



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
Jennifer Granholm, Governor • Steven E. Chester, Director

REMEDATION AND REDEVELOPMENT DIVISION
INTERNET: <http://www.michigan.gov/deqrrd>

INFORMATION BULLETIN

PROPOSED MODIFICATIONS OF CONSENT JUDGMENT AND COURT ORDERS REGARDING THE GELMAN SCIENCES, INC. SITE, WASHTENAW COUNTY May 2009

The Department of Environmental Quality (DEQ) is evaluating a May 4, 2009 *Comprehensive Proposal to Modify Cleanup Program* (PLS Proposal) submitted by Pall Life Sciences, Inc. (PLS) to modify current cleanup requirements specified in the Consent Judgment (entered in 1992) and subsequent Court Orders for this site of environmental contamination located in Washtenaw County, as shown in Figure 1 (items underlined below are shown in Figure 1). The modifications propose to divide the site into two areas (west and east of Wagner Road) and amend the cleanup objectives for these areas. The purpose of this bulletin is to: 1) summarize current response activities, 2) summarize the PLS proposal, 3) provide preliminary DEQ comments on the proposal, 4) identify opportunities for the public to attend a public meeting and/or provide written public comment on this proposal, and 5) provide the location of additional information (Related DEQ bulletins and fact sheets can be reviewed for a more complete understanding of the proposed modifications).

Summary of Current Response Activities

PLS, the successor to Gelman Sciences, Inc., is performing response activities with oversight by the Remediation and Redevelopment Division (RRD) of the DEQ. The 1992 Consent Judgment (CJ) and a subsequent Court Order, divide the site into five different areas, primarily based on the depth of 1,4-dioxane groundwater contamination. The deeper Unit E plume was discovered in 2001. After a PLS feasibility study, DEQ analysis and public comment, the Unit E plume remedy was established by a Court Order entered in December 2004.

The current objective for the four areas of groundwater contamination addressed in the CJ (Evergreen Core, Western and Marshy Systems) is to meet the generic residential groundwater cleanup criterion for 1,4-dioxane of 85 parts per billion (ppb). The December 2004 *Opinion and Order for Remediation of the Contamination of the "Unit E Aquifer"* requires interim response activities and a Prohibition Zone (PZ) that restricts the use of groundwater. PLS is required to prevent additional contamination above 85 ppb from migrating east of Wagner Road (into the PZ) to the extent practical, and to prevent concentrations above the criterion protective of surface water (2,800 ppb) from migrating east of Maple Road. The Maple Road requirement is intended to ensure that no contamination above 2,800 ppb discharges into the Huron River. PLS is required to monitor the plume to detect the potential for any migration outside of the PZ above 85 ppb.

PLS has been adding extraction wells and increasing the volume of water extracted and treated since significant remediation began in 1993. PLS is currently extracting about 1,100 gallons per minute (gpm) of contaminated groundwater from extraction wells throughout the site, treating and discharging most of that to the Honey Creek Tributary pursuant to a DEQ issued permit. One extraction well near Maple Road (TW-19) is extracting about 50 gpm, treating and reinjecting into the contaminated plume at that location.

The PLS Proposal does not address soil contamination, much of which was removed many years ago. The current approach is to evaluate any remaining soil contamination prior to termination of the groundwater cleanup to assure protectiveness.

Summary of PLS Proposal

Since discovery of the Unit D₂ plume, additional investigation performed by PLS has confirmed that there are connections between the Unit E plume and the shallower Unit D₂ plume in the Evergreen subdivision area, and that portions of the Unit E plume have migrated into the Evergreen subdivision area. It may no longer make sense to apply different cleanup standards to plumes that have taken separate paths to this area, and which cannot reasonably be distinguished or separately addressed.

PLS has been in discussion with the DEQ about these issues for over a year. The DEQ supported PLS's intention to look at the entire site comprehensively and to consider options that reflect new information, the complexity of this site, and changes to the statute that controls such cleanups. The PLS Proposal would split the site in two (the Western Area and Eastern Area) divided by Wagner Road, which is the western extent of the current PZ and Requested Prohibition Zone Expansion (RPZE) and proposes to amend the cleanup objectives.

PLS Proposal for Western Area

West of Wagner Road, selected extraction wells would be operated for mass removal and to prevent expansion of areas above 85 ppb, except for migration into the PZ. The initial total extraction is proposed to be about 600 gpm, including a new extraction well at Wagner Road to intercept higher concentrations of contamination migrating into the Evergreen area. As 1,4-dioxane in each extraction well decreases to 500 ppb, PLS would consider a lower extraction rate. PLS proposes to cease extraction when it can establish that the extent of the plume above 85 ppb would not expand, and then obtain deed restrictions on properties where 1,4-dioxane exceeds 85 ppb.

PLS Proposal for Eastern Area

East of Wagner Road, two extraction wells in the Evergreen area (LB-1 & LB-3) and one at Maple Road (TW-19) would be operated at a total of 200 gpm for mass removal. An additional extraction well would be considered near the intersection of Rose and Valley. The PZ would be expanded into the Evergreen subdivision area and 1,4-dioxane above 2,800 ppb would be prevented from migrating east of Maple Road. PLS would still monitor the migration of the plume to detect the potential for any migration outside of the PZ and RPZE above 85 ppb. Because of chronic problems with plugging of the injection wells, a new pipeline is proposed to transfer the groundwater extracted from TW-19 to the Evergreen area, where it would then be transferred with the water extracted from LB-1 and LB-3 through the deep pipeline back to the PLS property for treatment. The total capacity of that pipeline is 200 gpm. PLS would also perform a well identification survey within the RPZE, hook up any homes that rely on well water to city water, and plug any unused wells.

Preliminary DEQ Comments

The DEQ typically performs a preliminary review of such proposals prior to a public comment period. However, due to a limited six-week response time

(May 4 – June 15, 2009) established by the Washtenaw County Circuit Court, the DEQ has scheduled its public meeting and public comment period concurrent with its review of the PLS Proposal. While the DEQ has provided some input to PLS regarding potential revisions to the cleanup, PLS's Proposal has not been approved or agreed to by the DEQ. As with any submittal received by the DEQ, its options include: "approve", "approve with conditions", or "deny with an explanation of that decision".

The DEQ's primary concern is with the potential for northeasterly migration of groundwater contamination outside of the RPZE. The PLS Proposal indicates that the water level study that PLS performed, at the DEQ's request, confirms that any migration of contamination in the Evergreen area would be to the east, within the RPZE and PZ. The DEQ does not believe the water level study is sufficient to support that conclusion. In response to the DEQ's concerns about the results of that study, PLS agreed to install one set of monitoring wells; however, the DEQ believes that a minimum of two sets of wells are needed to confirm PLS's analysis. The DEQ is also concerned that the extent of groundwater contamination is not well enough defined in some areas. The DEQ's review is continuing.

Public Meeting

May 27, 2009, 7:00 PM

**Haisley Elementary School, 825 Duncan
Ann Arbor, Michigan**

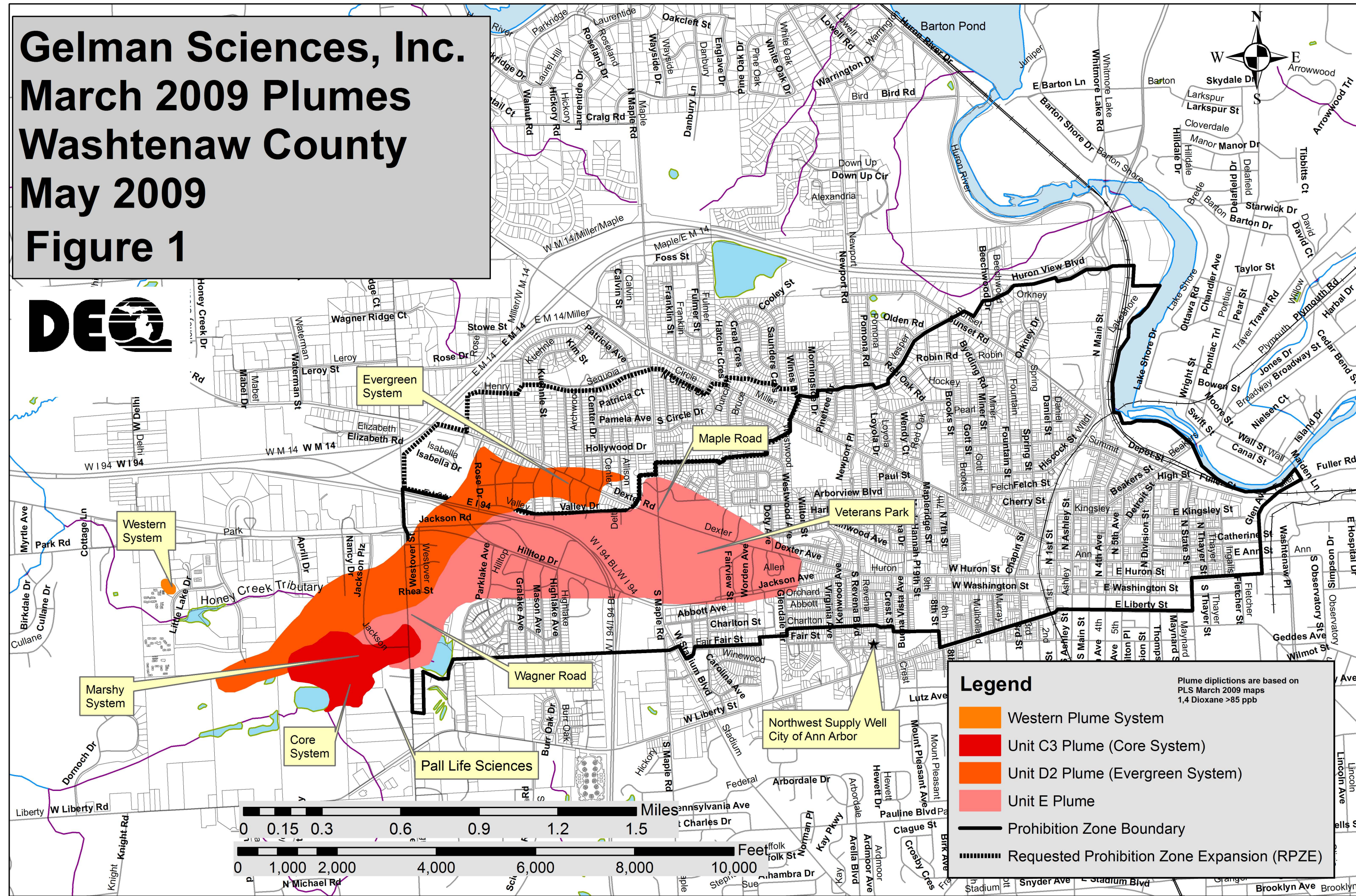
Written Comment

To allow comment to be considered by DEQ, it must be received by June 8, 2009. Written comments can be sent to: Ms. Sybil Kolon, DEQ, Remediation and Redevelopment Division
301 E. Louis Glick Hwy., Jackson, MI 49201
e-mail: kolons@michigan.gov phone: 517-780-7937

The PLS Proposal and related documents are available at the Gelman Information Repositories, including the Ann Arbor District Library, 343 South Fifth Avenue, during normal business hours, **AND** on the DEQ's Gelman web site (www.michigan.gov/deqrrd, scroll to "Contaminated Sites List" and click on "Gelman Sciences, Inc. Site of Contamination").

The Department of Environmental Quality will not discriminate against any individual or group on the basis of race, sex, religion, age, national origin, color, marital status, disability or political beliefs. Questions or comments should be directed to the DEQ Office of Human Resources, P.O. Box 30473, Lansing, MI 48909

Gelman Sciences, Inc. March 2009 Plumes Washtenaw County May 2009 Figure 1



Legend

- Western Plume System
- Unit C3 Plume (Core System)
- Unit D2 Plume (Evergreen System)
- Unit E Plume
- Prohibition Zone Boundary
- Requested Prohibition Zone Expansion (RPZE)

Plume dipictions are based on
PLS March 2009 maps
1,4 Dioxane >85 ppb