STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
JACKSON DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

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DIRECTOR

September 20, 2004

VIA ELECTRONIC MAIL

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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
Unit E Aquifer, Wagner Road Interim Response
DEQ Proposed Resolution of Dispute Pursuant to
Section XVI of Consent Judgment in Response to
Letter from Michael L. Caldwell Dated July 12, 2004

This letter serves as the Department of Environmental Quality's (DEQ) response to Mr. Michael Caldwell's July 12, 2004 letter. In that letter, Pall Life Sciences, Inc. (PLS) invoked the dispute resolution process in Section XVI of the Consent Judgment, regarding the DEQ's June 29, 2004 letter directing PLS to take specific interim responses in the Unit E aquifer near Wagner Road.

As you know, the parties discussed this dispute in a telephone conference call on July 26, 2004. At that time, the parties mutually agreed to indefinitely extend the time to voluntarily resolve this dispute, subject to five business days notice by either party. Assistant Attorney General Robert Reichel notified Mr. Caldwell via electronic mail dated September 9, 2004 that the DEQ would like to bring the pending dispute to conclusion. As Mr. Reichel later explained to Mr. Caldwell, the DEQ desires to complete the administrative stage of the dispute resolution process before the Court issues a further order regarding Unit E, as indicated by the Court at the September 8, 2004 status conference.

As agreed during the July 26, 2004 conference call, PLS submitted a Work Plan for Test Boring/Well Installation and Aquifer Testing in the Wagner Road Area on August 1, 2004. The DEQ responded to the work plan on August 19, 2004, with conditional approval. PLS then responded with a letter dated August 31, 2004. In that letter, PLS acknowledged that the investigation proposed in the work plan would provide information that could be used to determine the level of effort required to capture the Unit E plume near Wagner Road. PLS also agreed to the additional monitoring of MW-30d and MW-43 during the aquifer performance test, as requested by the DEQ.

PLS also asked for additional justification for the use of the rotosonic drilling method the DEQ has requested. While the DEQ believes its previous request included adequate justification, we are providing the following explanation in an effort to voluntarily resolve this issue.

The rotosonic drilling method can provide a continuous core that can be visually described and correlated with the response from the gamma logs. Continuous cores from several locations (near Wagner Road, in the area of Maple Village, near the leading edge of the plume) will better

document the geology at these locations. This in turn will improve the geological interpretation of the gamma logs from the boreholes installed using hollow stem augers (HSA), and help document the areal subsurface geology. Proper characterization of the subsurface at the PLS facility will help shed light on the fate and transport of the 1,4-dioxane plumes.

Almost all of the drilling to date at the facility has been conducted using HSA with a soil sample obtained every five feet. In optimal cases, these soil samples have been two feet in length, but have often been shorter due to sampling problems inherent in the sampling method. This has resulted in the need to interpolate the make-up of the subsurface stratigraphy for significant portions of the borehole and added uncertainty to the correlation of the gamma logs and the subsurface samples.

Rotosonic drilling has been used at a number of state-funded and liable party-funded investigations in Michigan. It has been a useful drilling method to help better understand the geology and determine the extent of groundwater contamination. This request for application of the rotosonic method at the PLS facility is a logical attempt at gaining a better understanding of the complex geological conditions and movement of the 1,4 dioxane. Gaining such understanding should help reduce uncertainty in making remedial decisions at the site.

We have reviewed Mr. Caldwell's July 12, 2004 letter and do not agree with his interpretation of the Consent Judgment or Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended, or the Part 201 Administrative Rules (Part 201 Rules), regarding interim response. Our position remains, as outlined in our June 29, 2004 letter, that the Consent Judgment, Part 201 and the Part 201 Rules do authorize the DEQ to require PLS to take interim response as directed in our June 29, 2004 letter.

PLS contends that achieving capture of the Unit E plume at Wagner Road will compromise the remedial efforts underway on the shallower aquifers, and would conflict with the July 2000 Remediation and Enforcement Order. This is not necessarily the case, and will not be known until the Wagner Road investigation is completed. In August 2004, PLS used 1,155 gallons per minute (gpm) of its total discharge capacity of 1,300 gpm under the existing surface water discharge permit. This included 221 gpm from two Unit E aquifer extraction wells on its property (TW-11 and TW-17). The concentration of the groundwater being extracted from these two wells was 650 and 680 parts per billion. It is likely that much higher concentrations in the Unit E plume are currently migrating east of Wagner Road.

The investigation near Wagner Road will provide information that can be used to design a system to prevent further migration of the Unit E plume east of Wagner Road. With the current volume of water being extracted and treated from non-Unit E wells, there is currently 366 gpm available to extract from the Unit E plume near Wagner Road. We agree that any reduction of extraction from non-Unit E wells to meet the objective of capture of the Unit E plume at Wagner Road must consider the objectives for the non-Unit E systems. However, once the requirements for capture of the Unit E plume at Wagner Road are determined, it will then be possible to balance, as needed, the remedial efforts for all systems.

The DEQ has considered the comments made by PLS regarding this dispute and has determined that PLS must take the following steps:

- ③ Perform the investigation described in the August 1, 2004 Work Plan for Test Boring/Well Installation and Aquifer Testing in the Wagner Road Area, as modified by the DEQ's letter of August 19, 2004, including the use of rotosonic drilling for at least one boring.
- ③ Submit a report on the investigation to this office within 30 days of completion of the aquifer performance test.
- ③ Submit a work plan to the DEQ within 60 days of completion of the aquifer performance test that will, when implemented, create a hydraulic barrier near Wagner Road to prevent further migration of groundwater contamination above 85 parts per billion from migrating east of Wagner Road.
- ③ Implement the work plan to create a hydraulic barrier near Wagner Road upon approval by the DEQ.

Please inform us of the status of your efforts to obtain access to perform the investigation by October 1, 2004 and notify us at least two business days prior to implementing any field work. Please contact me if you have any questions regarding this letter.

Sincerely,

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

SK/KJ

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