



JENNIFER M. GRANHOLM  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
JACKSON DISTRICT OFFICE



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DIRECTOR

January 10, 2006

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Dear Sirs:

**SUBJECT:** Gelman Sciences, Inc. Remedial Action  
Response to November 14, 2005 Correspondence Regarding Work Plan for  
Well Identification, Abandonment and Replacement of Certain Private Water  
Supply Wells, dated June 17, 2005

We have reviewed your response to our August 12, 2005 comments on the Work Plan for Well Identification, Abandonment and Replacement of Certain Private Water Supply Wells (Work Plan), dated June 17, 2005, and have the following comments.

The responses in your November 14, 2005 letter require that we clarify the intent of our August 12, 2005 response to the Work Plan. Under Section 1, Task 1 of the Work Plan, Pall Life Sciences (PLS) indicates that it will review well information for and address only "non-abandoned" wells. We now understand that PLS does not intend to identify or plug wells that it considers "abandoned" (wells that are not being used for drinking water, but have not been plugged). Similarly, Section 1, Task 2 indicates PLS will only look for "existing water supply wells". The scope of this task must be broadened to include any private wells that have not been plugged.

The Department of Environmental Quality (DEQ) disagrees with PLS's narrow interpretation of the May 17, 2005 Order Prohibiting Groundwater Use (Order). The Order prohibits the consumption or use by any person of groundwater from the Prohibition Zone (PZ), subject to certain exceptions. Wells that are still intact, regardless of their current use, could be used in the future, in violation of the Order, unless they are permanently plugged. The DEQ is charged in the Order with approving the PLS Work Plan. As the agency that oversees the implementation of the remedial action, the DEQ is obligated to ensure that the remedy selected by PLS, and approved by the Court, is implemented to protect the public health, safety and welfare, and the environment. To that end, consistent with guidance from division management, the DEQ will not approve the Work Plan unless it includes a commitment by PLS to identify any water supply wells that have not been plugged, and to render any such wells incapable of providing water, unless an exception allowed for in the Order is approved. PLS must implement this Work Plan with the purpose of using its best efforts to identify any private water wells within the PZ that have not been properly plugged to ensure that groundwater from the PZ cannot be consumed or used.

#### Open Loop Heat Pump Wells

PLS indicates that it is not necessary or appropriate to locate and identify open loop heat pump wells, and further indicates that water discharged from such a system would not come into contact with people. We do not agree. Because any such discharge points are not known, it

cannot be determined if there would be any human contact with the discharge water that would pose concern. Because the Order does not allow installation of such wells without DEQ approval, it is appropriate to determine if there are any such wells. Our letter did not request that PLS plug any such wells, we asked only that you identify any such wells so their use can be evaluated. You have indicated that PLS will make a Freedom of Information Act (FOIA) request to the City of Ann Arbor (City) regarding such wells. In addition, a similar FOIA request should be made to the Water Bureau of the DEQ, and any survey distributed to residents or property owners should also include a question about the existence of such wells.

#### Identification and Abandonment of Private Wells

Our August 12, 2005 letter states that "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." PLS's response to that statement is that the Order does not require PLS to identify or abandon "non-drinking water supply wells." PLS then goes on to assert that any wells not in use are already abandoned pursuant to the definition of "abandoned water well" in Rule 101 of the Part 1 Well Construction Rules promulgated pursuant to Act 368, PA 1978 (Rules).

We do not agree with PLS's interpretation of the Order. Paragraph 6 of the Order reads in part: "Within thirty (30) days of this Order, PLS shall submit to MDEQ for review and approval a work plan for identifying, or verifying the absence of, any private wells within the Prohibition Zone, for the abandonment of any such private wells and for replacement of private drinking water wells with connection to the municipal water supply." The Order does not specify the use or non-use of any private wells, nor does it address whether any private wells have been permanently or temporarily abandoned.

PLS cites Rules 163 and 164 of the Rules, sub-titled respectively "Abandoned wells and dry holes; plugging method" and "Abandonment of wells; plugging materials" in Section II of the Work Plan in addressing how wells will be plugged. Paragraph 6 of the Order, cited above, calls for the "abandonment" of private wells. While the language in the Order would have been clearer if the Rules were cited, the purpose of identifying private wells was to ensure they would be rendered permanently unusable, which is clearly the same purpose of Rules 163 and 164. Leaving "abandoned" wells in place would not meet the intent of the Order to prevent use of the groundwater in the PZ because these wells could still be used in the future unless they are permanently plugged. Our use of the word "abandon" instead of "plug" in our August 12, 2005 letter does not relieve PLS of the obligation to comply with the Order. PLS must, therefore, identify all private wells within the PZ and provide for them to be plugged according to all applicable regulations, including the Part 1 Well Construction Rules, unless PLS requests and receives DEQ approval for exceptions allowed for by the Order.

PLS asserts that it is the obligation of the property owner to physically de-commission already out-of-service wells. While this may be the case in some circumstances, PLS proposed the PZ as part of its remedy to address the Unit E aquifer contamination and it is our position that PLS has now assumed this responsibility.

#### Survey Materials

PLS questions the need for the DEQ to review any written materials to be used in the survey of residents in order to identify private wells. The DEQ needs to review these materials to ensure that they are adequate to accomplish the intended task.

Eight Township Properties within the Prohibition Zone

PLS does not believe the eight township residences that currently obtain their water from the municipal water supply need to be surveyed because any remaining wells are "abandoned water wells." We do not agree. Our comments above regarding the identification and abandonment of private wells also apply to this issue. Because these properties are not part of the City of Ann Arbor, they may have originally been served by private wells. It is important to determine if any wells remain that have not been properly plugged, to ensure there will be no future exposure to contaminated groundwater. PLS has now assumed the responsibility for plugging any remaining wells through its chosen remedy to address the Unit E aquifer contamination.

Abandoned Well Plugging Records

PLS indicates it will provide abandoned well plugging records only for water wells that PLS plugs. The DEQ position remains that PLS must provide copies of all such records that it locates as part of its performance of this Work Plan. To the extent that these records can be found, they will document that such wells are not able to be used, which is a primary purpose of the Work Plan.

Private Well at 2340 Dexter

PLS indicates that the owner of the property at 2340 Dexter plans to connect to City water in 2006 and that there is no immediate need for this property to be connected to City water. I spoke to Mr. Robert Schultz of Schultz Holdings, LLC, the owner of the property, and he indicated he has no immediate plans to connect the property to City water. It is our understanding that there is no requirement for this property to be annexed to the City or to connect to City services. After December 31, 2007, the City may seek to annex the parcel, in which case the property would be connected to City water after that. The property owner has no obligation to connect to City water at this time, therefore, PLS has now assumed this responsibility through its chosen remedy to address the Unit E aquifer contamination.

Although the last sample from this well was non-detect, there is groundwater contamination in the aquifer below this property. Paragraph 5e of the Order would allow for an exception to the Order if the DEQ agrees that the formation from which this well draws water is not likely to become contaminated. The DEQ does not believe this exception applies because of the complexity of the geology in this area and due to the planned interim response at Maple Road (extraction, treatment and reinjection) that could impact this well. Therefore, PLS must immediately take steps to arrange for this property to be connected to the City water supply, and to plug the existing well to prevent its use in the future. In the interim, PLS should monitor this well quarterly starting in January 2006 until this well is connected to the City water supply.

Private Wells at 2575 Valley, 3480 Jackson Road and 960 Newport

PLS does not believe it is required to abandon (plug) these wells. We do not agree. These are all private wells within the PZ and are subject to the Order, including the exception provisions of the Order that may apply. Regarding the well at 2575 Valley, we became aware of this well through PLS's monitoring. We are not able to find a record of it being added to the approved monitoring schedule, but do agree that it should be. Based on our understanding that the well is not accessible for use other than for monitoring by PLS, we will accept your November 14, 2005 letter as a request for an exception under Paragraph 5a of the Order. The DEQ approves the use of this private well as a monitoring well, with a current sampling frequency of semi-annual,

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for 1,4-dioxane analysis and collection of static water levels. This well shall be maintained by PLS until such time as it is determined that this sampling is no longer needed, and then properly plugged in accordance with all applicable regulations and procedures at the expense of PLS. This well should be plotted on future PLS maps.

Regarding the irrigation well at 3480 Jackson Road, your letter indicates that Varsity Ford has refused to have their well abandoned. I spoke with Mr. James Petersen of Varsity Ford and he indicated that they have not refused to abandon the well, although they would prefer to keep it for irrigation purposes. Because this well is in the PZ and is contaminated with 1,4-dioxane (four samples collected since July 2005 have each shown 3 parts per billion), we do not believe that any exceptions in the Order apply. Therefore, this well must be plugged to prevent its use in the future.

Regarding the irrigation well at 960 Newport, the DEQ believes that this well is also subject to the Order. We do agree that this well is not immediately at risk of becoming contaminated and will accept PLS's statement that it will review the information from the downgradient investigation scheduled for this year as an exception request. We approve the exception until July 5, 2006, at which time PLS must submit its evaluation of the information available at that time in support of its exception request, or take steps to plug the well. This well should be plotted on future PLS maps.

It has now been nearly seven months since PLS's submittal of the Work Plan and five months since the DEQ's response to the Work Plan. Section X of the Consent Judgment, Approvals of Submissions, requires PLS to submit for dispute resolution under Section XVI of the Consent Judgment if it disagrees with the DEQ's conditional approval of its submissions. PLS has not yet submitted any information to demonstrate that it has undertaken any of the tasks that are required by the Order. PLS should immediately implement the Work Plan as conditionally approved by the DEQ in this letter and our August 12, 2005 letter. If PLS objects to any of the conditions, then PLS should immediately invoke the dispute resolution procedures of the Consent Judgment.

Sincerely,

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Gelman Sciences Project Coordinator  
Remediation and Redevelopment Division  
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SK/KJ

cc: Ms. Mary Ann Bartlett, Pall Corp.  
Mr. Robert Reichel, Department of Attorney General  
Ms. Celeste Gill, Department of Attorney General  
Mr. Mitchell Adelman, DEQ/Gelman File  
Mr. James Cogger, DEQ