



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
JACKSON DISTRICT OFFICE



STEVEN E. CHESTER
DIRECTOR

March 7, 2006

VIA US & ELECTRONIC MAIL

Mr. Farsad Fotouhi
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Pall Life Sciences, Inc.
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Mr. Michael L. Caldwell
Zausmer, Kaufman,
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31700 Middlebelt Road,
Suite 150
Farmington Hills, MI 48334

Dear Sirs:

SUBJECT: Gelman Sciences, Inc. Remedial Action
Performance Monitoring Plan, Wagner Road Extraction, dated Dec. 22, 2005

We have completed our review of the above referenced submittal. We had requested a revised performance monitoring plan (PMP) in our letter dated November 16, 2005, conditionally approving the interim response. We understand that the extraction from TW-18 began on January 12, 2006.

As indicated in the attached Interoffice Communication from Mr. James Coger, dated March 7, 2006, we are concerned that the PMP will not provide the data required to adequately assess whether extraction from TW-18 will meet the objective of containing all 1,4-dioxane greater than 85 parts per billion (ppb) in the Unit E plume from migrating east of Wagner Road. We acknowledge that the wetland system east of Wagner Road makes it difficult to place monitoring wells in the most ideal locations to provide the needed data. An additional complicating factor is the proximity of the Unit D₂ plume to the north. The TW-18 aquifer performance test indicates that contamination in the Unit D₂ plume at MW-94s (2,734 ppb in January 2006) could be drawn toward TW-18. TW-18 is not designed to capture the contamination in the Unit D₂ plume and could have the effect of drawing some of the shallower contamination to the south, without capturing it. Such an effect would complicate remediation of the Unit D₂ plume.

The December 17, 2004 Order regarding the Wagner Road interim response agrees with the Department of Environmental Quality's (DEQ) position that it is more efficient to control the groundwater contamination at its source, and requires Pall Life Sciences (PLS) to capture the Unit E plume at Wagner Road to the extent that it does not compromise the remediation of the Unit D₂ plume. Since the December 2004 Order, investigations performed by PLS have provided a better understanding of the relationship of the two plumes at Wagner Road. Based on this new information, the DEQ now believes that both plumes of contamination should be controlled at Wagner Road, to the extent possible. This position is consistent with the Court's Order.

It is our understanding that PLS has installed a pipeline along Wagner Road to the Porter Street lot, the approximate location of the most contaminated portion of the Unit D₂ plume. This pipeline could be used to transport untreated groundwater from the Porter Street lot to the PLS treatment system. An extraction well into the Unit D₂ plume near Wagner Road and Porter Street would be more effective than the north horizontal extraction wells (HZ-N) that previously

removed some of the Unit D₂ plume downgradient of Wagner Road. The use of the HZ-N had to be discontinued last fall due to its conversion to a transmission line. Operation of an extraction well near Wagner Road and Porter Street could be balanced with extraction from TW-18 to limit the tendency of TW-18 to pull in shallower contamination from the Unit D₂ plume. The DEQ would like to discuss the technical merits of this proposal with PLS within the next few weeks.

Regardless of the decision regarding the above proposal, installation of the proposed additional monitoring wells should proceed. The monitoring well nest in the Rhea Street vicinity should be installed first, followed by the southern well site location. We anticipate that a nest of at least two wells will be needed at each location. As indicated in the PMP, PLS will consult with the DEQ prior to deciding on the number and depth of well screens.

The PMP schedule indicates that a report on the new well south of TW-18 will be submitted within two months of installation. This report should also include an evaluation of the Rhea Street well nest, including a performance standard for the two new well nests, if appropriate. The report on the Rhea Street wells should include a recommendation for an additional performance monitoring well if the data does not indicate that the Rhea Street well nest is capable of demonstrating that the performance objective is being met. Alternatively, PLS may propose adjusting extraction rates from TW-18 and TW-12 to achieve the objective of preventing further downgradient migration of 85 ppb east of Wagner Road. As indicated by Mr. Coger, the proposed timing of three to five years for demonstrating that the performance objective is being met, by relying on data from MW-71, is not acceptable. We believe that a monitoring well nest near the end of Porter Street may be a reasonable compliance point, based on the conditions on the ground.

It is our understanding that Attachment 1 is intended to indicate that water level data was collected one month after extraction start-up, and will be collected quarterly until the extent of capture is determined. We had previously requested that water level data for MW-94s, MW-94d, MW-95 and MW-96 be collected weekly for six weeks. A frequency for water quality sampling was not specified for most monitoring wells listed. The monitoring schedule specified by Mr. Coger should be followed.

PLS indicates that data collected as part of the PMP will be submitted in the quarterly reports. After submittal of the report on installation of the two new well nests, PLS should also submit its evaluation of the subsequent data, including supporting documentation, with the quarterly reports. As indicated by Mr. Coger, the evaluation of the system should include extraction wells TW- 11, TW-12, TW-17 and TW-18. The next quarterly report is due on April 15, 2006 and should include the data collected through March 31, 2006.

The leak detection procedure dated January 9, 2006 is adequate, with the understanding that the flow meters will be calibrated on a regular schedule to ensure they are accurately measuring the flow.

As stated by Mr. Coger, a contingency plan was not included in the PMP. A contingency plan will be required and should be included in the report to be submitted two months after installation of the two new well nests.

Mr. Farsad Fotouhi
Mr. Alan D. Wasserman
Mr. Michael L. Caldwell

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March 7, 2006

Please contact me if you have any questions.

Sincerely,

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Gelman Sciences Project Coordinator
Remediation and Redevelopment Division
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SK/KJ

Attachment

cc/att: Mr. Robert Reichel, Department of Attorney General
Ms. Celeste Gill, Department of Attorney General
Mr. Mitchell Adelman, DEQ/Gelman File
Mr. James Coger, DEQ