



ANN ARBOR
WATER

Gelman Plume & 1,4-Dioxane Quarterly Update

April - June 2023

Settlement Updates

On May 17, 2023, the State of Michigan and Gelman Sciences, LLC entered into the 4th Amended Consent Judgement (CJ). The 4th Amended CJ replaces the 3rd Amendment to the Consent Judgement that was in place since September 15, 2022, when the Michigan Court of Appeals vacated the Response Activity Order. Key elements of the 4th Amended CJ were identified by Michigan Department of Environment, Great Lakes, and Energy (EGLE) personnel in a June 6, 2023 Coalition for Action on Remediation of Dioxane (CARD) meeting; and by EGLE personnel at Congresswoman Debbie Dingell's community update forum to address the Gelman Dioxane Plume, held on June 28, 2023. Those key elements include the following:

- The residential drinking water criteria was reduced from 85 micrograms per liter (ug/L) to 7.2 ug/L, and the groundwater to surface water (GSI) criteria from 2800 ug/L to 280 ug/L. This is in line with current State of Michigan generic cleanup criteria.
- The Prohibition Zone has been expanded because of the more stringent criteria.
- Monitoring wells will be installed south of I-94 and west of Wagner Road. One is required for installation in a specific aquifer. The second location will have two to three monitoring wells installed, depending on the aquifers present.
- The Western Area Monitoring Plan (WMP) will be finalized. The WMP describes the frequency and purpose (for example, compliance, non-expansion) that each well will be sampled.
- The Eastern Area Monitoring Plan (EMP) is expected to be submitted to EGLE for review in July 2023.
- An extraction well will be installed in the Rose Drive area. This will either be a new extraction well or a repurposed existing injection well. It will be piped to the existing infrastructure and treated at the Gelman facility.

EPA Updates

A community forum hosted by Congresswoman Debbie Dingell to address the Gelman dioxane plume took place on June 28, 2023. Congresswoman Debbie Dingell invited representatives from the Environmental Protection Agency (EPA), EGLE, and the Michigan Attorney General's Office. Also present were numerous Washtenaw County, City of Ann Arbor, Scio Township and Ann Arbor Township elected officials and personnel. EPA and EGLE personnel provided updates and community members asked questions. A recording of the event is available on Congresswoman Dingell's Facebook page of recorded events: <https://www.facebook.com/RepDebbieDingell>

The EPA Superfund Branch Chief, Tim Fischer, provided updates on the EPA Superfund Site Assessment Process. Nuria Muniz, EPA National Priority Listing (NPL) Coordinator for Region 5, presented at the CARD meeting on June 6, 2023. Information from both of these meetings is presented below.

- The Site Inspection (SI) Report, for the sampling activities completed by EPA in 2022 is in progress. The SI Report is expected to be released in late July 2023.
- The purpose of the SI is to evaluate if a site is eligible as an NPL candidate.
- Another groundwater sampling event will occur for the wells surrounding the Gelman property. These will be incorporated into the SI Report document to build a robust administrative record to support the decision to move forward with NPL or not.
- Preliminary data indicates that the site could potentially qualify as an NPL site. However, the decision is subject to EPA headquarter and Administrator review, as well as agreement from EGLE.
- Listing a site for NPL requires a federal rulemaking process. There is a 60-day public comment period. The time between the proposed and final ruling is approximately 6 months to answer questions. At the end of that timeframe, the score will determine if the site can be listed.
- If the site is listed, EPA would be the lead enforcement agency on the site but would work closely with EGLE.
- If EPA is the lead enforcement agency, delineation will be the focus.
- If the site is listed, EPA would embark on a thorough feasibility study and remedial investigation to address the concerns at the site. This is typically 4-6 years before a remedy or remedies are selected.

EPA updates regarding the Gelman site are online at at <https://www.epa.gov/mi/gelman-sciences> and answers to frequently asked questions are at <https://www.epa.gov/mi/gelman-science-frequently-asked-questions-0>.



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Sentinel Well Installation

In November 2022, the city installed two sentinel monitoring wells. Sampling was completed at these wells in May 2023 for 1,4-dioxane using Method 522 analysis. There were no detections in either well. The monitoring wells will be sampled again in the third quarter 2023. An aquifer analysis is also in progress to determine the hydraulic conductivity of the two aquifers.

Agency Updates

MS4 Permit

Concentrations of 1,4-dioxane have been entering the Allen Creek Drain (ACD) stormwater system. The ACD system is part of Washtenaw County's Municipal Separate Storm Sewer System (MS4). On December 15, 2022, the Washtenaw County Water Resources Commission Office sent a letter to Gelman indicating that action was required to remain in compliance with the County's MS4 permit requirements regarding outstanding issues previously noted. The letter stated that the migration of 1,4-dioxane into ACD must cease or be in compliance with applicable State and County statutes and requirements.

NPDES Permit

- EGLE is reviewing the National Pollutant Discharge Elimination System (NPDES) permit application that was submitted for Gelman's current system on April 4, 2019.
- EGLE is nearing completion of the permit review. Once the review is complete, draft comments will be provided to Gelman. After Gelman's review, the proposed permit will be made available for public review and EGLE will hold a public hearing on the permit application.

EGLE / CARD

- CARD meetings were held virtually on April 4, May 2 and June 6, 2023. Additional personnel from EGLE were present for the June meeting.
- EGLE provided the following updates:
 - The 4th Amended Consent Judgement was signed on May 17, 2023.
 - As part of this, additional extraction will take place in the rose well remediation area. EGLE and Gelman personnel met regarding implementing this.
 - Two additional monitoring wells are being installed in the western plume. A western monitoring plan is currently being drafted and will be submitted to EGLE for review.
 - Gelman is revising the GSI work plan for Allen Creek to make sure it covers all required components of the 4th Amended Consent Judgement.
- Washtenaw County Health Department and EGLE are planning to complete residential well sampling this summer. Approximately 250 residential wells have been identified for this year's sampling. Samples will be submitted to the EGLE laboratory for analysis using method 8260 with 0.5 parts per billion (ppb) reporting limit. After sampling is complete, results will be sent to homeowners and added to the EGLE database.
- Ann Arbor Township is also planning to complete residential sampling at 24 residences. Letters from the Township for the sampling have been mailed to homeowners. Ann Arbor Township is securing a contract with an environmental firm to complete the sampling.
- The next scheduled meeting will be held on August 1, 2023, at 6 p.m. via Zoom. There is no meeting in July.

Pall Groundwater Treatment Updates

Total Volume of Groundwater Treated

March 2023 - May 2023

80,472,706 gallons

Mass of 1,4 Dioxane Removed

March: 85.25 lbs

April: 94.65 lbs

May: 96.01 lbs

Total: 275.90 lbs

The mass calculations were determined from the NPDES monthly discharge reports using the maximum daily influent concentration and maximum daily effluent concentrations. The volume was calculated from the average monthly flows in the monthly discharge report.

Next Quarterly Report Due October 2023

- 4th Amended CJ Updates
- EGLE and CARD Updates
- MS4 Permit
- NPDES Permitting Progress
- Sentinel Well Monitoring

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