

BASF North Works Virtual Public Meeting

April 30, 2025

Housekeeping

Please keep your microphone/phone muted unless speaking





- A Q & A session will be held after the presentation
 - At that time, if you wish to ask a question, raise your hand and the moderator will call on you; once called upon, please state your name and/or association prior to asking your question, which we ask to remain less than one minute
 - You may also type your question into the chat box or contact the moderator via email (during or after the meeting) at <u>Safakas.Kirstin@epa.gov</u>
- Media/press assistance is available
 - Any outlets interested in an interview or statement may follow up with EPA's Press Officer (during or after the meeting) at <u>Pressley.Macy@epa.gov</u>



Introductions- U.S. EPA

- Kirstin Safakas, Community Involvement Coordinator
- Macy Pressley, Press Officer
- Scott Ireland, LCRD Deputy Division Director
- Shilpa Patel, RCRA Acting Branch Manager
- Avi Lapp, RCRA Acting Section Supervisor
- Valerie Voisin, RCRA Project Manager
- Doug Lam, RCRA Project Manager
- Heather Williams, GLNPO Project Manager

Introductions- State

Elizabeth Garver, EGLE MMD Corrective Action Unit Supervisor

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- Mindy Steffler, EGLE MMD Corrective Action Unit Supervisor
- Sally Castle, EGLE DWEHD Surface Water Engineer
- MDHHS

Agenda

- Opening Remarks- Scott Ireland, U.S. EPA
- BASF North Works Progress Update- Valerie Voisin & Doug Lam, U.S. EPA

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- Drinking Water and Outfall Update- Missy Steffler, Elizabeth Garver, & Sally Castle, EGLE
- Q & A Session- All agencies & participants



Site Background

- Industrial use since late 1800s
- Original marshland of the Detroit River drained and filled in the early 1900s
- Active industrial property that manufactures chemicals and other products
- Under a Federal Cleanup Order





Clean Up Process under Hazardous Waste Cleanup Program





How our understanding has evolved

- Contaminants on site:
 - Mercury, PFAS, Volatile Organic Compounds (VOCs), Semi Volatile Organic Compounds (SVOCs), Metals, Available Cyanide, DDT (1 location)
- Initial focus on potential source areas
 - BASF investigated Solid Waste Management Units and Areas of Concern
 - Remedy proposal focused on these distinct areas
- Investigations showed that contamination was potentially more widespread
 - Fill used in historic property development a continuous source of contamination to groundwater
- Groundwater management needed on a site-wide basis

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Current Interim Measures

Operation of the Targeted Groundwater Interim Measure

- Operating since July 2023
- Two pumping wells extract groundwater from the southern section of the property
- Extracted groundwater is treated for PFAS and PFOS removal
- Treated groundwater is discharged to Downriver Utility Wastewater Authority (DUWA)
- Removed 3-12 gallons per minute depending on conditions
- Over 6.3 million gallons removed to date
- Development of the Comprehensive Groundwater Interim Measure



Comprehensive Groundwater Interim Measure



Priority: Mitigate contaminated groundwater from entering the Detroit River

- Physical barrier for entire downgradient perimeter
- Groundwater collection with on-site treatment

Building on the 30% Design

- Perimeter Barriers
 - Slurry Wall to Steel Sheet Pile (Yellow)
 - Reason: Inability to install slurry walls near other buildings/utilities
- Water Treatment Facility
 - Addition of the 300,000-gallon storage tank
 - Tanks hold water if too much is extracted for system to treat



Groundwater Preparation for 95% Design

Inward gradient

- 0.5 ft lower compared to the Detroit River, rolling 30-day period
- Groundwater Model
 - Groundwater Height primarily impacted by precipitation
 - Refinement for stormwater and water entering groundwater table through rain/snow
 - More in-depth calibration of the groundwater model
 - Takes in additional information on precipitation
- Storage Tanks
 - Two storage tanks will be added to the design rather than one
 - Storage increased from 200,000 gallons to 300,000 gallons



Soil Investigation Preparation for the 95% Design

- Fill Material, Tank locations:
 - Heavy Dock Investigation
 - Investigate area behind historic heavy dock for any holes beneath the surface
 - Storage Tanks Geotechnical Investigation
 - Determine space and location of the initial 200k gallon water tank
- Clay Depth Refinement
 - Geotechnical soil borings along southern perimeter
 - Updated cross sections with new basal clay depth
 - Updated estimates for install depth of steel sheet pile sections

Heavy Dock Investigation



Southern Perimeter Investigation





Comprehensive Groundwater Interim Measure Schedule



Contact Information- U.S. EPA

- Kirstin Safakas, Community Involvement Coordinator
 - <u>Safakas.Kirstin@epa.gov</u>
- Valerie Voisin, Project Manager,
 - <u>Voisin.Valerie@epa.gov</u>
- Doug Lam, Project Manager,
 - Lam.Doug@epa.gov

Surface Water Discharges

- National Pollutant Discharge
 Elimination System (NPDES) Permit
- Three (3) Outfalls
- Storm water, process water, and groundwater infiltration
- Observation and sampling requirements
- 5 Year Permit Cycle
- https://mienviro.michigan.gov/nsite/





Surface Water Discharges

- Sanitary wastewater and some process flows, including contaminated groundwater, go to the local wastewater treatment plant
 - Downriver Utility Wastewater Authority (DUWA)
- DUWA is also subject to NPDES Permit requirements
- Industrial Pretreatment Program





PFAS Study

- Outfall sampling for PFAS began in 2018, upon request from EGLE Water Resources Division (WRD)
- Outfall 001 exceeded Water Quality Standards for PFOS
- PFAS Source ID Study
- December 2021 study indicated that groundwater contaminated with PFAS infiltrated the sewer system





BASF ISW PFAS ACO Summary

- Entered January 13, 2025
- Compliance date of September 30, 2028
 - ▶ Outfall 001 PFOS to \leq 11 ppt
- Initial one-year compliance monitoring
 - 12 consecutive months of sampling conducted on four consecutive days
 - After one year submit report (monitoring results and calculated monthly averages)
 - **EGLE** will review and make compliance determination
 - If non-compliant:
 - Quarterly monitoring
 - Corrective actions
 - Compliance certification
 - If compliant -Annual sampling until NPDES permit reissued/other EGLE determination



BASF Groundwater Extraction System Overview

- Installed as required by Consent Decree 83-CV-4712-DT
 - Consent Decree: entered January 1986
 - System Basis of Design: June 1986

Designed to prevent migration of contaminants

- Groundwater extraction wells in three areas
- Designated system flow rate
- Groundwater treatment system
- Piezometers to monitor groundwater levels and flow conditions







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Performance Review and Modification Request

- Monitoring Results
 - Sampling
 - Groundwater Flow
- Flow Rate Review
- EGLE Request for Modification: March 10, 2025
 - Description of current operating procedures
 - Modifications to system or operating procedures to achieve design flow rates and gradients
- Response Deadline: 60 days from receipt of request



Contact Information- EGLE Materials Management Division

- Elizabeth Garver, Corrective Action Unit Supervisor
 - garvere2@michigan.gov
- Marc Messina, Project Manager and Senior Geologist
 - messinam@michigan.gov
- Christina Hebert, Environmental Quality Analyst
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MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

Wyandotte Drinking Water Plant

GLWA Fighting Island intake Wyandotte intake



- Conventional treatment plant, not designed to remove PFAS
- Single intake
 - 42 in diameter pipe
 - Approximately 1,500 ft off river shore
 - Approximately 20 ft under water

C2R2 Grant - Planned Upgrades (Consolidation and Contamination Risk Reduction)

- Systems eligible to apply with a contaminant result greater than 50% of a maximum contaminant level (MCL)
- Awarded funds in December 2021 to replace filter media with granular activated carbon (GAC) to provide another public health protection barrier
- As of April 2025, the City received approval by the utility commission, and has moved forward with a feasibility study and design phase.
- EGLE continues to monitor sampling results and is working with the City through this process.



Wyandotte Drinking Water Plant

- Wyandotte has participated in the state-funded PFAS intake sampling since 2018 and continues to sample.
- Prior to 2023, PFAS detections occurred in July August 2019 (2 ppt - 49 ppt) and April 2022 (2 ppt - 95 ppt).
- Beginning in 2023, sample analysis included "J-flagged" detections.
- Since 2023, Wyandotte has returned low level PFAS detects ranging from 0.3 ppt - 2.4 ppt, with detected <2 ppt estimated.
- In 2024, Wyandotte continued to monitor Mercury, PFAS, and VOCs on a quarterly basis at the plant tap and intake. They did not have any detections or monitoring violations.



Wyandotte Public Health Assessment

- Petition filed with the Agency for Toxic Substances and Disease Registry (ATSDR) in February 2024
- Petition accepted November 2024
- Will be conducted by the Michigan Department of Health and Human Services
- Consists of a data review, exposure analysis, and recommendations
- Contact information- MD
 - Contact Joost van't Erve at <u>vantErveJ@michigan.gov</u>

Contact Information- MDHHS

- Joost van't Erve, Toxicologist
 - vantErveJ@michigan.gov

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Thank You!

• EPA Webpage: https://www.epa.gov/hwcorrectiveactioncleanups/epa-rcra-id-mid064197742

• EGLE MPART Webpage:

https://www.michigan.gov/pfasresponse/investigations/sites-aoi/waynecounty/basf-northworks-wyandotte