



JENNIFER M. GRANHOLM  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
JACKSON DISTRICT OFFICE



STEVEN E. CHESTER  
DIRECTOR

July 1, 2003

VIA ELECTRONIC AND US MAIL

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

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

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

Dear Sirs:

SUBJECT: Gelman Sciences, Inc. (GSI) Remedial Action  
Unit E Aquifer

This letter is intended to document changes in approach to the Unit E Aquifer investigation and remediation as agreed to during our quarterly meeting on May 27, 2003. Investigation conducted since submittal of the March 28, 2003 work plan has determined that the width of the plume of contamination at the Maple Village Shopping Center (MVSC) is wider than expected, and Pall Life Sciences (PLS) has determined that groundwater extraction, treatment and reinjection at IW-2, as previously proposed, may not be feasible due to the volume of water that would have to be extracted.

I have discussed these issues with Mr. Fotouhi. Most of the changes, as agreed to by the Department of Environmental Quality (DEQ), were included in the letter from Mr. Caldwell and Mr. Reichel to the Honorable Donald Shelton, dated June 19, 2003. There are a few other issues we would like to clarify.

Enclosed is a hard copy of an Interoffice Communication from Mr. Richard Mandle, dated June 3, 2003, with his review of the TW-15 Aquifer Test. We had previously provided this document to you by e-mail. At this time, we have no additional comments to add to Mr. Mandle's review.

PLS submitted a Pilot Study for In Situ Ozone Treatment on June 3, 2003. The DEQ approved one part of the

pilot test, with conditions, and that test was performed on June 13, 2003. Additional phases of this pilot test should not be implemented until 1) the results of the first test are provided; and 2) PLS submits more detail regarding the remaining parts of the pilot test for DEQ review and approval.

We have reviewed the work plan for the aquifer test to be performed in the Maple Village Shopping Center and do not believe it will meet all of the objectives of the work plan, i.e. to evaluate the feasibility of remedial strategies for addressing 1,4-dioxane in the Unit E aquifer, including a dual injection/extraction well in this area. As discussed at previous meetings, this method would involve recirculation, with the groundwater being extracted, treated, and then reinjected into a shallower, or deeper, part of the aquifer at the same location. We agree that this option should be considered, and request changes to the aquifer test to ensure that adequate information is collected.

Based on our review of the pertinent literature, we are concerned that the distance (530 feet) to the nearest proposed monitoring wells will be too great to provide the best data during the aquifer pump test. We believe that a well cluster should be installed prior to the pump test about 200 feet from the test well with one well being screened at the same depth as the test well and the second well screened in the upper portion of the aquifer. Since PLS is considering pumping from and injecting into the aquifer at different depths, we believe that PLS should know the aquifer characteristics for both the upper and lower parts of the aquifer. In order to determine this, it may be necessary for another pumping well to be installed into the upper part of the aquifer to conduct a pumping test at that depth.

Performance of an aquifer test that does not produce adequate data will result in additional delays while adequate information is collected. We urge you to reconsider your design to incorporate these comments. Please forward any changes to your work plan as soon as possible and inform us at least two days in advance of planned field work for the well installation.

Additional items that have not been specifically addressed since the change in approach was agreed to are discussed below.

1. In our May 9, 2003 response to the March 28, 2003 Unit E Aquifer Groundwater Remediation Work Plan, we requested a work plan for completing the investigation of the contamination downgradient of the MVSC by July 14, 2003. We believe it is important that this work proceed. We have discussed potential locations for monitoring wells at recent meetings, and believe a work plan can be prepared and submitted by July 14, 2003, as previously requested.
2. In our May 9, 2003 letter, we also requested a work plan for investigation of the upgradient portions of the Unit E Aquifer by August 18, 2003. We believe it is important to investigate this area prior to implementation of response actions intended to address the entire Unit E Aquifer plume. Due to the agreed upon change in schedule we believe it is reasonable to delay this schedule by up to one month. To ensure that the feasibility option that is eventually selected will comprehensively address the entire Unit E Aquifer plume, this work should be performed this year.
3. The DEQ had previously requested, and PLS agreed to submit, information to determine the ultimate fate of the contamination in the Unit E Aquifer, particularly as it relates to impacts on surface water, such as the Huron River, upgradient of any drinking water intakes. At the technical meeting on April 16, 2003, we requested a written analysis in support of the maps PLS had prepared. Please submit this information by August 29, 2003.

Please contact me if you have questions or would like to discuss these matters in more detail.

Sincerely,

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

SK/KL

Enclosure

cc: Mr. Richard Mandle, DEQ  
Mr. Mitchell Adelman, DEQ/GSI File  
Mr. Leonard Lipinski, DEQ  
cc/enc: Ms. Mary Ann Bartlett, Pall Corp.  
Mr. Robert Reichel, DAG