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GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
JACKSON DISTRICT OFFICE



STEVEN E. CHESTER
DIRECTOR

August 12, 2005

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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
Response to Work Plan for Well Identification, Abandonment and
Replacement of Certain Private Water Supply Wells, dated June 17, 2005

We have completed our review of the above referenced work plan. This work plan was submitted pursuant to the "Order Prohibiting Groundwater Use" (Order) issued by the Washtenaw County Circuit Court on May 17, 2005. We provided a preliminary response on July 11, 2005. In response to our request in that letter, in an e-mail note from Mr. Michael Caldwell, dated July 30, 2005, Pall Life Sciences (PLS) declined to respond to some of the comments it disagreed with. This letter incorporates comments from our previous letter, with minor modifications, and additional comments, and constitutes our conditional approval of the work plan.

Our primary concern is with areas where the plume (above 85 parts per billion {ppb} of dioxane) is known to exist, as well as adjacent and immediately downgradient areas, as defined by the north and south boundaries of the Prohibition Zone (PZ), extending from Wagner Road to approximately Glendale Drive. PLS should focus its initial well identification efforts in this area (Western PZ). We also want to receive information more frequently than proposed, as specified below, in addition to the full report at the end of the well identification phase of the work plan.

Section I - Identification of Existing Private Drinking Water Wells Within the PZ

This section of the work plan should be intended to identify any current or former water supply wells within the PZ that have not been abandoned. Because new heat pump wells that are not part of a closed loop system may not be installed without Department of Environmental Quality (DEQ) approval, as outlined in 5c of the Order, it is appropriate that this section should also include an effort to locate any such heat pump wells to determine if such wells need to be abandoned.

The intent of the following language from page one of the work plan is not clear to us:

"Properties within the Prohibition Zone, but not zoned as part of Ann Arbor, could potentially have legal water supply wells (wells that are not already considered "abandoned" by state and/or county regulations and are, therefore, required to be plugged by the owner)."

It is our position that it is PLS's responsibility to abandon any wells identified within the PZ, subject to the exception allowed for in 5e of the Order.

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Any written materials to be used in the survey methods described in Task 1 should be provided to this office for review and approval at least two weeks prior to their planned use.

Tasks 1 and 2 should be implemented in phases, starting with the Western PZ, to ensure that water supply wells most likely to be contaminated are identified and addressed as soon as possible. There are eight properties listed in Table 1 that are known to have a connection to the city water supply, seven of which are west of Glendale Drive. These seven properties should be included in the first phase of Task 1 (Westover and Wagner Road properties), to determine if any wells exist that need to be provided with municipal water and/or abandoned.

Tasks 2 and 3 should also be coordinated in two phases, focused first on the Western PZ and then on the Eastern PZ (the remainder of the PZ east of the Western PZ). For any vulnerable properties identified in the Western PZ, these properties should be surveyed, as described in Task 1 and modified by this letter, within one month of identification. It should not be necessary to supplement this work plan, as described in Task 2, unless the survey methods described in Task 1 have been determined to be inadequate.

All wells identified should be sampled and analyzed for 1,4-dioxane. Once a well is identified at any given property in the Western PZ, the DEQ should be notified within two weeks. For any wells identified in the Eastern PZ, PLS may submit the required information in its final report.

A preliminary report should be submitted to the DEQ upon completion of Task 2 for the Western PZ, and then a final report upon completion of all tasks in this section, for the entire PZ. These reports should identify any vulnerable properties based on the findings. Surveys of the Eastern PZ should then proceed on a reasonable schedule. The preliminary and final reports should include a copy of all abandoned well records for the period covered, whether abandoned before the PZ was instituted or as a result of the performance of this work plan. These reports should also include any written materials or forms received from the property owners surveyed.

Section II – Plugging of Identified Water Supply Wells

The procedure for plugging wells is adequate and complies with applicable laws. Where these wells serve as water supply wells, this work should be done after connection to the municipal water supply, as outlined in Section III. Work performed related to Section II should be submitted in the two reports referenced above or in subsequent quarterly reports submitted pursuant to the Consent Judgment.

Section III – Connection to Municipal Water

This section refers to a Consent to Connection form acceptable to PLS and the DEQ. A suggested form is attached, modified from a form used by the DEQ. It also covers abandonment of the existing well. Please let me know if this form is acceptable to PLS, and if not, provide PLS's draft for our approval by August 29, 2005.

Table 1 lists all properties PLS have located thus far that are within the political boundaries of Scio Township or Ann Arbor Township. There are seven properties in Table 1 with "no" in the "City Water?" column. On July 19, 2005, PLS provided information to support PLS's request that five of these wells be excepted from the requirement to provide connection to the City of Ann Arbor municipal water supply, as allowed for in 5e of the court order. That information is currently under review. That submittal included one additional water supply well at

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697 S. Wagner, and did not include a request for an exception for the water supply well at 2340 Dexter Road or 591 S. Wagner Road. It is our understanding that the residence at 591 S. Wagner does not have a water supply well.

Regarding the water supply well at 2340 Dexter, we believe this well is in use for water supply. We understand that PLS did not include this well in its request for exceptions because PLS believed it had been connected to the municipal water supply. Mr. Fotouhi has indicated that PLS does intend to submit such an exception request. Please submit this request to this office by August 29, 2005 or take immediate steps to connect this property to the municipal water supply.

We have also learned of three wells in the PZ that are not used as water supply wells, but that must be abandoned, as required by the Order, unless PLS submits information, and receives DEQ approval, for the exception allowed for in 5e of the Order. Two of these are in the Western PZ (an irrigation well at 3480 Jackson Road and a former water supply well at 2575 Valley) and one is in the Eastern PZ (an irrigation well at 960 Newport). If PLS intends to make an exception request for the two wells in the Western PZ, that information should be submitted to the DEQ by September 15, 2005.

As stated previously, once a well is identified at any given property in the Western PZ, the DEQ should be notified within two weeks, and the process for having these properties connected to the municipal water supply system, and/or the wells abandoned, should begin immediately. If PLS intends to provide information requesting the DEQ to consider the exception allowed for by 5e of the Order, the two-week notification to the DEQ referenced above should include notice of that intent, and that information submitted to the DEQ within one month of the two-week notification.

For any wells identified in the Eastern PZ, PLS may submit the required information in its final report. The final report should include a schedule for connecting these properties to the municipal water supply system, and/or the wells abandoned. If PLS intends to provide information requesting the DEQ to consider the exception allowed for by 5e of the Order, PLS should then provide that information to the DEQ within one month of the report. The final report should be submitted within one month of completion of the work plan.

Work performed related to Section III should be submitted in the two reports referenced above or in subsequent quarterly reports submitted pursuant to the Consent Judgment.

In the event that wells identified in the Eastern PZ are found to have any detection of 1,4-dioxane, or are in the immediate vicinity of any detection of 1,4-dioxane, the schedule outlined for the Western PZ wells should be followed. The obligation of PLS to provide connection to the city water supply and abandon wells within the PZ will continue for the duration of the PZ. If any vulnerable properties or wells are identified after PLS submits its final report on this work plan, PLS will be required to implement the tasks in this work plan, as modified by this letter, or according to subsequent revisions approved by the DEQ.

We have scheduled a meeting for September 9, 2005 to discuss this and other issues. Please contact me or Assistant Attorney General Robert Reichel, if you have any questions you would like to discuss before then.

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

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Sincerely,

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

SK/KJ

Attachment

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