

Michigan Department of Environment, Great Lakes, and Energy
Quarterly Other Cleanup Authority Report - Summary of Recent Activities and
Response Actions
Gelman Sciences Inc. Site
December 30, 2019

This document provides a brief update of activities conducted from May 2019 thru December 2019. Links to other historical information about the Gelman site are also provided below.

2019 Residential Well Sampling

The residential and business water supply well sampling activities for 2019 were completed in September 2019. In 2019, out of 108 water supply well samples collected, none exceeded the 7.2 parts per billion (ppb) criterion for 1,4-dioxane (Dioxane) in residential drinking water. Dioxane was detected in three residential wells on the south side of Elizabeth Road at concentrations ranging from 1-2 ppb, well below the 7.2 ppb criterion. The three properties have had previous detections of Dioxane ranging from 1-4 ppb. In addition, two new detections of Dioxane were identified during the May 2019 sampling activities. Dioxane was detected in a residential well on the north side of Elizabeth Rd and in a well on Breezewood Ct to the west near Honey Creek. Both detections were at 1 ppb. Confirmation of the detections at both new locations were not confirmed during resampling events in 2019.

Also, during the 2019 sampling activities samples were collected in selected wells for Full Scan Volatile Organic Compound (VOC) Analysis and Semi-Volatile Organic Compound (SVOC) analysis. A total of 37 samples were analyzed for VOC's and 7 samples were analyzed for SVOC's. Two VOC's, Tetrahydrofuran and Chloroform, were detected at one property on W Liberty Avenue at concentrations of 5 ppb and 0.6 ppb respectively during sampling in May 2019. Confirmation resampling was conducted in August 2019. Both contaminants were not detected. Currently both contaminants are not considered to be related to groundwater contamination from the Gelman Site. SVOC contaminants were not detected during the 2019 sampling activities.

In collaboration with the Washtenaw County Health Department (WCHD), the Department of Environment Great Lakes and Energy (EGLE) initiated sampling of residential and business water supply wells within and around the known Dioxane groundwater contamination plume in the 1990's as part of the monitoring activities to evaluate and abate risk of exposure to contamination above the state cleanup criterion for drinking water. It should be noted that there is no applicable federal drinking water criterion (MCL criterion). Both EGLE and the WCHD annually review which water supply wells should be sampled. The wells are sampled by WCHD, usually once per year with specific wells sampled twice per year. As stated above WCHD was able to collect 108 samples of the 117 samples proposed in 2019.

Washtenaw County communicates results directly to well owners and building occupants. Results (identified by address) for water supply well samples collected since 1998 and including 2019 are posted on the EGLE “Gelman Sciences, Inc. Site of Contamination Information Page” under the “Recent Analytical Data” tab which can be accessed using the link provided below.

[Recent Analytical Data](#)

2020 Residential Well Sampling

For 2020, a total of 194 water supply wells are planned to be sampled as part of the ongoing long term residential and business water supply well sampling program. These include locations along Dexter Road, W. Delhi Road, Breezewood Court, Lakewood Avenue, Rose Drive, and Christine Drive. The 2020 sampling will be initiated in March and April 2020 and be completed by October 2020.

Monitoring Well Sampling

Gelman currently conducts sampling and analysis of approximately 300 monitoring wells (MWs) throughout the site and vicinity.

The MWs have been installed for the specific purpose of monitoring and evaluating the Dioxane contamination in groundwater. The water from these wells is not used for drinking, irrigation or any other purpose. Specific MWs are sampled on a monthly, quarterly, semi-annual, annual, and biennial basis following EGLE approved monitoring plans for specific areas of the site identified as the Western Area, Eastern Area and the Little Lake Area. EGLE collects samples of selected MWs with Gelman (i.e. “split sampling”), periodically, as a check of the quality and accuracy of data submitted by Gelman.

From April 2019 thru December 2019 Gelman collected and analyzed samples from 557 MW locations as identified below:

- April 82 MWs Sampled
- May 77 MWs Sampled
- June 30 MWs Sampled
- July 73 MWs Sampled
- August 65 MWs Sampled
- September 43 MWs Sampled
- October 67 MWs Sampled
- November 67 MWs Sampled
- December 53 MWs Sampled

Results of monitoring well samples collected by both Gelman and EGLE are posted on the EGLE “Gelman Sciences, Inc. Site of Contamination Information Page” under the “Recent Analytical Data” tab. Historic data and results since 2003 are also posted.

A 2015 map which depicts the locations of the monitoring wells can also be found on the EGLE Gelman webpage under the Maps heading (See link below).

[Monitor Well Location Map](#)

Current Remediation Activities

Current remediation activities are performed by Gelman and involve the operation of groundwater extraction wells located at the former Gelman Plant site and elsewhere in Scio Township and the City of Ann Arbor. From April 2019 thru December 2019 Gelman removed contaminated groundwater at an average rate of 475 gallons per minute from extraction wells.

From April 20019 through December 2019 Gelman pumped and treated approximately 188,157,032 gallons of contaminated groundwater from extraction wells removing 623 pounds of Dioxane as listed below:

	<u>Extraction Wells Operated</u>	<u>Groundwater Pumped</u>	<u>Dioxane Removed</u>
April	10	20,836,269 gallons	70 pounds
May	14	21,120,602 gallons	70 pounds
June	16	18,731,608 gallons	61 pounds
July	13	21,164,952 gallons	71 pounds
August	13	21,913,389 gallons	78 pounds
September	13	20,879,076 gallons	70 pounds
October	17	21,414,406 gallons	68 pounds
November	12	20,565,845 gallons	67 pounds
December	12	21,530,885 gallons	68 pounds

Contaminated groundwater collected from the extraction wells is piped to the Gelman plant and treated using ozone and hydrogen peroxide. The treated groundwater is then discharged to a tributary of Honey Creek under a National Pollutant Discharge Elimination System (NPDES) permit issued by EGLE. The current NPDES permit became effective on February 1, 2016 and expired on October 1, 2019. The NPDES permit establishes discharge limits for Dioxane and treatment chemicals and byproducts. The current permit's discharge limits for Dioxane are 7 ppb (monthly average) and 22 ppb (daily maximum). The Gelman NPDES permit renewal request, submitted in April 2019, is currently under review by EGLE Water Resources Division.

Until the review is completed and a new permit is issued, the current permit limits remain in effect.

Also, during the April 2019 through December 2019 period Gelman completed routine maintenance on selected extraction wells, and completed approved abandonment of extraction well TW-12 and monitoring wells MWs- 62 s, i, and d. Also, during this period maintenance was completed on the treatment system including cleaning of the Red Pond. The Red Pond is the location on the Gelman property where contaminated groundwater, from all extraction wells, is collected and stored prior to treatment.

Data and information about the remediation activities can be found in the monthly NPDES monitoring reports and quarterly progress reports submitted by Gelman. Mass reduction (Pounds of Dioxane removed) in each of the aquifer systems are identified in the Gelman quarterly progress reports. Historic and current information on pumping rates of extraction wells can be found in the “Average Monthly Extraction Flow Rates” table updated and submitted quarterly by Gelman. The reports and table are posted to the EGLE Gelman web page under the “Selected Documents” tab (See link below).

[Selected Documents](#)

A 2015 map which depicts the locations of the extraction wells (purge wells) can also be found on the EGLE Gelman webpage under the Maps heading (See Monitor Well Location Map link on Page 2).

Surface Water and Seep Sampling

On August 7, 2019 EGLE sampled selected surface water locations, as listed below, for Dioxane. The results of the 2019 sampling activities are summarized below:

Surface water samples have been analyzed from:

- Unnamed Tributary of Honey Creek at Park Rd – 4.1 ppb
- Honey Creek/Huron River (HC/HR) confluence – Not Detected
- Honey Creek at Dexter Rd – 1.5 ppb
- Honey Creek at W Huron Drive – 1.2 ppb
- Huron River off N Maple Rd Bridge – Not Detected

Results of surface water samples collected by both Gelman and EGLE are posted on the EGLE Gelman web page under the “Recent Analytical Data” tab (See link below).

EGLE is planning to collect surface water samples at the above referenced locations along with previous sample locations again in 2020.

[Recent Analytical](#)

Recent Investigation(s)

At the request of the Washtenaw County Water Resources Commission, EGLE initiated a six-month sampling investigation of the Allen Creek Drain at 7 specific manhole locations. The locations are summarized below:

Location #1 – Manhole in Westpark (that has been previously sampled as Allen Creek -West Park SW)

Location #2 – Manhole on Chapin Street.

Location #3 – Manhole on Maple Ridge

Location #4 – Manhole on Wildwood Ave

Location #5 – Manhole on Murray Ave

Location #6 – Manhole on Eighth St

Location #7 – Manhole in the ravine in Maryfield/Wildwood Park

During the planning of the investigation EGLE requested that Gelman conduct the investigation using the work plan developed by EGLE. Gelman voluntarily agreed and conducted the sampling and analysis of the samples for Dioxane. EGLE oversaw the sampling activities and collected samples for Full Scan VOC analysis at the EGLE Environmental Laboratory (EGLE Laboratory) at each of the 7 locations during each sampling event. EGLE also collected samples, for Dioxane analysis at the EGLE Laboratory, from selected locations during each sampling event. The monthly sampling events were conducted from February 7, through July 24, 2019. A summary of the Dioxane results from these sampling events is provide in the table below.

<u>Location</u>	<u>Concentration Range</u>
West Park SW	15 – 22 ppb
Chapin Street	5.8 – 11.0 ppb
Maple Ridge	ND
Wildwood	ND
Murray	0.98 – 1.3 ppb
Eighth	0.96 – 1.0 ppb
Maryfield/Wildwood Park	ND

Full analytical results for the specific sampling events can be found in the “Summary Report Allen Creek Drain Sampling Investigation” which is posted on

the EGLE Gelman web page under the “Selected Documents” tab which can be accessed using the link provided below.

[Summary Report](#)

Other Recent Activities

EGLE attended, provided information, and answered questions at nine local meetings concerning the Gelman Site from April 2019 through December 2019.

These meetings included:

- Coalition for Action on Remediation of Dioxane (CARD) Monthly Meeting, Washtenaw County Western Service Center, April 2, 2019.
- Gelman Site Review Meeting with City of Ann Arbor Water Treatment Plant Personnel and Tetra Tech, City Consultant, City of Ann Arbor Water Treatment Plant, April 3, 2019.
- Coalition for Action on Remediation of Dioxane (CARD) Quarterly Technical Meeting, Scio Township Offices, May 7, 2019.
- Coalition for Action on Remediation of Dioxane (CARD) Monthly Meeting, Washtenaw County Western Service Center, June 4, 2019.
- Coalition for Action on Remediation of Dioxane (CARD) Monthly Meeting, Washtenaw County Western Service Center, July 2, 2019.
- Coalition for Action on Remediation of Dioxane (CARD) Quarterly Technical Meeting, Scio Township Offices, August 6, 2019.
- Coalition for Action on Remediation of Dioxane (CARD) Monthly Meeting, Scio Township Offices, September 3, 2019.
- Coalition for Action on Remediation of Dioxane (CARD) Quarterly Technical Meeting, Scio Township Offices, November 5, 2019.
- Coalition for Action on Remediation of Dioxane (CARD) Monthly Meeting, Scio Township Offices, December 3, 2019.

Recent Court Actions

The court ordered confidential negotiations to modify the current Consent Judgement are on-going. The negotiating parties include Gelman, EGLE, the City of Ann Arbor, Washtenaw County, Scio Township, and the Huron River Watershed Council.