



Bedford Plant Corrective Action
Public Information Session
September 29, 2022



Project Update Since June 2019 Public Meeting

Parcel 400
Area

TSCA Vault

Pilot Groundwater Trench
Collection System

Spring 18

Stormwater Pond

Groundwater
Treatment
Plant

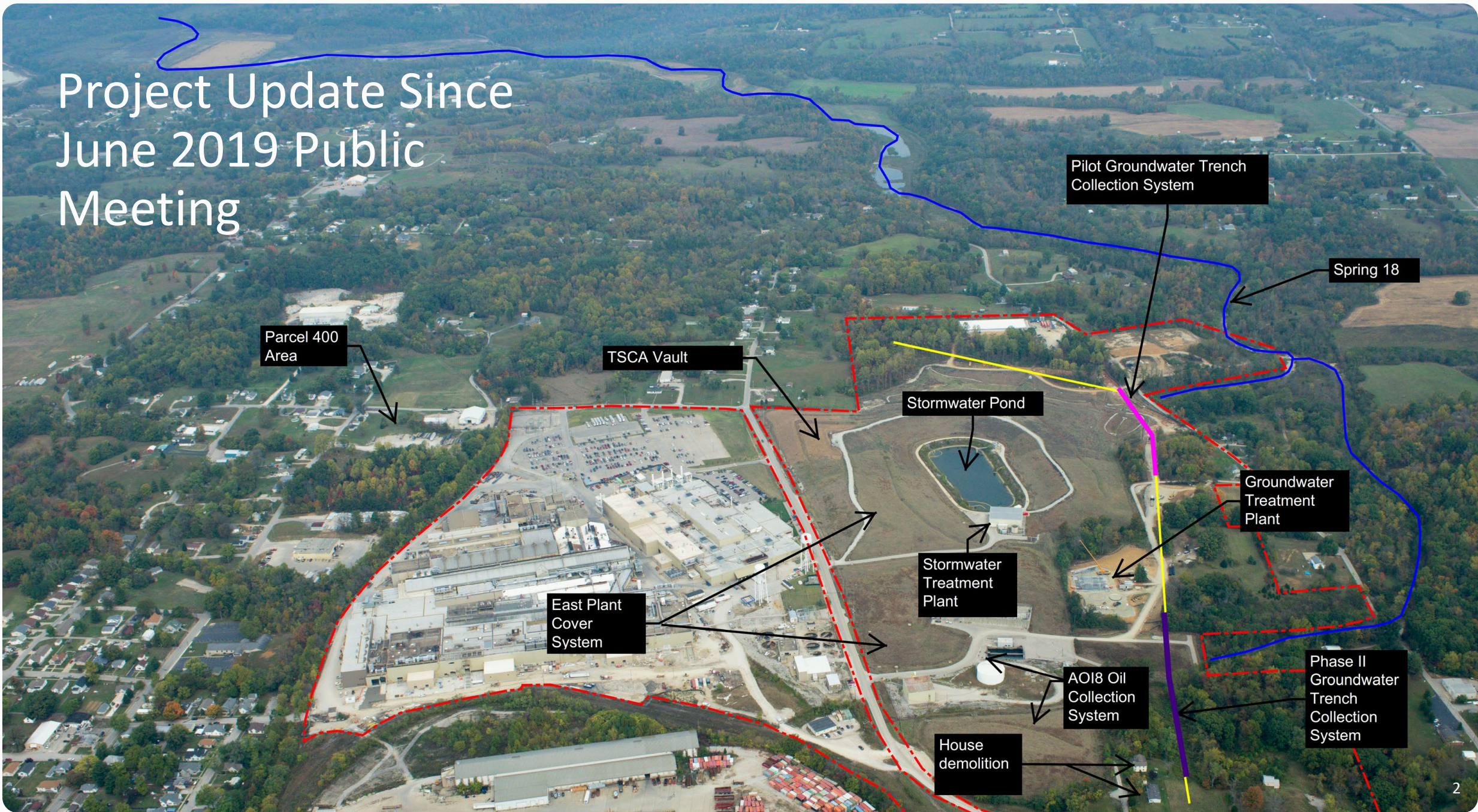
East Plant
Cover
System

Stormwater
Treatment
Plant

Phase II
Groundwater
Trench
Collection
System

AO18 Oil
Collection
System

House
demolition





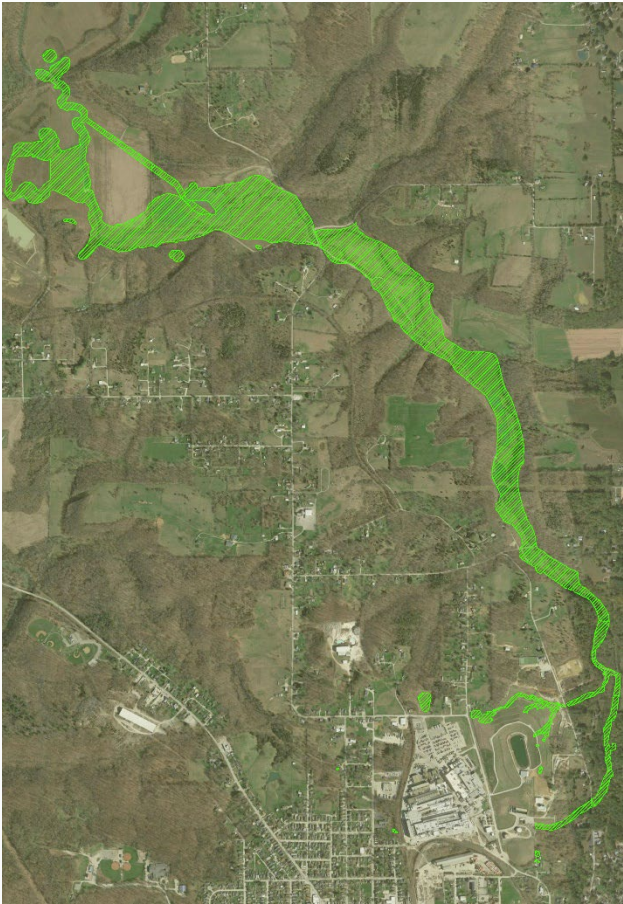
Project Programs

- Comprehensive Environmental response, Compensation, and Liability Act (CERCLA) Removal Action (RA) elements:
 - Bailey’s Branch and Pleasant Run PCB cleanup
 - control of impacted springs and seeps along the creek
 - active removal work has been completed since 2010 with restoration completed in 2014
- RCRA Corrective Action (CA)
 - conduct comprehensive RCRA Facility Investigation (RFI)
 - implement Interim Measures and Final Corrective Action Measures
 - work is ongoing

CERCLA Removal Action



Remediated and restored approximately 7 miles of creek and 140 acres of floodplain

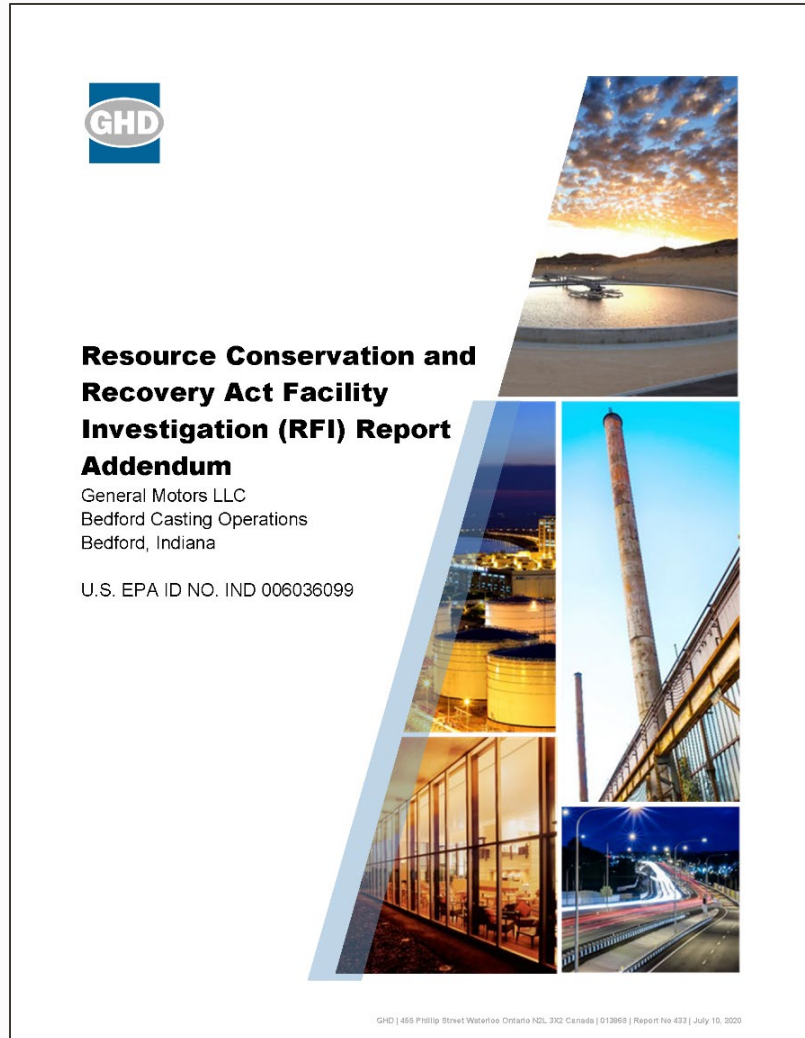


Spring 018 IM Completion

- Low level PCBs in the water discharging from Spring 018
- Completed Removal Actions:
 - removal of PCB contaminated sediments in creek channel and impacted bedrock in adjacent areas (swallet areas)
- Completed Restoration Actions
 - backfilling and restoration of major swallet areas filled with rock and cement
 - sealed creek bed and exposed bedrock side-walls
- Conducted 6 years of post-restoration monitoring that demonstrated discharges are acceptable
- Developing plans to:
 - remove berm containment on north side to allow free flow of water
 - abandon monitoring wells/coreholes
 - Stabilize damaged area of the creek bed restoration



RFI Addendum No. 1



- Submitted to U.S.EPA in 2020
- RFI Addendum Activities included:
 - Two specific investigations were completed subsequent to the submittal of the RFI Report
 - sampled additional areas not identified as areas of waste storage, use or disposal to assess worker exposures - do not exceed U.S.EPA's criteria that would require corrective measures
 - investigated former Clarifier area following completed upgrades to the industrial water treatment plant - exposure barriers and Engineering Controls address will address potential worker exposures
 - Updated groundwater flow and PCB transport Conceptual Site Model based on data and information collected since 2015 RFI Report submittal
 - Summarized the interim measures completed post-RFI report (the Pilot Groundwater Collection Trench)

RFI Addendum No. 1

Incremental Sampling of Non-Covered Areas



- Surface soil sampling was conducted in select areas. Sampling targeted:
 - areas not covered by East/West Plant Cover System
 - unpaved areas maintained by Plant
 - areas more prone to potential worker activities
- Exposure barriers installed over several areas, including former clarifier area that was part of wastewater treatment system and above ground tanks that were removed
- Areas without exposure barriers do not present a significant risk to workers

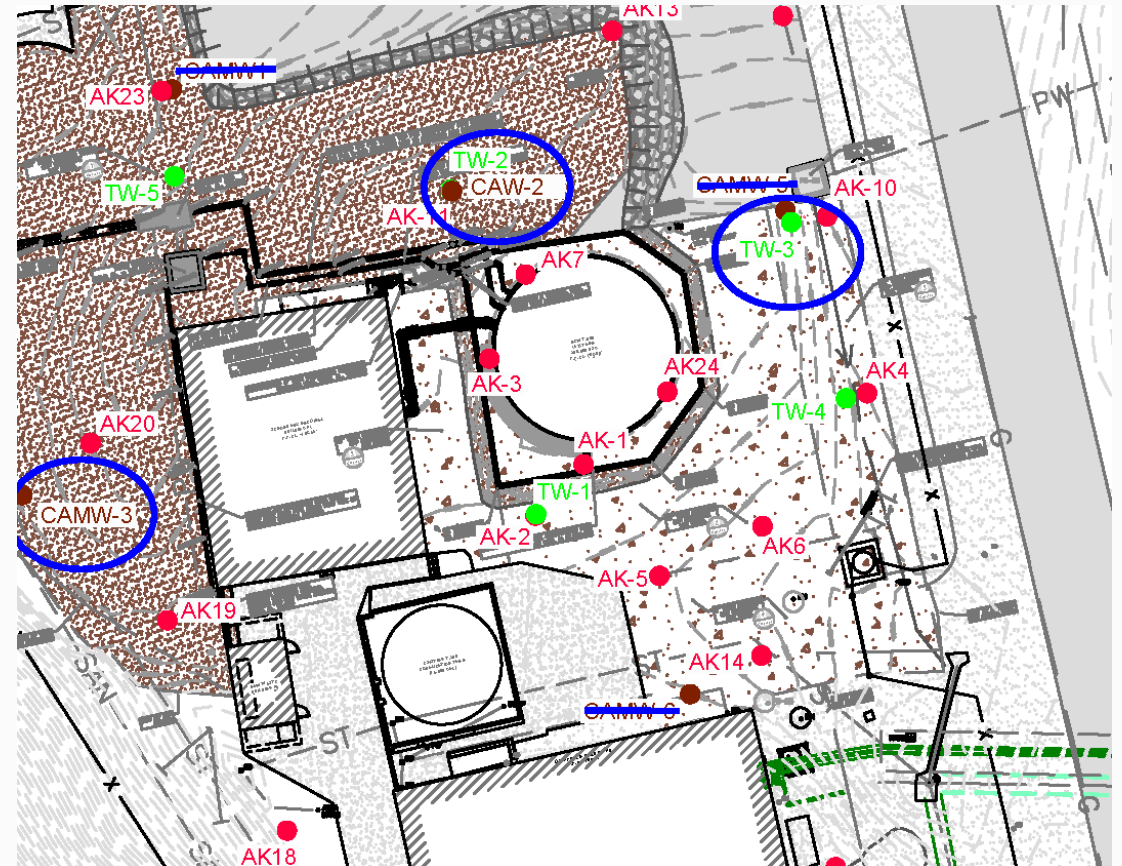


RFI Addendum No. 1

Former Clarifier Area Recovery Testing



- Evidence of oil (a.k.a., NAPL) observed in the Former Clarifier Area, west of GM Drive
- Prepared a Clarifier [former] Area Oil Assessment Work Plan to assess the potential for NAPL capture and recovery
- Currently collecting oil from select wells and monitoring the recovery of that oil to determine feasibility of active recovery as a corrective measure
- Results expected by end of 2022

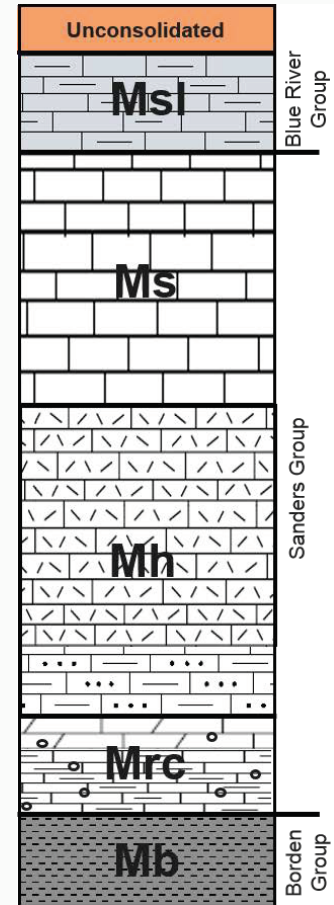
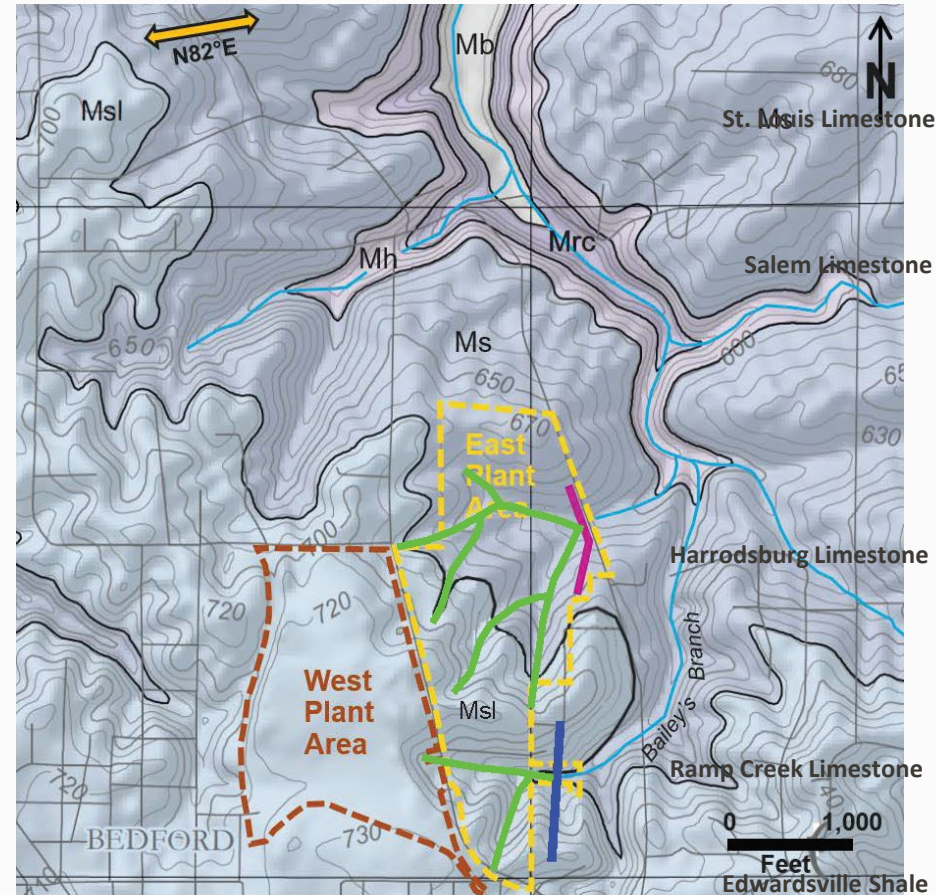


RFI Addendum No. 1

Updated Conceptual Site Model



- Uppermost limestone section is significantly more karstic (easier to transmit groundwater) due to exposure at/near surface
- 2 incised bedrock valleys in East Plant Area control groundwater flow
- Characteristics of the 2 bedrock valleys
 - east – west trending
 - relatively steep sided
 - well-developed karstic features
 - act to consolidate and direct groundwater flow eastward
- Pilot Trench and SSCs control flow from Facility
- Will be adding Phase II Trench

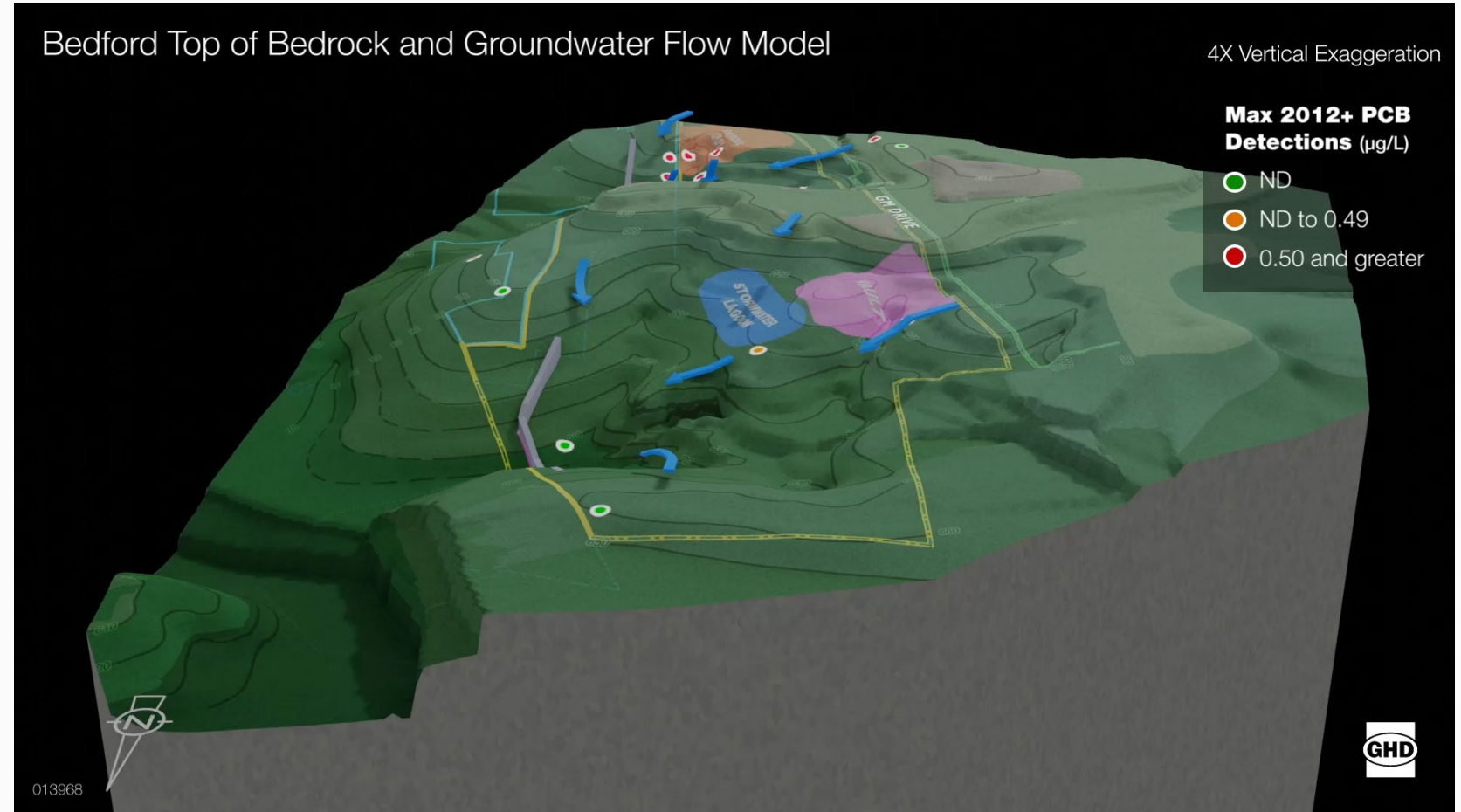


RFI Addendum No. 1

Updated Conceptual Site Model



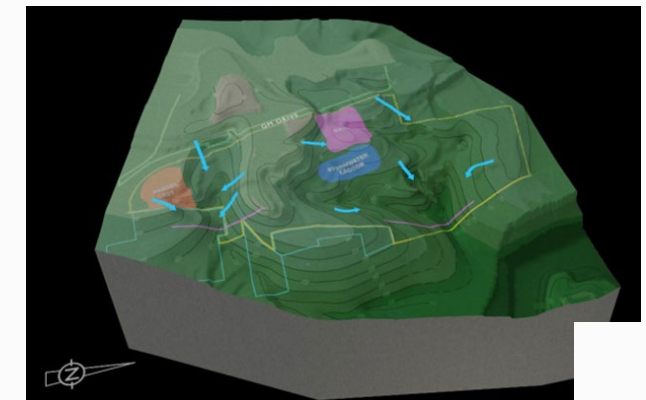
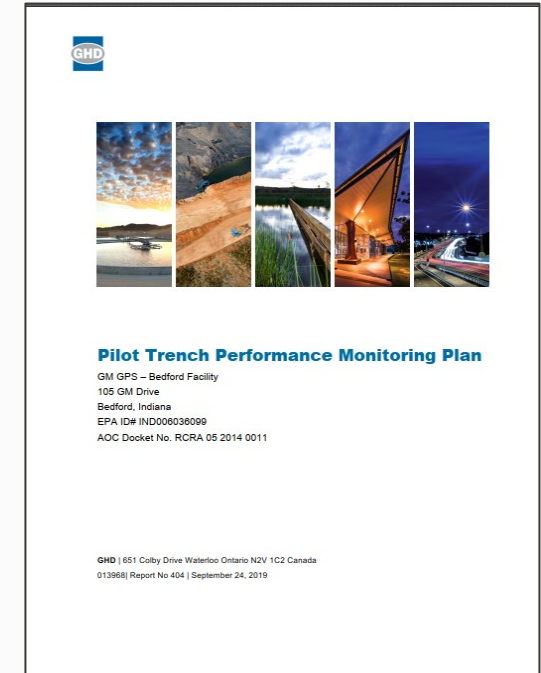
- Groundwater flow in East Plant Area influenced by 2 bedrock valleys
 - north and south valleys separated by area of bedrock high
 - shallow groundwater flows into the bedrock valleys, continuing eastward.
 - groundwater collection systems located at the downgradient flow ends of these valleys to stop off-property migration





Pilot Trench Performance Monitoring

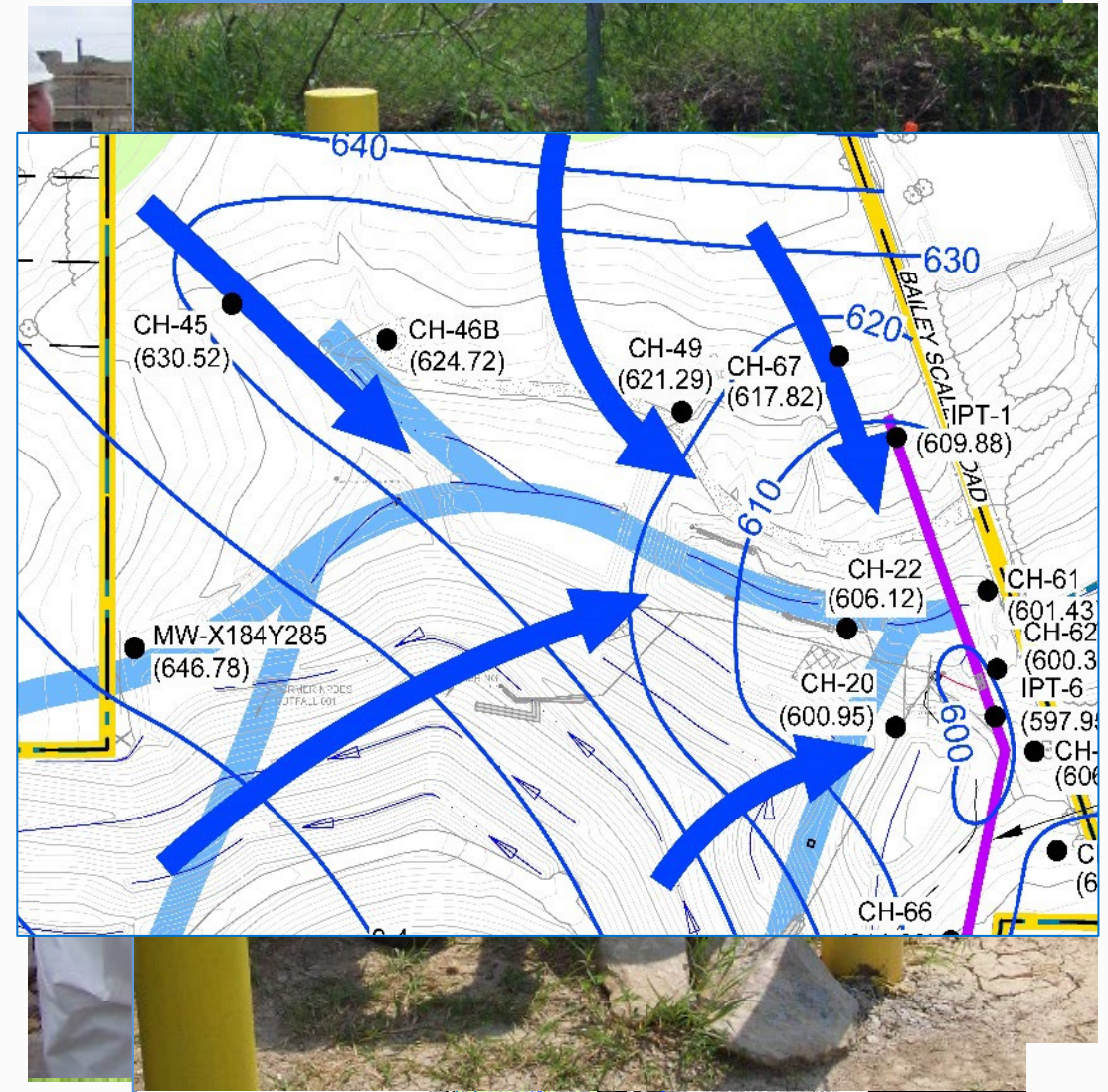
- Ensuring control of potentially impacted groundwater on GM property is important for the long-term protectiveness of the Facility controls
- PMP is focused on confirming the zone of groundwater capture by the Pilot Trench in the northern portion of the East Plant Area
- The PMP will determine:
 - if shallow groundwater in the northern portion of the East Plant Area is flowing as predicted in the Conceptual Site Model – towards the bedrock valley and into the Pilot Trench?
 - If not, is groundwater flowing off of GM property?
- The information will be used to determine if additional groundwater controls in this area of the East Plant Area is needed to ensure potentially impacted groundwater does not migrate off GM property



Pilot Trench Performance Monitoring



- The PMP includes new:
 - thermal imaging drone survey to identify seeps and springs to monitor
 - monitoring well installation
 - dye trace studies to track groundwater flow,
 - groundwater elevation measurements to track groundwater flow, and
 - PCB sampling of groundwater
- Combine new and existing information to determine capture zone of the Pilot Trench and whether impacted groundwater is migrating beyond GM property boundary



Parcel 400-430-431 Soil Removal



- Work conducted in 2020 pursuant to access agreement with land owners
 - excavated PCB-impacted soil
 - confirmed excavated area met the cleanup goal
 - transported and disposed PCB-impacted soil and other materials
 - backfilled the excavations
 - restoration
- Removed 2,751 tons of impacted soil
- Completion of Construction report approved by U.S.EPA and IDEM and provided to land owners



Excavation



Backfill



Topsoil



Seeding



Restoration

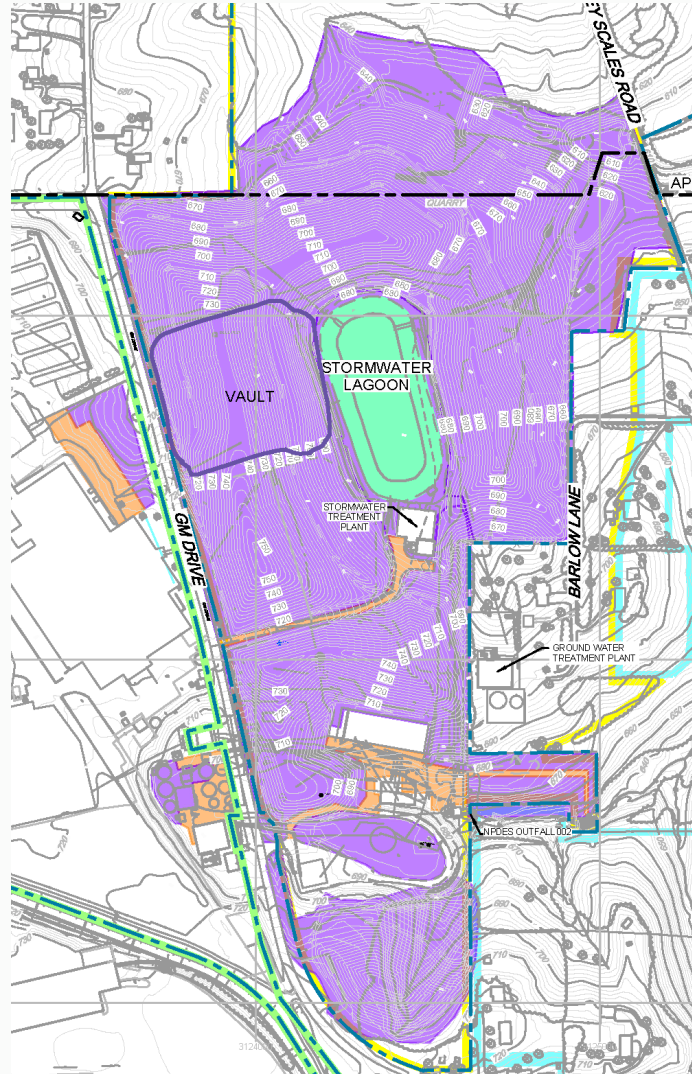


Parking Area Repair

Cover System & Landfill Vault Inspections, Monitoring and Maintenance



- Cover System Maintenance:
 - burrowing animal evaluation
 - sapling removal
 - mowing cover
- Landfill Vault
 - new communications equipment and programming
 - annual progress report



AOI-8 East Oil Recovery

- Continue PCB oil recovery via passive and/or active systems
 - CH-A: solar sipper
 - recoverable volume has been reduced
 - CH-5, MW-X209Y053 and CAMW-3: Passive absorbent socks
- To date, the areas of oil appear to be isolated and immobile
- No human exposure
- Locations where oil recovery is being implemented will be evaluated to determine if the methodology continues to be appropriate and effective

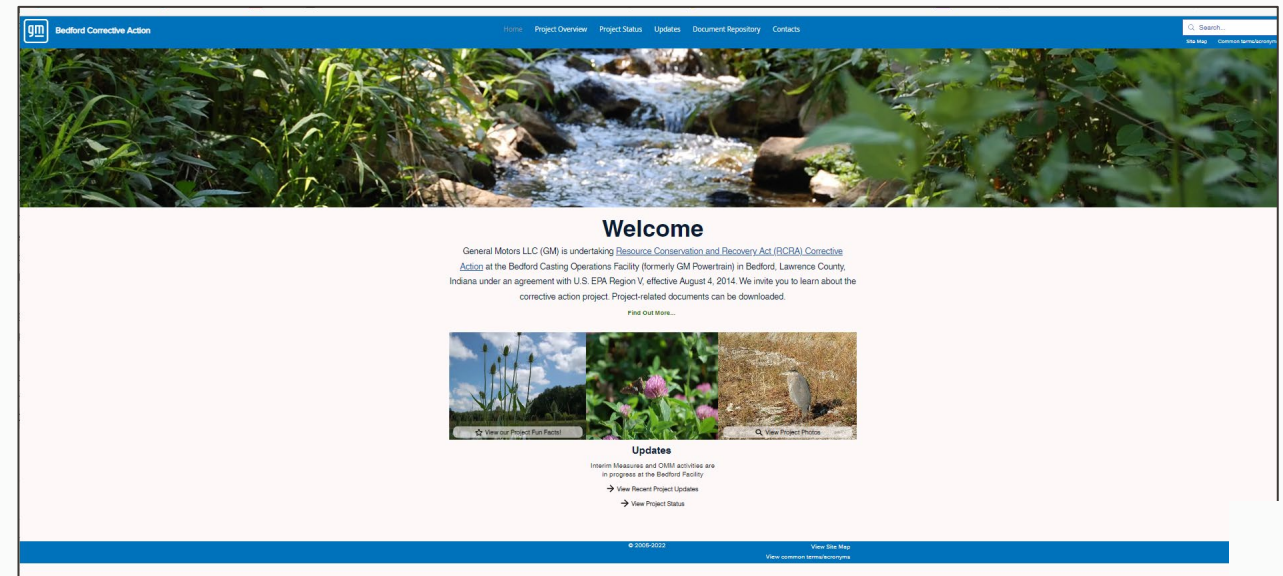
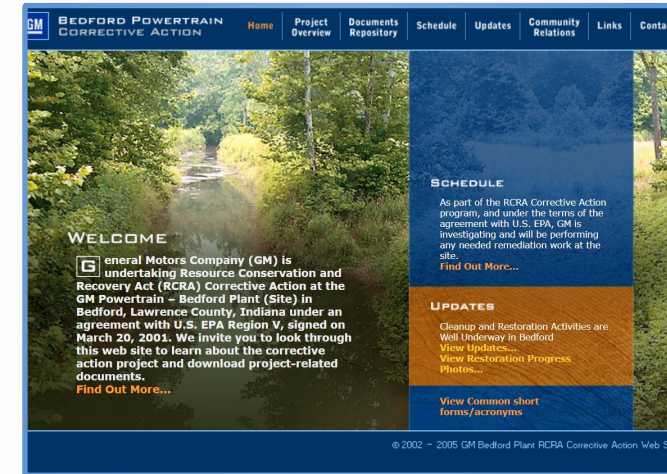




Project Website Refresh

- Web site continues to be updated with recent USEPA-approved documents
- Web site originally commissioned in early 2000s – technology outdated
- Updated website under development
- Expected to ‘go live’ within the next month while we continue to work on content
- Same email address will be used:

www.bedfordpowertraincorrectiveaction.com





Corrective Measures Proposal

- Evaluate and recommend proposed final corrective measures to address any future significant exposure risk to human health



- Draft report submitted to U.S.EPA – working with U.S.EPA to finalize document

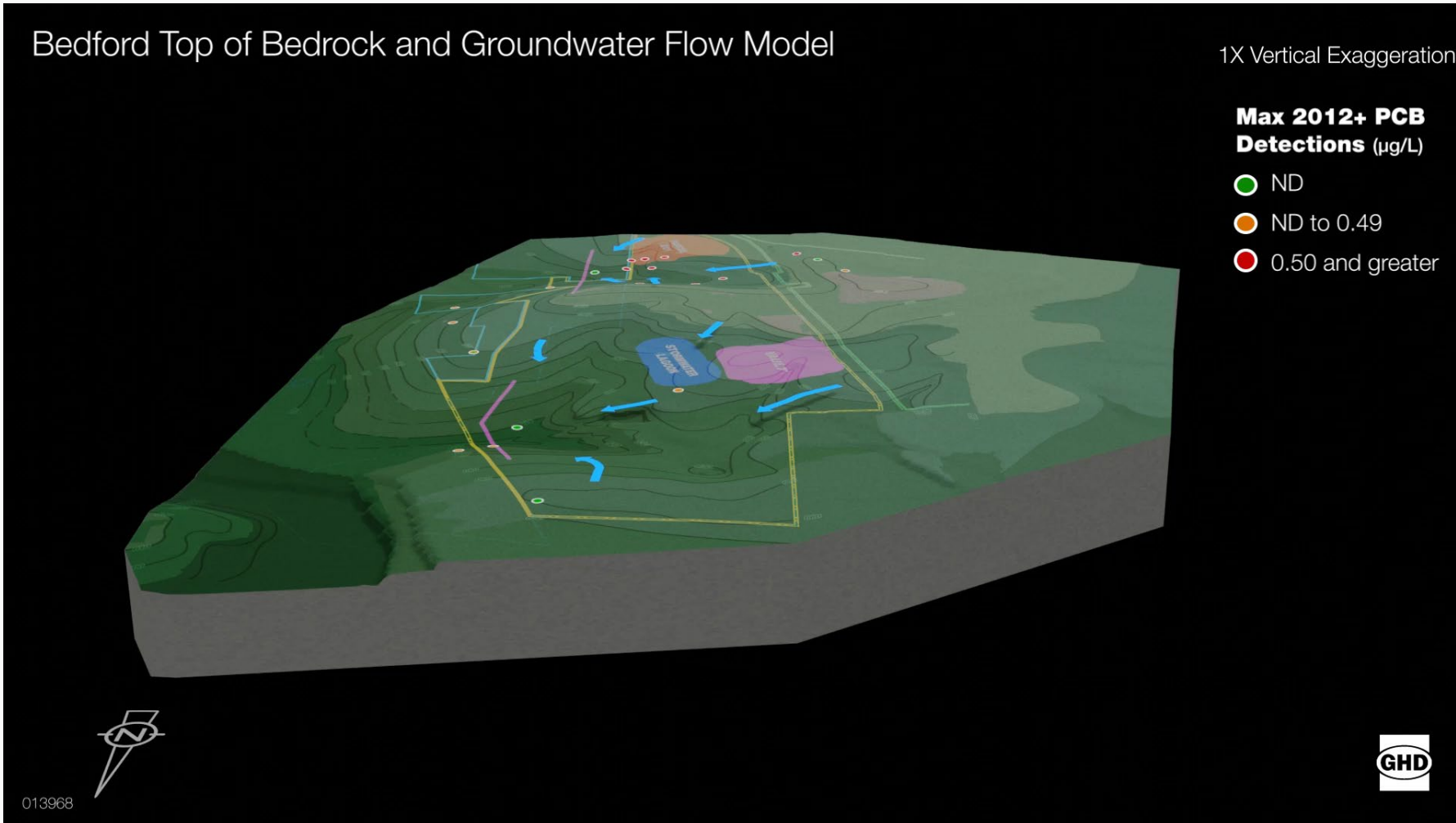


Corrective Measures Proposal

The updated CAOs (draft) include:

- A deed restriction on the property to prohibit residential land use and potable water supply wells
- Restrict future potable water wells adjacent to the Facility through the use of existing controls
- Maintain containment systems constructed as interim measures in the East Plant Area and select areas of the West Plant Area
- Mitigate worker direct contact exposures from excavation of PCB-impacted soil on GM property
- Recover (NAPL) in select areas of the AOI-8 area where practical
- Prevent contaminated groundwater at the Facility from migrating beyond the property boundary at levels that present a risk of exposure and monitoring the effectiveness of any controls
- Minimize disruption to the Facility and surrounding community during implementation of the CA
- Reduce long term operation, maintenance, and monitoring requirements

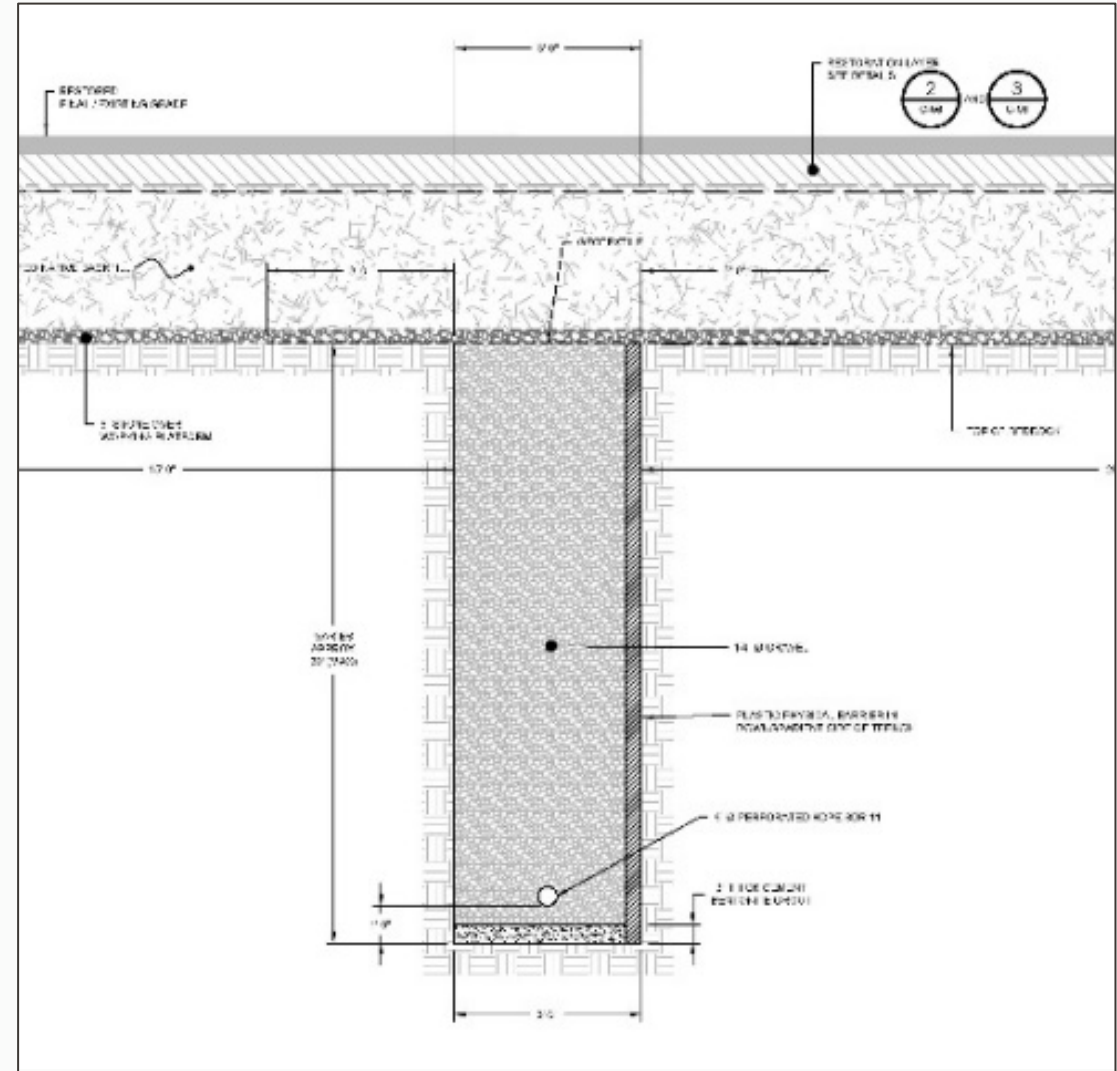
Phase II Bedrock Trench – Groundwater Control System



Phase II Trench



- Collection Trench Components
 - Establish bottom trench elevation into competent bedrock
 - Seal the trench bottom and back side (downgradient) wall
 - Perforated pipe and gravel placed in bottom of trench to collect/convey water to wet well
 - Seal ground surface with clay to prevent surface water infiltration
 - Pump collected groundwater to the GWTP for treatment prior to discharge



Phase II Trench Construction

- Contractors have submitted bids to perform the work
- GM is reviewing bids – contractor has not been selected
- Anticipated to start work in October/November 2022
- Work expected to take 8 months





Phase II Trench Performance Monitoring

- Components (similar to Pilot Trench performance monitoring)
 - hydraulic monitoring (monitoring wells, piezometers, staff gauge)
 - spring / seep testing
 - dye tracer testing
 - GWTP monitoring
 - PCB analysis where dye is detected
 - data analysis
- Will determine need for any additional groundwater controls



Community Engagement Activities

- Community engagements have been held on a regular basis during periods of active work
- Information from the presentations are posted to the website.
 - <http://www.BedfordPowertrainCorrectiveAction.com>
- Final approved documents can be found on the project website
- Periodic Project Fact Sheets
- Project Questions contact Katie Kamm: (812) 277-8954