



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
JACKSON DISTRICT OFFICE



March 29, 2006

VIA US & ELECTRONIC MAIL

Mr. Farsad Fotouhi
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Mr. Michael L. Caldwell
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31700 Middlebelt Road,
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Farmington Hills, MI 48334

Dear Sirs:

SUBJECT: Gelman Sciences, Inc. Remedial Action
Operation & Maintenance Plan, January 2006

We have completed our review of the Operation & Maintenance Plan (O&M Plan), received in our office on January 31, 2006. Please review the following comments. Our review and comments should not be represented as an indication that the Department of Environmental Quality (DEQ) agrees that the incorporation of our comments in the O&M Plan will be adequate to operate and maintain the systems as required. PLS should review and update the O&M Plan as needed.

These comments relate to the review by the Remediation and Redevelopment Division of the DEQ pursuant to our oversight of the remediation of the Gelman Sciences, Inc. site. The Water Bureau of the DEQ, which has authority over the discharge of treated water to surface water, will be responding to relevant portions of the O&M Plan in the near future.

Pall Life Sciences (PLS) has indicated that this entire submittal is confidential/proprietary, without providing any justification for this designation. We recognize that Section XXII of the Consent Judgment allows for PLS to designate certain information as confidential or proprietary. Please be advised that the DEQ considers information related to health and safety, particularly the Health & Safety Plans contained in Appendix A, to be information that must be available for public use. Please provide us with the basis for PLS's claim that the entire O&M Plan, including any appendices, is confidential/proprietary. Our review of the O&M Plan shows that very little of the O&M Plan is truly confidential or proprietary in nature. In fact, much of this information is available in previous versions of the O&M Plan that were not claimed to be confidential/proprietary. Until this issue is resolved, please be advised that, in the event of an emergency, the Department of Environmental Quality (DEQ) may provide a copy of the entire O&M Plan to emergency responders.

O&M Plan

Section 1.0 should include maintenance of extraction wells, including a schedule or procedure for determining that maintenance or rehabilitation is required. Any substances, including volume and concentration to be used for rehabilitation should be specified and the O&M Plan must specify that these compounds will be extracted to ensure that concentrations exceeding Part 201 generic residential criteria will not be exceeded in the surrounding groundwater. Water Bureau staff will review the information about the substances used for rehabilitation of extraction

wells to determine if any additional sampling related to the discharge to surface water will be required.

Section 1.1.1 should reference AE-2 and indicate that it is not currently in use.

Section 1.1.2 should include a schedule and procedure for monitoring the condition of the pipelines. In a letter dated December 12, 2005, Mr. Fotouhi indicates that "...PLS routinely monitors the pipelines with a device called a "coupon"." We did not find any reference to this procedure in the O&M Plan.

Sections 1.1.3 and 1.1.6 refer to AE-1. This should be changed to AE-3.

Section 1.1.6 – This section (Leak Detection System) is the same as the previous O&M Plan, except the north horizontal well has been removed. Due to the problems identified after a pipeline leak was detected in July 2005 (discussed below), it is critical that this section of the O&M Plan be updated. At a minimum, the following items must be added to the leak detection system:

1. A schedule for calibration of all flow meters, and reference to a procedure to be added to Appendix C for flow meter calibration.
2. Information on the availability of replacement flow meters, and any other important parts and equipment. If not readily available, an extra flow meter should be kept on-hand.
3. Information on how to determine if the communication system between the flow meters is malfunctioning, how frequently such a determination will be made, and what procedures should be used for leak detection in that event.
4. If the operator determines that an alarm indicating a leak is a false alarm, the operator should document how he/she reached that conclusion.
5. The relevance of pressure monitoring must be addressed.
6. If the operator is not able to determine the reason for an alarm within a specific time (not to exceed 12 hours), the Corporate Environmental Engineer must be notified.

We are providing our review of some of the circumstances involved in detection of the leak of the NTP in July 2005, for further clarification of the need for an improved leak detection system. When PLS first notified the DEQ that the NTP had been shut down on July 18, 2005, it was "...due to a possible negative pressure." In a letter dated December 12, 2005, Mr. Fotouhi stated: "...the pipeline has been monitored using continuous pressure sensing devices and the information is sent by telemetry to computers for processing. This is a state-of-the-art technique for monitoring pipeline integrity." In response to a request from DEQ to incorporate pressure monitoring into the leak detection procedure, Mr. Fotouhi, in a December 21, 2005 e-mail, indicated that pressure monitoring was not reliable. These apparently conflicting statements need to be reviewed and a clear statement on the relevance of pressure monitoring should be provided in the leak detection section of the O&M Plan.

An e-mail from Mr. Fotouhi dated November 3, 2005 states that: "The system properly made us aware of the discrepancy in flow readings and after visually checking for leaks it was determined that the flow meter in the Red Pump House was in error and needed to be replaced. We had experienced problems with several flow meters requiring replacement this year and, therefore,

this was a reasonable conclusion.” There is no timeline associated with these statements. Flow meter and daily log data provided by PLS indicate that there were flow discrepancies in both readings that should have triggered multiple alarms from June 1, 2005 until the leak was verified on July 18, 2005. The same e-mail indicates that a communication problem resulted in a processor problem that required a complete system shut down on July 18, 2005. “The flow meter in question was replaced at this time and reverse flow was noted before starting extraction ... leading us to the previously improbable conclusion that there was a leak in the transmission line into the aquifer.”

The DEQ does not have all of the information relevant to this time period (June 1, 2005 to July 18, 2005). However, it appears that a flow meter that was believed to be faulty was left in place for at least six weeks and the information it communicated was presumed to be incorrect. We would appreciate any clarification that PLS can provide regarding these issues.

Section 1.3 should reference TW-4 and TW-7 and indicate that they are not currently in use.

Section 1.5 should reference TW-19 or the O&M Plan for the Mobile Ozone Treatment Unit.

Appendices

Health & Safety Plan for Building 4 – Information on activating the local emergency response system should be added to this plan.

Health & Safety Plan for Building 5 – The location of Building 3, where spill supplies and PPE are stored, should be included in this section of the plan.

Health & Safety Plans for the Evergreen Facility and the Porter Lot – The section of the plans on Medical Facilities should reference Appendix H&S-C.

Appendix H&S-C – This appendix should include a more detailed map showing the location of each building that has a Health & Safety Plan, and major streets to get to the medical facility.

Appendix C – The Table of Contents, and/or a cover sheet for Appendix C, should include a list of the procedures. Grouping of related procedures would be useful. Some, but not all procedures are referred to in various sections of the O&M Plan. Additional references should include: Breach of Transmission Line should be referenced in the section on leak detection and/or transmission pipeline; Cleaning Carrier Pipes should be referenced in the section on the carrier pipeline; Responding to Pumping Station Groundwater Spills should be referenced in Sections 1.1.3 and 1.1.4. Additional references may be appropriate and should be considered.

Appendix D – A drawing showing the location of buildings, major components of the system and pipelines should be included.

Please provide us with a revised O&M Plan, and any other response, by May 1, 2006.

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

-4-

March 29, 2006

Sincerely,

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

SK/KJ

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