



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
JACKSON DISTRICT OFFICE



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March 18, 2009

VIA ELECTRONIC AND US MAIL

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Dear Sirs:

SUBJECT: Gelman Sciences, Inc. Remedial Action
PLS Well Identification Plan Response, dated October 24, 2008

The Department of Environmental Quality (DEQ) has reviewed the above referenced letter from Pall Life Sciences (PLS) responding to the DEQ's July 21, 2008 letter regarding the well identification process in the Prohibition Zone (PZ). As promised during the December 5, 2008 conference call between the parties, the DEQ is providing this written response. The DEQ acknowledges that PLS has provided additional information that resolves the DEQ's concerns at many of the addresses, as detailed in this letter and Table 1 (enclosed). However, there are still some fundamental issues that have not been resolved.

PLS has asserted that the DEQ has broadened the Court's May 17, 2005 Order Prohibiting Groundwater Use (PZ Order), stating in its October 2008 letter that "[t]he DEQ has required PLS to identify any property that may at one time have had a well and then to definitely prove that any such historic wells have been properly abandoned – *despite the undisputed fact that any such properties have been served by municipal water for decades.*" The DEQ does not dispute the first part of the statement because we believe it to be consistent with the PZ Order's requirement for PLS to develop a work plan to "*identify or verify the absence of, any private wells within the Prohibition Zone.*" Although PLS did submit a work plan, which was conditionally approved by the DEQ, it has not complied with all of its requirements, and we now know that the work plan was not sufficient to meet the underlying goals of the PZ Order, which was entered to satisfy the requirements of MCL 324.20118(6)(d) and MCL 324.20120b(5) for institutional controls preventing unacceptable exposure to 1,4-dioxane in the groundwater. Rather than broadening the PZ Order, the DEQ's requirements are consistent with the spirit, if not the letter, of the PZ Order.

Recognizing the difficulty of verifying the absence of some wells and in a spirit of cooperation, the DEQ had previously presented PLS with an alternative method for dealing with locations where old wells cannot be found or ruled out conclusively. The DEQ, in its July 21, 2008 letter and during the December 5, 2008 conference call, indicated that PLS could provide notification to specific property owners within the PZ where wells were known to exist, but cannot be found and plugged, or where the absence of wells cannot be verified.

The last phrase of the sentence identified above ("*. . . despite the undisputed fact that any such properties have been served by municipal water for decades.*") is not pertinent to the purpose of the well identification process because old wells could still be present on these properties. In

addition, PLS's work plan for identification of water supply wells did not propose that the period of time a home has been on municipal water would form the basis for verifying the absence of a well and thus negate the need to search for a water supply well, nor did any of the DEQ's responses to the work plan or subsequent reports provide for such a determination. Further, PLS's assertion that "there is no reasonably possible scenario under which residents of such properties could be subject to any unacceptable exposures," is pure conjecture. As stated in our July 21, 2008 letter: "The DEQ's experience with other institutional controls¹ throughout the state indicates that it is not uncommon for residents and property owners to knowingly and unknowingly use groundwater for drinking water where that use has been restricted. This has been done by diverting groundwater from an unplugged well for household use." The DEQ has not asked PLS to ensure that no such illegal connections exist, we have asked only that adequate notice be provided to owners of property where wells were known to exist, but cannot be found and plugged, or where the absence of wells cannot be verified (vulnerable properties).

During the December 5, 2008 conference call, the DEQ staff requested that PLS provide a copy of the letter that was included as part of the survey (survey letter), along with a list of addresses that received the survey letter. PLS had previously provided the DEQ with a draft survey letter and the DEQ provided revisions to PLS in a letter dated April 18, 2006. The DEQ recalls PLS verbally agreeing to the revised survey letter; however, the DEQ has no record of ever receiving a copy of the final letter that was provided to the survey recipients. PLS staff indicated there would be some difficulty in compiling that information, but that it would be provided. To date, the DEQ has not received the requested information. If PLS can provide the requested documentation, including a copy of the actual survey letter used (provided it contains the elements in the DEQ's revisions to PLS's proposed survey letter), and the names and addresses to which it was provided, the DEQ will accept that as sufficient notice for those addresses, except as noted below for tenant occupied properties (see Table 1 and the discussion below).

While PLS did provide additional information in its October 2008 response that resolves the DEQ's concerns regarding some addresses, it refuses to perform all of the additional measures specified by the DEQ to complete the well identification process. As stated in the DEQ's July 21, 2008 letter, "A thorough review of areas within the PZ and outside of subdivisions is needed to identify other properties that may have once been served by wells." To assist with this process, the DEQ requires that a detailed map be produced that shows which parcels within the PZ are outside of subdivisions where municipal water was required at the time of construction. PLS declined to produce the requested map despite its obligations under the PZ Order to ". . . identify or verify the absence of, any private wells within the Prohibition Zone." As noted in the DEQ's July 21, 2008 letter, the DEQ has identified many additional vulnerable properties, some of which PLS has since investigated. In one case, PLS found and plugged an unused well. The DEQ's review was done to demonstrate our point and was not intended to complete the well identification process that PLS is required to perform.

In its October 2008 response, PLS provided some clarification about the City's water utility records that is helpful, but not conclusive. Based on the information cited by PLS, that the original "meter set date" was not always saved when a new meter was set, we agree that the "meter set date" does not necessarily establish that City water had not been previously provided. However, in cases where the date of construction is prior to the "meter set date", the

¹ The PZ Order is considered to be an institutional control for restriction of the use of groundwater, as discussed in more detail on page 4.

existence of a well is not eliminated and a survey is still required, unless PLS can document that the building was connected to City water when built.

In some cases, PLS is relying on the "tap date" to show a home was hooked up to City water at the time it was built. City staff had previously explained that the "tap date" indicates the date that City water was available, not the date the property was actually connected to City water. Unless City ordinances required hook-up at the time of construction (starting in 1945), this is not considered adequate to verify the absence of a well. City staff also indicated that some more recent "tap dates" may reflect upgrades to older water mains, and may not indicate that City water had never been previously available in those areas.

To summarize the status of the well identification process to date, the DEQ has updated the information presented with its July 21, 2008 letter and incorporated all pertinent information about each address into Table 1. This includes addresses that the DEQ agrees are resolved, which PLS omitted from its table. Although the DEQ is satisfied that the omitted addresses have been resolved, we have reinserted them for the purpose of providing a complete list of all addresses that have been reviewed. A summary of the table is provided below, for the 135 addresses so far identified, preceded by the DEQ Comment Code used in Table 1:

- a1 - the DEQ agrees that 38 addresses show no evidence of a well (documentation required in some cases, as noted in the Additional Comments column);
- a2 - 35 wells have been plugged;
- b- - two wells approved by the DEQ as monitoring wells, to be plugged by PLS when no longer needed;
- c - the DEQ will consider a request for an exception for the only well in this category, otherwise PLS must plug this well;
- d1 - available information indicates there are 35 addresses where a well was once used for water supply and may not have been plugged;
- d2 - the DEQ has agreed that these two wells may remain in use subject to conditions²;
- e - the absence of a well has not been verified at 22 addresses

Two comment codes have been added to the box at the end of Table 1 that provides detail on the DEQ comment codes. In cases where wells cannot be found or their absence verified, and the required notice has been provided, the "d1" comment code would become "a3" and the "e" comment code would become "a4".

Various measures are required for each comment code, depending on what has been done to date. For ease of reference, the fields under the Additional Comments column have been color coded for similar measures, as discussed below:

- no color and blank: no additional measures are needed (46 addresses);
- pink: new information in PLS's October 24, 2008 letter must be documented with the source of information at each address or actual documents (27 addresses);
- blue: surveys and inspections are required (35 addresses);
- gray: if PLS can confirm that the owners received the survey letter addresses, these will be resolved, otherwise notice must be provided to the owners (13 addresses);

² PLS must provide City water to these houses: 1) at the request of the property owner, 2) upon such determination by the DEQ, or 3) upon sale of either property.

- no color, with comments: of the remaining 14 addresses, four are resolved for now and various measures are required at the remaining nine.

In other words, of the 135 addresses identified so far, most have been or can easily be resolved if PLS provides information it indicates it already has. Clarifications regarding the DEQ's requirement for additional measures are included below.

In a few cases, survey information was provided by a tenant rather than the property owner. For addresses where the property owner has not received the survey letter, the information contained in the DEQ-approved survey letter must be provided to the property owner. At addresses where surveys have not been done, and are still required, PLS must survey the property owner.

The survey as originally proposed by PLS, included inspection of properties to determine if any wells were present, but did not indicate that inspections would not be done as part of each survey. Results of the surveys indicate that PLS did not inspect the property for wells when the owner was not aware of any wells. Property owners whose homes are connected to City water may have no knowledge of whether a home ever had a well, or how to recognize if it ever did have a well, whereas PLS staff that perform the surveys should be trained to recognize signs of wells. It is the DEQ's preference that an inspection is done of each property that is to be surveyed, whether or not the owner is aware of any wells, if access can be obtained to do so.

In cases where the survey has been completed and an inspection was not done, the DEQ will not require PLS to return to the property to do an inspection. However, in cases where surveys are still required, PLS must request access to inspect the property, even if the owner is not aware of any wells, and perform an inspection, unless access is denied.

Regarding the request for additional documentation, please provide either the actual documents PLS has relied upon for determining that a property was never served by a water supply well, or provide the source of the information, such as the name of the municipality, department, staff person and type of records reviewed, as appropriate. It appears that PLS has relied upon statements by City staff in many cases. A listing of those addresses, with the source and type of information provided, would be adequate in those cases.

In some cases where the DEQ has requested additional surveys and inspections, it may also be possible that an additional records search could resolve specific addresses if records show that a building was hooked up to City water within one year of construction.

The DEQ is providing the following detailed list of tasks that are required to complete the well identification process in the PZ. The DEQ is directing PLS to perform the following tasks:

- 1) produce a detailed figure of the PZ that shows individual parcels and identifies the boundaries of each area/subdivision that is not being surveyed;
- 2) produce a list of addresses that are outside of the subdivision boundaries in the figure discussed in #1, above, that have not been surveyed or investigated;
- 3) review all parcels on the list in #2, above, to determine if they need to be surveyed and provide the basis for not surveying those that PLS does not propose to survey (i.e. vacant, well plugging record, documentation that they were provided with municipal water when developed);

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- 4) survey the owner of each parcel on the list in #3, above, where wells were known to exist, or where the absence of wells cannot be verified;
- 5) complete the measures specified in this letter for unresolved addresses in Table 1;
- 6) provide an electronic spreadsheet of all addresses outside of the subdivision boundaries on the figure described in #1, above, including the results of the review and surveys of new addresses and updates of any information in Table 1;
- 7) provide a final report with the above figure and spreadsheet that explains which subdivisions/areas were not surveyed and why;
- 8) for any expansion of the PZ, the same process shall be followed and PLS shall provide an addendum with a revised figure and spreadsheet;
- 9) inform the DEQ of any new information it becomes aware of regarding the status of any wells in the PZ and take any required measures, including the plugging of any water supply wells that are subsequently identified (the DEQ will maintain the spreadsheet).

This letter does not specifically respond to all comments raised in PLS's October 24, 2008 letter. We believe that any comments not specifically addressed have already been addressed in the DEQ's letter of July 21, 2008, which along with this letter, contains the DEQ's official position on the well identification process. The DEQ believes the tasks outlined above are reasonable and are required to ensure the long-term protectiveness of the PZ.

The DEQ considers PLS to be in violation of the PZ Order. Please provide your written commitment to perform the tasks outlined above, and a schedule for doing so, by March 30, 2009. If PLS does not commit to performing the required actions by March 30, 2009, the DEQ will coordinate with the office of the Department of Attorney General to take appropriate action to ensure their performance.

Sincerely,

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SK/KJ

Enclosure

cc: Mr. Saied Tousi, Pall Corporation
Mr. Richard Fleece, Washtenaw County
Ms. Lynelle Marolf, DEQ
Mr. Stephen Cunningham, DEQ
cc/enc: Ms. Celeste Gill, Department of Attorney General
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