that sediment samples can be collected from those portions of the test boring to assist in determining the optimum construction of the wells, as Mr. Mandle suggests.

The work plan indicates that 20-foot extraction well screens will be used. As Mr. Lipinski indicates, the screen length for the extraction wells should be determined after the test borings have been completed.

All wells should be geophysically logged, as suggested by Mr. Mandle.

The work plan indicates that nearby wells will be monitored during the pump tests, but does not specify which wells. As indicated by Mr. Mandle, MW-79, MW-84s&d, MW-85 and MW-87s&d should be monitored during the test of TW-18. MW-79 and MW-88 should be monitored during the test of IW-3. When the location of the second extraction well is determined, please also specify which wells will be monitored during the pump test of that well. Please submit the results from each pump test to this office and to Mr. Mandle, as soon as they are available.

As we discussed, we have agreed that the monitoring wells to be used for the performance monitoring network should be determined after the extraction/injection wells are installed and the pump tests performed. However, as we discussed during our meeting, we believe several more monitoring wells will be needed. As Mr. Lipinski points out, it is important that all required

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monitoring wells be installed prior to initiation of the interim response, so a true baseline condition can be established. In order to implement the interim response as soon as possible, we recommend that PLS begin steps to obtain access for monitoring wells in the locations we discussed, particularly at the northeast intersection of Maple and Dexter Roads. Upon completion of the pump tests, the DEQ will review the results and work with PLS to finalize the performance monitoring network so the interim response can be implemented as soon as possible.

The work plan indicates that a 200-gallon per minute treatment system will be installed and connected to the extraction and injection wells by underground pipelines, and will treat 1,4-dioxane to below 85 parts per billion (ppb) before injection. At our meeting you indicated that PLS is working out an access agreement for installation of the system, and that the agreement would include a contingency for an additional treatment unit, if necessary. One of our concerns is the ability of the proposed interim response to intercept the entire width of the plume as the concentrations approaching Maple Road increase. Concentrations of 1,4-dioxane could reach 5,000 ppb or more, based on recent investigations at Wagner Road. Please provide us with an estimate of how long it will take to put a second treatment system into operation and what measures PLS intends to take to ensure that the need for an additional system can be anticipated to allow for its installation and continuous operation of the remedial system to meet the objectives of capturing all 1,4-dioxane above 2,800 ppb.

The DEQ will require an operation and maintenance (O&M) plan for the interim response, including the treatment system, extraction and injection wells. The O&M plan should be submitted to this office at least one month prior to initiation of the interim response.

The work plan states that PLS will rely on the Part 22 Rules, promulgated pursuant to Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, for groundwater discharge. We intend to review these rules in more detail and will inform PLS of any additional requirements well in advance of implementation of the interim response.

Please notify us at least three days before beginning field work. Please contact me if you have any questions or would like to discuss these matters in more detail.

Sincerely,

Sybil Kolon  
Environmental Quality Analyst  
Gelman Sciences Project Coordinator  
Remediation and Redevelopment Division  
517-780-7937

SK/KJ

Enclosures

cc: Mr. Rick Mandle, DEQ  
Mr. Mitchell Adelman, DEQ/Gelman File  
Mr. Leonard Lipinski, DEQ  
cc/enc: Ms. Mary Ann Bartlett, Pall Corp.  
Mr. Robert Reichel, Department of Attorney General