

**FOURTH FIVE-YEAR REVIEW REPORT FOR
EASTERN SURPLUS COMPANY SUPERFUND SITE
WASHINGTON COUNTY, MAINE**



SEPTEMBER 2021

Prepared by

**U.S. Environmental Protection Agency
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LIST OF ABBREVIATIONS & ACRONYMS

| | |
|-------------|---|
| ALM | Adult Lead Methodology |
| ARAR | Applicable or Relevant and Appropriate Requirement |
| BEHP | Bis(2-ethylhexyl) phthalate |
| BLL | Blood Lead Level |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CFR | Code of Federal Regulations |
| CIC | Community Involvement Coordinator |
| Cis-1,2-DCE | Cis-1,2-Dichloroethene |
| COC | Chemical of Concern |
| 1,1-DCA | 1,1-Dichloroethane |
| 1,2-DCA | 1,2-Dichloroethane |
| DNAPL | Dense Non-Aqueous Phase Liquid |
| DOD | United States Department of Defense |
| DSF | Downeast Salmon Federation |
| EPA | United States Environmental Protection Agency |
| ESD | Explanation of Significant Differences |
| EISB | Enhanced In-Situ Bioremediation |
| FS | Feasibility Study |
| FYR | Five-Year Review |
| HA | Health Advisory |
| HHRA | Human Health Risk Assessment |
| HQ | Hazard Quotient |
| IC | Institutional Control |
| IEUBK | Integrated Exposure Uptake Biokinetic |
| IGCL | Interim Groundwater Cleanup Level |
| IRIS | Integrated Risk Information System |
| MCL | Maximum Contaminant Level |
| MCLG | Maximum Contaminant Level Goal |
| MEDEP | Maine Department of Environmental Protection |
| MEG | Maximum Exposure Guideline |
| mg/kg | Milligrams per Kilogram |
| mg/kg-day | Milligrams per Kilogram per Day |
| µg/dL | Micrograms per Deciliter |
| µg/L | Micrograms per Liter |
| NCP | National Oil and Hazardous Substances Pollution Contingency Plan |
| ng/L | Nanograms per Liter |
| NHANES | National Health and Nutritional Examination Survey |
| NPL | National Priorities List |
| NTCRA | Non-Time Critical Removal Action |
| O&M | Operation and Maintenance |
| OU | Operable Unit |
| PCB | Polychlorinated Biphenyl |
| PCE | Tetrachloroethene |
| PFAS | Per- and Polyfluoroalkyl Substances |
| PFBS | Perfluorobutanesulfonic Acid |
| PFOA | Perfluorooctanoic Acid |
| PFOS | Perfluorooctane Sulfonate |
| PL | Protective Level |
| ppb | Parts per Billion |
| ppm | Parts per Million |
| PPRTV | Provisional Peer-Reviewed Toxicity Value |

| | |
|---------------|-------------------------------------|
| ppt | Parts per Trillion |
| RAG | Risk Assessment Guidance |
| RAO | Remedial Action Objective |
| RfC | Reference Concentration |
| RfD | Reference Dose |
| RI | Remedial Investigation |
| ROD | Record of Decision |
| RPM | Remedial Project Manager |
| RSL | Regional Screening Level |
| SL | Screening Level |
| TBC | To-Be-Considered |
| TBD | To Be Determined |
| TCE | Trichloroethene |
| Trans-1,2-DCE | Trans-1,2-Dichloroethylene |
| UU/UE | Unlimited Use/Unrestricted Exposure |
| VISL | Vapor Intrusion Screening Level |
| VOC | Volatile Organic Compound |

I. INTRODUCTION

The purpose of a five-year review (FYR) is to evaluate the implementation and performance of a remedy to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 Code of Federal Regulations (CFR) Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the fourth FYR for the Eastern Surplus Company Superfund Site (the Site). The triggering action for this statutory review is the completion date of the previous FYR on September 28, 2016. The FYR has been prepared because hazardous substances, pollutants or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of one operable unit (OU1). This FYR Report addresses the OU. OU1 addresses the groundwater remedy, institutional controls, archaeological mitigation, and long-term monitoring.

EPA remedial project manager (RPM) Jeffry Saunders and hydrogeologist Christopher Kelly led the FYR. Participants included EPA human health risk assessor Paulina Do, EPA ecological risk assessor TaChalla Gibeau, EPA community involvement coordinator (CIC) Darriel Swatts, EPA senior enforcement counsel Man Chak Ng, Maine Department of Environmental Protection (MEDEP) project manager Rebecca Hewett, and Johnny Zimmerman-Ward and Jill Billus from EPA FYR support contractor Skeo. The review began on December 8, 2020.

Appendix A provides a list of references used in preparation of this FYR Report. **Appendix B** provides a chronology of Site events.

Site Background

The Site is located at 887 Main Street (Route 191) in the rural community of Meddybemps in Washington County Maine, about 70 miles east-northeast of Bangor (**Figure 1**). The Site consists of about 4 to 5 acres of land north of Route 191 and about 2 to 3 acres of land south of Route 191. From 1946 to about 1976, the Eastern Surplus Company used the property north of Route 191 as a storage and salvage yard. Materials stored on the property contained hazardous substances that were released into the soils and then migrated into underlying groundwater.¹ Site investigations identified two distinct groundwater plumes. The northern plume was in the northern half of the Site north of Route 191. The southern plume started just north of Route 191, flowed beneath the highway, and migrated to the southern part of the Site. **Figure 1** shows the approximate areas of the plumes at the time of the 2000 Record of Decision (ROD). Cleanup activities at the Site have generally remediated the southern plume; current work at the Site is focused on addressing remaining contamination in the northern plume.

The Site consists mostly of open space. The part of the Site north of Route 191 has an inactive groundwater treatment plant, an office trailer, and equipment and wells associated with cleanup activities. A fence with a locked gate on Route 191, as well as two locked gates on the western boundary of the Site along Stone Road, restrict access to the northern part of the Site. An additional interior fence is located around the northern plume area, where groundwater cleanup is ongoing. Two seasonal homes are located on the southern part of the Site, south of Route 191 (**Figure 1**).

¹ The Site's 1992 Remedial Investigation (RI) Report noted that materials on site included scrap metal, junk cars, old appliances, miscellaneous military personnel equipment, 55-gallon drums and smaller containers of hazardous materials/substances, a trailer of calcium carbide, electrical transformers, capacitors and switches and old ammunition. Some of the materials were acquired from the U.S. Department of Defense (DOD).

The Site has archaeological significance; it is listed on the National Register of Historic Places because of the presence of Native American artifacts dating back 9,000 years. A commemorative plaza and walkway, constructed in 2012 on the northern part of the Site, highlights the significance of the Site's history with the Passamaquoddy Tribe.

Land use near the Site is primarily agricultural and residential (both year-round and seasonal). The Site is adjacent to Meddybemps Lake and a residential property to the north, Dennys River and Mill Pond to the east, and undeveloped land to the south and west. There is an inactive gravel borrow pit adjacent to Stone Road, the private road immediately west of the Site. A dam controls the outlet of the lake to the river, and a small wetland is adjacent to the river, just downstream of the dam. A concrete hydroelectric structure/powerhouse straddles the Dennys River about 500 feet downstream from the dam. Beyond the wetlands, the Site is above the floodplain; a steep bank runs along the Dennys River. The surface water bodies proximate to the Site (e.g., Meddybemps Lake) are used as a water supply and a fishery, and for swimming and recreation.² Homes and businesses near the Site rely on private wells for potable water. There are currently two seasonal homes proximate to the Site boundary south of Route 191: one home built prior to 2006 and located beyond the Site boundary approximately 600-feet south of Route 191 and a second more recently constructed (i.e., following completion of the third FYR in 2016) home located within the southern Site boundary near an existing barn structure (see **Figure 1**). Both residences have private wells. Sampling of private wells near the Site during the 1992 remedial investigation (RI) and as recently as 2015 have not identified Site-related impacts.

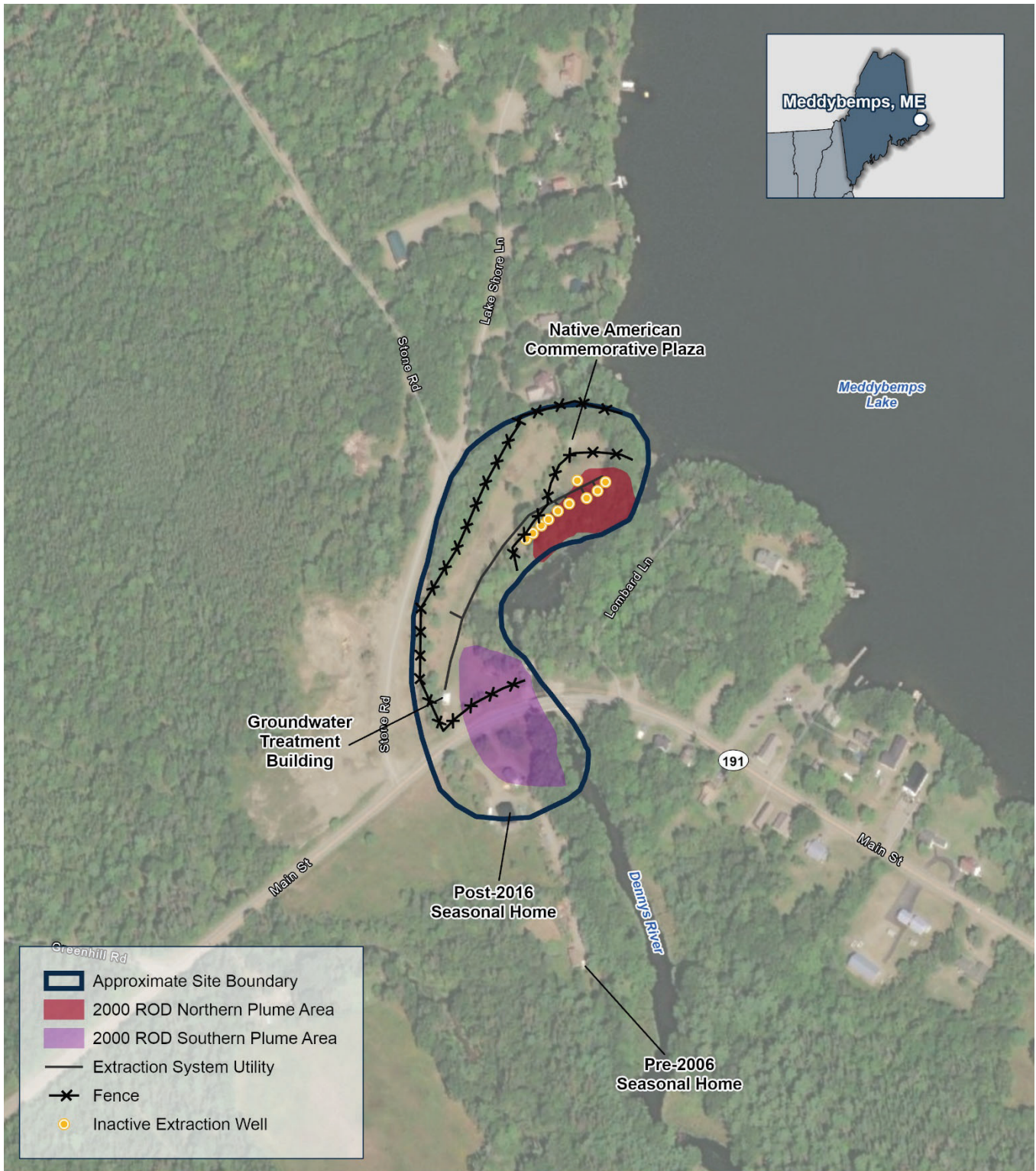
Groundwater at the Site exists in the shallow overburden and in the underlying bedrock. The overburden in the northern portion of the Site is seasonally saturated with the water table fluctuating as much as 6 feet during the year. Most of the contamination in the northern plume is in the bedrock aquifer, whereas the major contamination in the southern plume was in the overburden and shallow bedrock aquifers. Groundwater flow direction at the Site is generally to the south/southeast and towards the Dennys River.

² The Feasibility Study (August 1999) indicates that some seasonal residents use the lake as a water supply; however, the Remedial Investigation (July 1999) notes that there were no known users of lake or river water as water supplies.

FIVE-YEAR REVIEW SUMMARY FORM

| SITE IDENTIFICATION | | |
|--|--|--|
| Site Name: Eastern Surplus Company | | |
| EPA ID: MED981073711 | | |
| Region: 1 | State: ME | City/County: Meddybemps/Washington County |
| SITE STATUS | | |
| NPL Status: Final | | |
| Multiple OUs? No | Has the Site achieved construction completion? Yes | |
| REVIEW STATUS | | |
| Lead agency: EPA | | |
| Author name: Christopher Kelly and Jeff Saunders | | |
| Author affiliation: EPA Region 1 | | |
| Review period: 12/8/2020 – 9/1/2021 | | |
| Date of site inspection: 2/20/2020 | | |
| Type of review: Statutory | | |
| Review number: 4 | | |
| Triggering action date: 9/28/2016 | | |
| Due date (five years after triggering action date): 9/28/2021 | | |

Figure 1: Site Map



Eastern Surplus Superfund Site
 Town of Meddybemps, Washington County, Maine

0 200 400 Feet

Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding the EPA's response actions at the Site. Sources: Maxar, Esri Community Maps Contributors, Province of New Brunswick, BuildingFootprintUSA, Esri Canada, Esri, HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada, the 2013 Draft Site Close-out Report, the 2017 ESD and the 2020 Final Cleanup Status Report.

Skeo
 Last Modified: 8/18/2021

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

MEDEP identified the Site as an uncontrolled hazardous waste site in 1985 and initiated a surface cleanup to remove aboveground waste. At MEDEP's request, EPA took over the removal activities in 1986. The Response Actions section of this FYR Report provides more information on removal actions at the Site. EPA listed the Site on the Superfund program's National Priorities List (NPL) in 1996.

EPA conducted a remedial investigation and feasibility study (RI/FS) at the Site between 1996 and 1999. The RI identified tetrachloroethene (PCE) as the primary groundwater contaminant in terms of magnitude (i.e., approximately three orders of magnitude higher than PCE concentrations within the non-plume overburden zone) and frequency of detection. Additional volatile organic compounds (VOCs) and metals were found in both the northern and southern plumes. Polychlorinated biphenyls (PCBs) were also detected in the southern plume. Most of the contamination in the northern plume was located in the bedrock with dense non-aqueous phase liquid (DNAPL) possible, whereas the major contamination in the southern plume was located in the overburden and shallow bedrock. Both the northern and southern plumes were believed to be discharging to the Denny's River.

EPA completed a human health risk assessment (HHRA) in August 1999. The HHRA concluded the only pathways that exceeded EPA's acceptable cancer risk range and/or a hazard quotient (HQ) of concern were ingestion of groundwater in the northern and southern plumes by a resident and ingestion of fish (due to mercury, which is not considered Site-related). The groundwater chemicals of concern (COCs) selected in the 2000 ROD include 1,1,2-trichloroethane, bis(2-ethylhexyl) phthalate (BEHP), chloromethane, methylene chloride, PCE, PCBs, trichloroethene (TCE), 1,1-dichloroethane (1,1-DCA), antimony, cadmium, cis-1,2-dichloroethene (cis-1,2-DCE), lead, manganese, and xylene. No unacceptable risks were identified for the on-Site soils, sediments or surface water remaining on-Site after the early removal actions.

EPA completed a baseline ecological risk assessment in 1999. The ecological risk assessment found no substantial risk to ecological receptors due to Site-related contaminants.

Response Actions

Removal Actions

MEDEP's removal action in 1985 included installation of a security fence, removal and disposal of waste oils, PCBs and transformer bodies, stabilization of leaking containers, and removal of ammunition. Between 1986 and 1990, EPA and the U.S. Department of Defense (DOD) removed thousands of leaking drums, containers and compressed gas cylinders and properly disposed of the wastes off-Site.

While the RI was ongoing, EPA initiated a non-time critical removal action (NTCRA) in 1998. The objective of the NTCRA was to eliminate the source of soil, groundwater, and sediment contamination by removing soil and sediment with levels of contamination above the cleanup levels and initiating a source control groundwater extraction and treatment system to remove some of the contaminated mass in the aquifer and to prevent the off-Site migration of the contamination. The NTCRA included removal and off-Site disposal of waste materials and two on-Site structures, and excavation and off-Site disposal of contaminated soils and sediment above removal action cleanup levels (**Table 1**). The removals occurred on the properties north of Route 191 and were completed in 1999. Because of the historical significance of the Site, EPA followed the requirements of the National Historic Preservation Act during removal activities. **Figure C-1** in **Appendix C** shows the soil excavation areas. A screening level risk evaluation confirmed that the soil cleanup levels in **Table 1** remain valid for non-residential land use (**Appendix D**).

The NTCRA also included construction of a groundwater extraction and treatment system for the northern and southern plumes. The groundwater extraction and treatment system was constructed in 2000 and subsequently

upgraded in 2001 as prescribed by the ROD. The system began fulltime operation on August 25, 2001 after a 19-month operation period to determine optimal pumping configuration and treatment system effectiveness.

Table 1: 1999 Removal Action Soil Cleanup Levels

| Contaminant | Cleanup Level (mg/kg) |
|---|-----------------------|
| PCBs | 2 |
| Tetrachloroethene (PCE) | 0.06 |
| Trichloroethene (TCE) | 0.06 |
| Methylene chloride | 0.02 |
| Cadmium ^a | 27 |
| Chromium ^a | 450 |
| Lead ^a | 350 |
| <p><i>Source:</i> Table 1 and page 9 narrative in the May 1999 Action Memorandum for the Eastern Surplus Company Site.</p> <p>a) The May 1999 Action Memorandum noted that if elevated concentrations of these compounds were detected as part of the ongoing site characterization or cleanup effort, EPA would determine if the material should be excavated as part of the NTCRA.</p> <p>mg/kg = milligrams per kilogram</p> | |

Remedial Actions

EPA selected a remedy for the Site in the September 2000 ROD and modified it with a September 2017 Explanation of Significant Differences (ESD). The ROD identified the following remedial action objectives (RAOs) for the Site:

- Prevent the ingestion of groundwater contaminants that exceed federal or state maximum contaminant levels (MCLs), non-zero maximum contaminant level goals (MCLGs), State of Maine maximum exposure guidelines (MEGs), or, in their absence, an excess cancer risk of 1×10^{-6} or an HQ of 1 per contaminant.
- Prevent, to the extent practicable, the off-Site migration of groundwater with contamination above cleanup levels.
- Restore groundwater to meet federal or state MCLs, non-zero MCLGs, State of Maine MEGs, or, in their absence, an excess cancer risk of 1×10^{-6} or an HQ of 1 per contaminant.
- Provide long-term monitoring of surface water, sediments, groundwater, and fish to verify that the cleanup actions at the Site are protective of human health and the environment.

The 2000 ROD identified the following major remedy components, as modified by the 2017 ESD:

- Extraction and treatment of the contaminated groundwater in two distinct plumes (northern and southern plumes). Groundwater from each of the contaminated plumes will be extracted and treated by a common treatment system. Each extraction system will be designed to prevent off-Site migration of contaminated groundwater and restore the aquifer to drinking water standards. (The 2017 ESD suspended operation of the groundwater extraction and treatment system while enhanced in-situ bioremediation [EISB] takes place but did not eliminate it completely as a remedy component).
- Enhancement of the groundwater extraction system by flushing of treated water and/or injection of a chemical reagent to facilitate the removal of contamination. (The 2017 ESD changed the in-situ component of the remedy from chemical reagents to biological reagents).

- Implementation of land use restrictions in the form of deed restrictions, such as easements and covenants to prevent ingestion of groundwater and disturbance of archaeological resources. The land use restrictions will be used to control the two parcels that encompass the surficial extent of the Site, which the State of Maine (the State) has agreed to own. The State has agreed to impose institutional controls that run with the land for these parcels. Institutional controls shall also be implemented for those other properties, if any, where groundwater contamination is located until groundwater meets cleanup levels.
- Long-term monitoring of groundwater, surface water and sediments to evaluate the success of the remedial action. More biota sampling (fish, mammals, and plants) may also be performed, as necessary.
- Implementation of archaeological mitigation activities to address impacts caused by the NTCRA's soil excavation in 1999.
- FYRs to assess protectiveness until cleanup goals have been met.

The ROD did not include a source control component because EPA's HHRA concluded that the 1998-1999 NTCRA addressed risks that were posed by soils and sediment. The ROD estimated a timeframe of 5 to 10 years to achieve the RAO of restoring the groundwater to drinking water quality. The 2017 ESD acknowledged that groundwater restoration through extraction and treatment would require many years and possibly decades, but it did not include an estimated timeframe to achieve RAOs with the updated EISB remedy component.

Table 2 lists Site COCs in groundwater and their interim groundwater cleanup levels (IGCLs) specified in the ROD. The 2017 ESD also identified vinyl chloride and 1,2-dichloroethane (1,2-DCA) as contaminants not identified in the ROD but present in groundwater. Bench-scale testing indicated that complete dechlorination from PCE to ethene could be achieved at the Site, and EISB was added as a remedy component as detailed in the ESD. Reductive dechlorination is a process by which chlorine atoms are replaced by electrons coupled to hydrogen atoms, resulting in sequential dechlorination from PCE to TCE to dichloroethylene (DCE) to vinyl chloride to ethene. Therefore, vinyl chloride, which was only detected in one RI sample at a low concentration, as well as ethene and ethane are anticipated byproducts of EISB implementation, the detection of which provides an indication that full dechlorination is occurring.

Table 2: Interim Groundwater Cleanup Levels

| Groundwater COC | Interim Groundwater Cleanup Level (µg/L) | Basis |
|--|--|--------------|
| <i>Carcinogenic COCs^a</i> | | |
| 1,1,2-Trichloroethane | 3 | 1992 MEG |
| Bis(2-ethylhexyl) phthalate (BEHP) | 6 | MCL |
| Chloromethane | 3 | 1992 MEG |
| Methylene chloride | 5 | MCL |
| Tetrachloroethene (PCE) | 3 | 1992 MEG |
| PCBs | 0.05 | 1992 MEG |
| Trichloroethene (TCE) | 5 | MCL |
| <i>Non-carcinogenic COCs^a</i> | | |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 1992 MEG |
| Antimony | 6 | MCL/MCLG |
| Cadmium | 5 | MCL/MCLG |
| Cis-1,2-dichloroethene (cis-1,2-DCE) | 70 | MCL/MCLG |
| Lead | 15 | Action Level |
| Manganese | 200 | 1992 MEG |
| Xylene | 600 | 1992 MEG |
| <i>Notes:</i> | | |
| a) From Table 30 of the 2000 ROD. | | |
| µg/L = micrograms per liter | | |

Status of Implementation

The NTCRA soil excavation resulted in unavoidable adverse effects to historic properties (archaeological resources) at the Site. Mitigation of the adverse effects was required, and mitigation activities were performed as part of the remedial action. EPA, the State of Maine Historic Preservation Officer, the Passamaquoddy Tribe, and the Advisory Council on Historic Preservation entered into a Memorandum of Agreement for Recovery of Significant Information and Mitigation of Adverse Effects, with an effective date of July 24, 2000.

Archaeological mitigation activities in 2000 and 2001 included the archaeological investigation of 200 square meters on the northern part of the Site, development of a report documenting the findings of the field work, and development of a cultural study and permanent displays at the Site as well as mobile displays for use in educational settings.

In 2001, EPA upgraded the groundwater extraction system constructed during the NTCRA. The system included groundwater extraction from a series of shallow bedrock and overburden wells installed in both the northern and southern plumes. Extracted groundwater was then pumped to a treatment building on the northern part of the Site, treated using liquid-phase granular activated carbon and ion exchange, and discharged to an infiltration gallery on Site. Full-scale operation began in August 2001. A long-term monitoring program for groundwater, surface water, sediments and biota also began.

In 2002 and 2003 EPA conducted a pilot study and then full-scale application of the chemical reagent potassium permanganate. While the results were beneficial for the southern plume, the post-injection monitoring indicated that contaminant concentrations returned to previous levels in the northern plume. EPA attributed the southern plume success to the contamination being primarily in the overburden sand and gravel whereas the contamination in the northern plume is primarily in the bedrock. In 2010, with concurrence from MEDEP, the southern extraction system was shut down because performance standards had essentially been met (PCE concentrations fluctuated between the MCL of 5 micrograms per liter [$\mu\text{g/L}$] and the 1992 MEG of 3 $\mu\text{g/L}$; all other VOCs met their respective performance standards). The southern extraction system was decommissioned in 2012.

EPA suspended operation of the northern extraction system in December 2011 to allow for an assessment of EISB. Following success of a bench-scale test, EPA performed a large-scale EISB pilot test in 2012 and 2013. EPA selected full-scale implementation of EISB as a component of the remedy in the 2017 ESD.

EPA performed the remedial design for EISB between June 2017 and September 2018. Remedial design activities included a multimedia sampling event (September 2017), installation of nine bedrock wells from June to September 2018 (including geophysical borehole logging and packer testing/sampling to determine optimum screen placement), and EISB treatment system design. EPA's remedial action contractor completed the Final Basis of Design Report in August 2018. The report recommended four treatment phases. Although adjustments are made between treatment events to maximum effectiveness and efficacy (e.g., modifications to the targeted treatment zones, amendment volumes necessary to adequately adjust geochemical conditions, and amount of extracted groundwater), each phase generally consists of groundwater extraction, immediately followed by batching (i.e., mixing with various chemicals and amendments) and re-injection, with a performance monitoring round of sampling three to four months after. Several amendments including a pH buffer, fast acting electron donor material, and nutrients for the bacteria culture (dehalococcoides [DHC] species) are added directly to targeted well locations. Extracted groundwater is mixed with a primer, to lower the dissolved oxygen and oxidation-reduction potential (ORP), and a long-lasting electron donor material to ensure proper anaerobic conditions for the DHC bacteria. Batched water is then reinjected to the aquifer while geochemical conditions are monitored. As described in the Section IV data review of the northern plume area groundwater, the results of the treatment activities encouragingly indicate a reduction in the PCE hot spot area, reduction in the mass of PCE, and an anticipated increase in the presence of PCE daughter products.

Phase I of the EISB remedial action began in December 2018. About 3,300 gallons of groundwater was extracted from 20 wells. Prior to the extraction, a surfactant was injected into the groundwater to increase the availability of chlorinated VOCs to be treated by EISB. Extracted groundwater was stored in two batch tanks, mixed with amendments until proper anaerobic conditions were achieved, and re-injected into the wells. Amendments were

also added directly to the wells prior to injecting extracted groundwater. EPA conducted Phase I performance monitoring in March 2019.

Phase II EISB treatment began in August 2019. About 1,050 gallons were extracted from five locations, mixed with amendments and re-injected at 13 locations. EPA conducted Phase II performance monitoring in December 2019. The Data Review section of this FYR Report discusses the results of the performance monitoring events.

Following the December 2019 performance monitoring event, EPA's remedial action contractor demobilized equipment associated with the EISB effort from the Site, except for the three batch tanks. Materials and equipment related to the former pump-and-treat operations remain on Site. EPA is finalizing a contract for the continued execution of the EISB remedy. Operation of the northern extraction system remains suspended.

Institutional Control (IC) Review

The 2000 ROD required land use restrictions to prevent ingestion of groundwater and disturbance of archaeological resources. The land use restrictions were required for the two parcels north of Route 191. The ROD also required institutional controls for other properties affected by groundwater contamination, until groundwater meets cleanup levels.

As a condition of the 1999 Consent Decree, the State acquired ownership of the Site parcels north of Route 191. The State recorded Declarations of Environmental Covenants (Environmental Covenants) for a 3.19-acre parcel in July 2017 and a 1.08-acre parcel in August 2017.³

The Environmental Covenants include the following property covenants, conditions, and restrictions that:

- Prohibit excavation, site development and any other ground disturbance without MEDEP permission.
- Prohibit extraction of groundwater, disturbance of remedy components, and discharge or injection of liquids into the subsurface (except for those activities associated with approved environmental cleanup).
- Require equipping any buildings constructed on the property with an approved sub-slab vapor barrier and ventilation system or a sub-slab active depressurization system.
- Require that owners of the property conduct annual inspections for compliance with the terms of the Environmental Covenants and report the results to MEDEP and EPA in writing by June 30 each year.

The Environmental Covenants also clarify that MEDEP will only approve excavation, site development and any other ground disturbance that will not adversely affect the cultural or historical resources at the Site. The properties shall be maintained in a manner that preserves its historical integrity, in particular the setting (physical environment) and feeling (a sense of tribal spiritual life). The covenants and restrictions in the Environmental Covenants run with the land. The State has worked to obtain a release deed from the Town of Meddybemps for their interest in the properties and transfer ownership of the two parcels to the Passamaquoddy Tribe. On June 8, 2021, the Maine Legislature passed, and the Governor signed, a Resolve authorizing the conveyance of the State's interest in one of the parcels to the Passamaquoddy Tribe "by release deed 'as is' with no representations or warranties as to title, subject to any and all terms, conditions, encumbrances, restrictions and liens of records." MEDEP also plans to record an Environmental Covenant that references the release deed.

The 2011 FYR documented that the southern extraction system was deactivated in November 2010 because the RAO for that area (i.e., southern plume) had essentially been met as IGCLs for all Site contaminants except PCE had been attained and PCE concentrations had stabilized at its IGCL. Additionally, historical sampling of the private well for the seasonal home located approximately 600 feet south of former extraction well RWS-6 did not

³ Copies of the executed Environmental Covenants are available online from EPA's site profile page, site documents & data section, at www.epa.gov/superfund/eastern.

identify contamination.⁴ As a result, the 2016 FYR determined that institutional controls on the southern portion of the Site were no longer necessary (as the ROD contemplated, institutional controls would only be implemented until the groundwater was restored to cleanup levels). Notably, a second seasonal home was constructed on the property south of Route 191 following completion of the 2016 FYR. Therefore, as discussed in the Section VI other findings, sampling of the private wells for the seasonal homes on the parcel south of Route 191 is recommended to verify performance standards continue to be met.

Table 3 summarizes the planned and implemented institutional controls at the Site. **Figure 2** shows the areas with implemented institutional controls in relation to the 2019 PCE plume boundary as well as upgradient well MW58B1, which reported PCE above the IGCLs during the sampling event in 2015; however, VOCs were not detected in MW58B1 during the subsequent October 2016 sampling event (see the Data Review section of this FYR Report for more information).

Table 3: Summary of Planned and/or Implemented Institutional Controls (ICs)

| Media, Engineered Controls, and Areas That Do Not Support UU/UE Based on Current Conditions | ICs Needed | ICs Called for in the Decision Documents | IC Objective | Title of IC Instrument Implemented and Date (or planned) |
|---|------------|--|---|---|
| Groundwater and archeologically-significant resources north of Route 191 | Yes | Yes | To prevent ingestion of contaminated groundwater and disturbance of archaeological resources. | Declarations of Environmental Covenants (July and August 2017) ^a |
| Groundwater south of Route 191 | No | Yes | To prevent ingestion of contaminated groundwater. | None implemented ^b |

Notes:

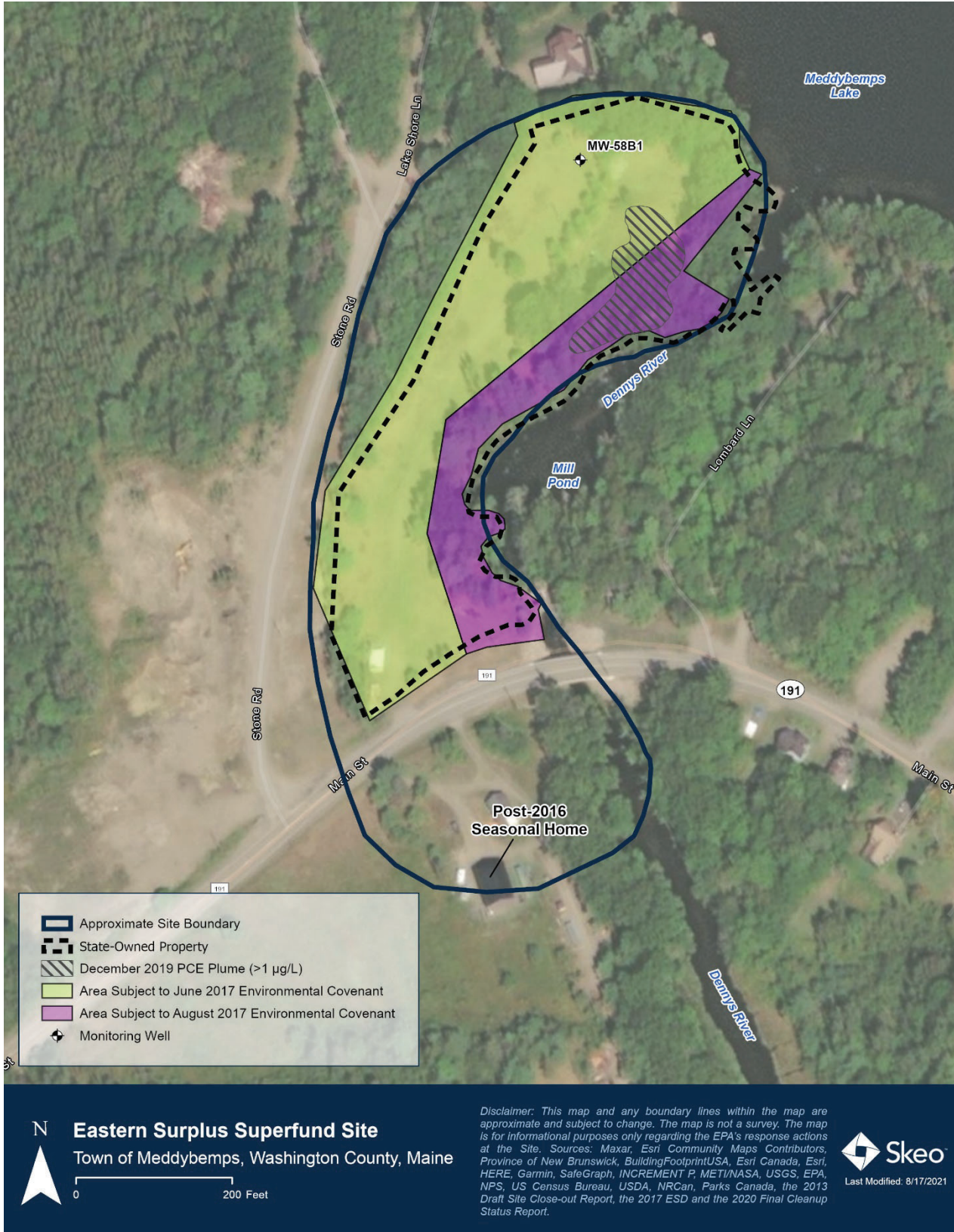
a. Contiguous properties of approximately 3.19-acres and 1.08-acres as recorded in the Washington County Registry of Deeds in Book 4378, Page 156, and Book 4388, Page 78, respectively.

b. The 2000 ROD states that “*institutional controls to prevent use of the contaminated groundwater will be implemented until the groundwater is restored to cleanup standards.*” The 2016 FYR determined that institutional controls on the southern portion of the Site were no longer necessary (as the ROD contemplated, institutional controls would only be implemented until the groundwater was restored to cleanup levels).

TBD = To be determined

⁴ The 2011 FYR states, “In 2006 a seasonal home was constructed on the parcel, about 600 feet south of the farthest southern extraction well, RWS-6. Since groundwater samples from RWS-6 meet drinking water standards, EPA anticipated that the well for this seasonal home would provide clean water and this was confirmed through sampling and analysis.”

Figure 2: Institutional Control Map



Systems Operations/Operation and Maintenance (O&M)

Operation and maintenance (O&M) responsibilities transferred from EPA to MEDEP in December 2012. There is no ongoing O&M for the groundwater extraction and treatment system since its suspension in December 2011. In 2012, EPA decommissioned the southern extraction system. The northern extraction system remains in place. Materials related to the former extraction and treatment operations are still present in the treatment building, including bag filters, system hardware, pumps, plumbing and tools. Once implementation of the EISB remedy is complete and the necessity for an additional remedial action(s) is evaluated, updates to the O&M Plan will be considered.

Current Site activities include general maintenance, landscaping, and snow plowing.

The February 2020 Cleanup Status Report, prepared by EPA contractor Nobis Engineering, Inc., also described the following interim maintenance and inspection activities for the Site:

- Inspecting the Site to ensure access is controlled and the perimeter fence and gate is locked and in good condition. Inspecting the condition of the tribal display area and the overall historical integrity of the Site.
- Inspecting the Site for erosion, settlement, and potential impacts to existing wells.
- Inspecting Site conditions for compliance with land use restrictions (e.g., ensure excavation of soil, storage of or discharge of materials has not occurred that would adversely impact the Site).
- Inspecting the monitoring wells during sampling events to ensure that the well caps are not damaged, that bolts are available and secured (as applicable), and that locks remain in place.
- Inspecting the conditions along the Dennys River for erosion or any potential groundwater discharge locations.
- Periodic (as needed) re-development of monitoring wells based on water quality observations and measured sediment thickness.

MEDEP conducted an inspection in June 2019. EPA, MEDEP and EPA's remedial action contractor inspected the Site again in February 2020. During the February 2020 Site inspection, remaining remedial action-related materials were assessed and organized, equipment was demobilized from the Site, and a general inspection was completed. The job trailer was noted to be in poor condition, with evidence of roof leaks and rodent activity.

The 2000 ROD also required long-term monitoring of groundwater, surface water and sediments to evaluate the success of the remedial action. Additional biota sampling was to be performed, if deemed necessary. Long-term groundwater monitoring was conducted between 2001 and 2015. Groundwater monitoring then shifted to monitoring for the EISB program, per the 2017 ESD. Recent groundwater EISB performance monitoring events occurred in March and December 2019. Performance monitoring is anticipated to continue in 2021 and beyond in support of the EISB program.

Nearby residential wells were sampled semi-annually during the initial remedial action period, but regular sampling ended in 2006. Site-related contamination had not been found in the residential wells. MEDEP sampled one residential well located north of and adjacent to the Site along Lake Shore Avenue in 2015 and Site-related contaminants were not detected.

Surface water and sediment monitoring took place in summer 2008. Analytical results indicated sporadic exceedances of the ROD protective levels (PLs) for metals in surface water samples and one exceedance of the ROD PL for PCBs in sediment.⁵ The Draft 2013 Site Close-Out Report indicates that the results supported ceasing regular sampling of surface water and sediment. More surface water and pore water sampling occurred in 2017 as part of the EISB remedial design (see the Data Review section of this FYR Report for more information).

⁵ Table 27 of the ROD identified PLs for surface water and sediment. The PLs were identified for the purpose of long-term monitoring of environmental media after remedial action initiation.

Biota sampling was completed in October 2002 (clams) and July 2003 (fish and mussels). A benthic study was also completed during summer 2003. Conducting biota sampling was required only once during the 10-year response period following the ROD.

III. PROGRESS SINCE THE PREVIOUS REVIEW

Table 4 includes the protectiveness determinations and statements from the 2016 FYR Report. **Table 5** includes the recommendations from the 2016 FYR Report and the status of those recommendations.

Table 4: Protectiveness Determinations/Statements from the 2016 FYR Report

| OU # | Protectiveness Determination | Protectiveness Statement |
|----------------|------------------------------|---|
| OU1 (Sitewide) | Short-term Protective | The Sitewide remedy currently protects human health and the environment because groundwater cleanup goals have been attained in the southern portion of the Site; and ownership of the northern properties of the Site by MEDEP prevents exposure to Site groundwater where the remaining contamination is located, and the contaminated groundwater has not yet impacted the Dennys River or ecological receptors. However, in order for the remedy to be protective in the long-term, the following actions need to be taken: implementation of permanent institutional controls; and resumption of a remedy (or change the RAO) in the northern portion of the Site. |

Table 5: Status of Recommendations from the 2016 FYR Report

| OU # | Issue | Recommendations | Current Status | Current Implementation Status Description | Completion Date (if applicable) |
|----------------|------------------------------|---|----------------|---|---------------------------------|
| OU1 (Sitewide) | Remedy has not achieved RAO. | Expand to full-scale EISB or modify RAOs. | Completed | EPA issued an ESD in 2017 to document full-scale EISB as a component of the remedy. The first two phases of the modified remedy were implemented in 2018 and 2019. Two performance monitoring events were also completed – Phase I in March 2019 following the Phase I treatment and Phase II in December 2019 following the Phase II treatment. Additional phases and monitoring are planned to track EISB performance and to monitor potential impacts to downgradient receptors. | 9/26/2017 |
| OU1 (Sitewide) | ICs not implemented. | Assist state with implementation. | Completed | MEDEP recorded Environmental Covenants in July and August 2017 for the state-owned parcels north of Route 191. Groundwater south of Route 191 has met performance standards and may no longer require groundwater use restrictions. | 8/25/2017 |

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Community Involvement and Site Interviews

EPA posted an online news release on its website in February 2021 stating that the FYR was underway. A copy of the news release is included in **Appendix E**. The results of the review and the completed FYR Report will be made publicly available online at EPA's site profile page, located at: www.epa.gov/superfund/eastern.⁶

During the FYR process, EPA conducted interviews with Site stakeholders and community members to document any perceived problems or successes with the remedy that has been implemented to date. A summary of the interviews is provided below. **Appendix F** includes the completed interview forms.

The MEDEP project manager indicates that progress is being made on various aspects at the Site, including cleanup of the northern plume area, transfer of ownership of the northern portion of the Site to the Passamaquoddy Tribe, and removal of the former powerhouse structure on the Dennys River (the powerhouse structure removal is not considered part of the Site). MEDEP believes the remedy in place is protective of human health and the environment. MEDEP has been actively involved in multiple activities at the Site, which are addressed further in the **Appendix F** completed interview form. MEDEP plans to prepare, execute, and record an updated Environmental Covenant, based on the Town of Meddybemps' recent release deed to the State/MEDEP for their prior tax liens on the properties (i.e., previously noted contiguous 3.19-acre and 1.08-acre parcels).

A Maine Department of Marine Resources scientist noted that the project has come a long way since it began. The powerhouse structure is slated to be taken out during the summer of 2021. He noted that his agency has done some survey work in the stream and has contracted with an engineer related to the proposed removal of the powerhouse structure.

The Tribal Historic Preservation Officer for the Passamaquoddy Tribe is well-informed regarding the Site and its cleanup activities. Site visits and EPA newsletters are useful methods for conveying site-related information to the Tribe. The Tribe continues to be very interested in owning and maintaining the Site due to the cultural and traditional links to the Tribe. The Tribe representative noted that the Tribe would like to see the dam/powerhouse fully removed and ownership of the Site clarified.

A Tribal Member of the Passamaquoddy Tribe and Site caretaker feels well-informed regarding the Site. He was unaware of vandalism or trespassing at the Site, or changes in projected land use. He asked that the Tribe be considered as a potential contractor for some of the other work at the Site and noted that he has experience under the Brownfields program.

A representative of the Meddybemps Board of Selectmen noted that the Town receives notices when testing and work at the Site is going to occur. He is not aware of any changes in local ordinances that could affect the protectiveness of the remedy. He indicated that the best way to keep involved parties and neighbors informed of site activities would be to place announcements in the Calais Advertiser (local paper), Quoddy Tides (local paper) and Bangor Daily News.

A representative for the Downeast Salmon Federation (DSF) was impressed with the dedication and commitment to the project. The representative noted that DSF works with EPA to coordinate fisheries restoration-related activities on the Site. DSF did not have any concerns associated with the protectiveness of the Site's remedy.

⁶ On March 18, 2013, the EPA promulgated a final rule to amend 40 CFR § 300.805(c) of the NCP Location of the Administrative Record File to acknowledge advancements in technologies used to manage and convey information to the public. This enabled EPA to make Administrative Records available to the public via the internet. Calais Public Library, located at 9 Union Street, Calais, Maine 04619, continues to serve as the required local information repository and is critical to providing the public with access to the online site profile page and Administrative Record.

A representative for the Lake Meddybemps Association is aware of the former environmental issues at the Site and feels well-informed about the Site's remedial progress. The representative is not aware of vandalism or trespassing at the Site but notes that there is disagreement between the Passamaquoddy Tribe and some members of the local community regarding land ownership.

EPA also reached out by phone to six residents near the Site to determine interest in participating in an interview; none of the residents contacted were interested in an interview.

Data Review

Implementation and monitoring of the EISB groundwater remedy is ongoing. EPA's contractor performed pre-treatment monitoring of the northern plume in September 2017 and July 2018, completed the first two phases of EISB treatments in December 2018 and August 2019, and conducted post-treatment performance monitoring in March 2019 and December 2019. Performance monitoring assessed the effectiveness of the treatments at reducing VOC concentrations and overall contaminant mass levels. The Final Cleanup Status Report, dated February 2020, is the primary source of information for this data review. **Figure 3** shows the northern plume area injection and monitoring locations.

Prior to the 2012 to 2013 EISB pilot test, groundwater contamination in the northern plume generally consisted of widespread dissolved PCE contamination with only sporadic presence of PCE daughter products, such as TCE, cis-1,2-DCE and vinyl chloride. Since the pilot test and full-scale EISB treatments, PCE concentrations have generally decreased, and PCE daughter product concentrations have increased in hot spot and downgradient sampling locations. These data suggest that dechlorination is progressing in the area where EISB has been performed. Further discussion of the northern plume groundwater data is provided below. Pre-treatment pore water and surface water results are also discussed.

Southern Plume Area Groundwater

Monitoring of the southern plume area did not occur during this FYR period. As part of the 2016 FYR, EPA evaluated the 2011-to-2014 groundwater data from the southern plume and found the results were stable and met the IGCLs. The wells on the south side of Route 191 were decommissioned in 2012 and 2016 with EPA approval. In the April 2016 well decommissioning approval letter, EPA requested that periodic contact be maintained with the property owner of the seasonal residences on the property south of Route 191. Should the dwelling become occupied, EPA requested sampling of the private well in conjunction with FYRs. Current occupancy of the home is unknown. No sampling has occurred during this FYR period.

Northern Plume Area Groundwater

PCE and its daughter products TCE and cis-1,2-DCE are the primary groundwater COCs at the northern plume area and are the focus of this review. Vinyl chloride, although not identified as a ROD COC, is a target VOC and a degradation product of PCE and has been detected above the federal MCL of 2 µg/L and current MEG of 0.2 µg/L. Therefore, vinyl chloride is included in this review.

Additional ROD COCs, including antimony and manganese, were detected above IGCLs in several wells/open boreholes sampled in 2016 and 2017 as part of pre-treatment monitoring. Post-treatment performance monitoring did not include metals analysis. Future performance monitoring events may include metals analysis for a subset of locations to evaluate potential effects of full-scale EISB treatment on these COCs. **Appendix G** includes data summary tables from the 2017, 2018 and 2019 groundwater monitoring events for VOCs. As shown in the **Appendix G** summary tables, reporting limits for several chemicals were above the IGCLs. The 2020 Final Cleanup Report noted that laboratories have difficulty reporting analytical data to expected quantitation limits due to the amendments added to the groundwater as part of the EISB program.

Figure G-1 in **Appendix G** shows the distribution of PCE in the shallow bedrock aquifer of the northern plume prior to the full-scale treatment (September 2017 and July 2018 combined data set). **Figure G-2** in **Appendix G** shows the PCE plume in December 2019, after the second full-scale treatment. Although the overall extent of the PCE plume has not changed significantly between the pre- and post-treatment events, the PCE hot spot area, designated by PCE concentrations greater than 4,000 µg/L, decreased from approximately 315 square feet prior to the treatments to approximately 60 square feet in December 2019. The December 2019 hot spot is centered around IN-10B1.

PCE concentrations at IN-10B1 and IN-6B increased between the pre- and post-treatment monitoring events (**Table G-1, Appendix G**). The 2020 Final Cleanup Status Report indicated that the increase at these locations could be associated with the use of the surfactant injected into the groundwater prior to the treatments (mobilizing dissolved phase VOCs from residual DNAPL). The increase in PCE concentrations in these wells could also be the result of displacement of contaminants during the amendment injections. Monitoring will continue to evaluate concentration trends in these wells and nearby wells over time.

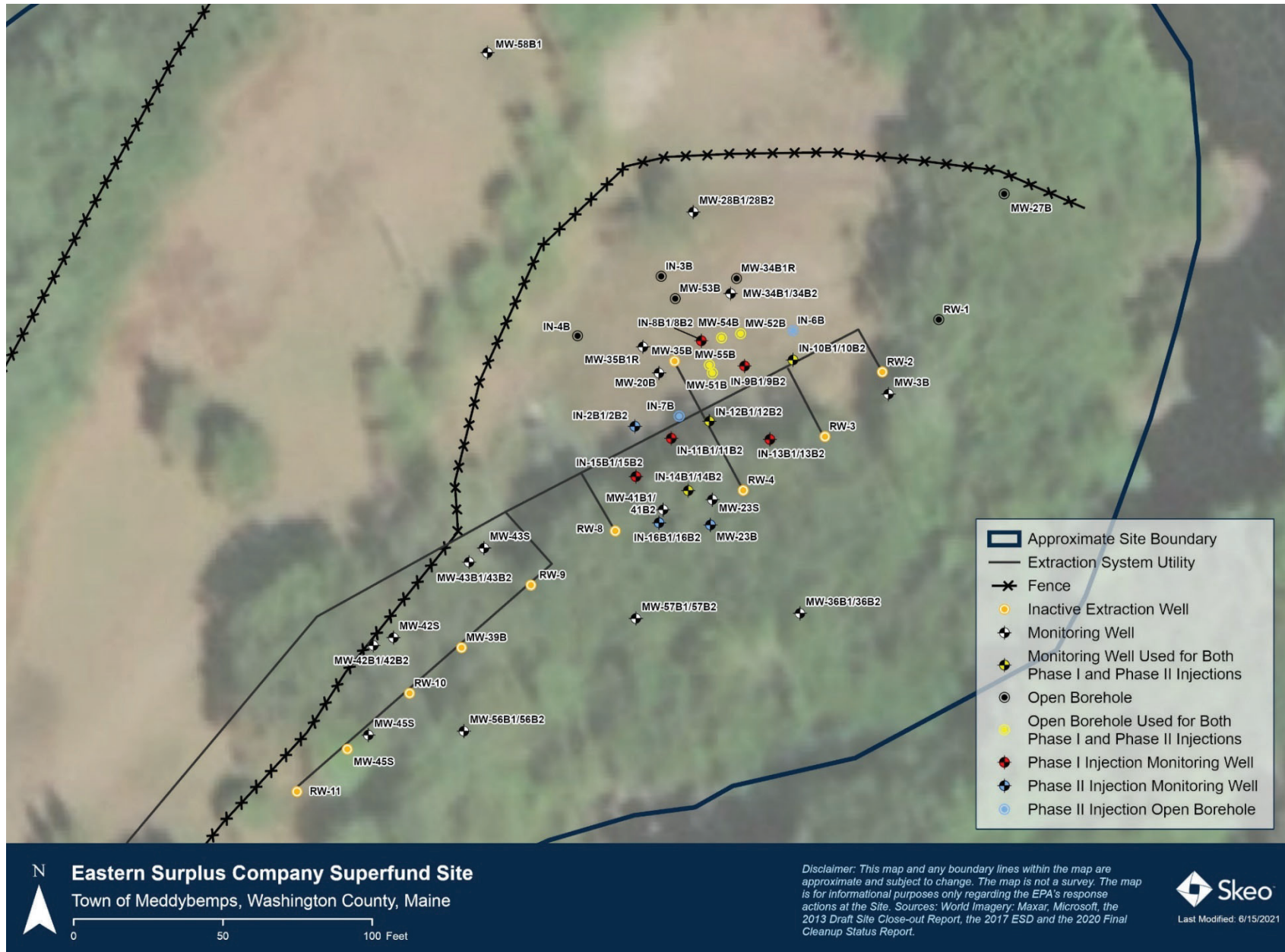
PCE daughter products TCE, cis-1,2-DCE and vinyl chloride have increased in concentration and extent compared to pre-treatment conditions, which is expected because of the reductive dechlorination of PCE. **Figures G-3 through G-8** in **Appendix G** show the pretreatment extent of these COCs, as well as the December 2019 extent. An evaluation of total plume mass pre-treatment and post-treatment in December 2019, included in the Final Cleanup Status Report, indicates a reduction in PCE mass within the plume of about 69%. Results of the assessment also indicate an increase in mass of TCE (573%), DCE (1,231%) and vinyl chloride (45%). The total mass of target VOCs has been reduced by about 2% after the first two treatments.

EPA plans to continue treatment along with performance monitoring and evaluations of remedy effectiveness. Prior to additional treatment, a pre-injection monitoring event is anticipated to be completed in 2021 to evaluate current groundwater conditions. A minimum of two to three treatment and performance monitoring events are anticipated to follow. Future monitoring should consider the inclusion of wells outside the current northern plume area, such as upgradient wells, to monitor the effects of treatment and contaminant migration.

Porewater and Surface Water

As part of the EISB remedial design, EPA's contractor collected three pore water samples and three surface water samples from the Dennys River for VOC and metals analyses in 2017. The samples were collected in the inferred groundwater discharge zone. PCE and TCE were detected only in pore water sample PW-301. Detected concentrations were low (less than 1 µg/L). Neither PCE nor TCE was detected in the co-located surface water sample (SW-301). Site-related metals were detected in pore water and surface water at all three sample locations. COC manganese exceeded its IGCL in pore water sample PW-203 but manganese in the co-located surface water sample (SW-203) was below the IGCL. The results demonstrate that current groundwater discharge from the Site does not affect the Dennys River at unacceptable levels.

Figure 3: Northern Plume Area Injection and Monitoring Locations



Site Inspection

Due to travel restrictions related to the COVID-19 pandemic, the current EPA RPM was not able to participate in a site inspection specific to this FYR. However, as discussed in Section II – Response Action Summary, Site inspections that include assessment of the protectiveness of the remedy have regularly occurred following finalization of the ESD. MEDEP conducted an inspection in June 2019, and EPA, MEDEP and EPA’s remedial action contractor inspected the Site again in February 2020. During February 2020, remaining remedial action-related materials were assessed and organized, equipment was demobilized from the Site, and a general inspection was completed.

During the inspections, the Site was observed to be secure and in generally good condition. Some limited damage to the perimeter fence was observed (e.g., break in a cross pole along Stone Road in June 2019). Consistent with the community interviews (see previous Community Notification, Involvement, and Interview section), evidence of vandalism was not reported. The job trailer was noted to be in poor condition, with evidence of roof leaks and rodent activity; however, no issues impacting the current or future protectiveness were observed.

The EPA RPM will visit the Site to confirm remedy status when possible, ideally prior to the next FYR.

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

Question A Summary:

Yes, the remedy is functioning as intended by the 2000 ROD as modified by the 2017 ESD.

Remedial Action Performance

The groundwater remedy specified in the 2000 ROD – groundwater extraction and treatment and in situ chemical treatment – was effective at reducing COC concentrations in groundwater to cleanup levels in the southern plume. Because this cleanup approach was ineffective for the northern plume bedrock contamination, EPA modified the remedy with the 2017 ESD to incorporate EISB. Following a successful pilot study, EPA performed full-scale EISB treatments in December 2018 and August 2019. Initial assessment of performance monitoring data suggests that the EISB treatments are working as intended by the 2017 ESD.

EPA plans to continue treatment along with performance monitoring and will use the data to evaluate effectiveness of EISB. COC concentrations above IGCLs are currently contained within the Site boundary, north of Route 191. Future monitoring should consider the inclusion of additional wells outside the current northern plume area, such as MW58B1 upgradient of the northern plume and nearby private wells, to monitor the effects of treatment and contaminant migration. Periodic monitoring for inorganic COCs to assess potential impacts from the treatments should also be considered.

Additional components of the remedy – land use restrictions north of Route 191, long-term monitoring of groundwater, surface water and sediment, and archaeological mitigation activities – have been implemented. They are functioning as intended.

System Operations/O&M

MEDEP is currently responsible for Site O&M activities. Once EPA’s implementation of the EISB remedy is complete and the necessity for an additional remedial action(s) is evaluated, updates to the O&M Plan for the Site will be considered.

Implementation of Institutional Controls and Other Measures

The State executed and recorded Environmental Covenants for the State-owned parcels north of Route 191 in 2017. The exterior fence for the northern part of the Site and the interior fence around the northern plume area also remain in place and control access.

The 2016 FYR determined that institutional controls on the southern portion of the Site were no longer necessary (as the ROD contemplated, institutional controls would only be implemented until the groundwater was restored to cleanup levels). Although all monitoring wells on the south side of Route 191 were decommissioned in 2012 and 2016, following the recent construction of a second seasonal home, more sampling of the private wells on the property south of Route 191 is recommended to verify that the wells continue to meet groundwater performance standards. In the April 2016 well decommissioning approval letter, EPA requested that periodic contact be maintained with the property owner of the seasonal residences on the property south of Route 191, with sample collection should the dwellings become occupied.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels and RAOs used at the time of the remedy selection still valid?

Question B Summary:

No. There have been changes in exposure pathways and methods of evaluating risk, toxicity values, potential standards and to-be-considered (TBC) criteria since the 2000 ROD, as discussed below. The changes as described below are not expected to alter the protectiveness of the remedy because there are no complete exposure pathways to contaminated groundwater and institutional controls are in place to prevent future exposures.

Changes in Standards and TBCs

New standards should be considered during the FYR process as part of the protectiveness determination. Under the NCP, if a new requirement is promulgated after the ROD is signed, and the requirement is determined to be an applicable or relevant and appropriate requirement (ARAR), the new requirement must be attained only if necessary to ensure that the remedy is protective of human health and the environment.

EPA guidance states:

“Subsequent to the initiation of the remedial action new standards based on new scientific information or awareness may be developed and these standards may differ from the cleanup standards on which the remedy was based. These new...[standards] should be considered as part of the review conducted at least every five years under CERCLA §121(c) for sites where hazardous substances remain on-site. The review requires EPA to assure that human health and the environment are being protected by the remedial action. Therefore, the remedy should be examined in light of any new standards that would be applicable or relevant and appropriate to the circumstances at the site or pertinent new [standards], in order to ensure that the remedy is still protective. In certain situations, new standards, or the information on which they are based may indicate that the site presents a significant threat to health or environment. If such information comes to light at times other than at the five-year reviews, the necessity of acting to modify the remedy should be considered at such times.” (See CERCLA Compliance with Other Laws Manual: Interim Final (Part 1) EPA/540/G-89/006 August 1988, p. 1-56).

- ***Per- and Polyfluoroalkyl Substances (PFAS)***

In May 2016, EPA issued final lifetime drinking water health advisories (HAs) for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate⁷ (PFOS). The EPA HA for PFOA and PFOS is 70 nanograms per liter (ng/L) (parts per trillion [ppt]), individually or combined. See also EPA’s Interim Recommendations to Address Groundwater Contaminated with Perfluorooctanoic Acid and Perfluorooctanesulfonate (OLEM Directive 9283.1-47, Dec. 19, 2019), which establishes a screening level of 40 ng/L (ppt) for PFOA or PFOS individually. Using the standard Superfund approach, an unacceptable noncancer risk may be triggered by an exceedance of an HQ of 1. EPA’s HA of 70 ng/L

⁷ Perfluorooctane sulfonic acid is a synonym for perfluorooctane sulfonate.

(ppt) equates to an HQ of less than 1 (approximately 0.1 to 0.2). Should data indicate PFAS levels have reached or exceeded 40 ng/L (ppt) for either PFOA or PFOS, EPA recommends further evaluation.

On June 21, 2021, Maine adopted an emergency interim drinking water standard and testing requirements for six PFAS contaminants (i.e., perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), perfluorohexane sulfonic acid (PFHxS), perfluorononanoic acid (PFNA), perfluoroheptanoic acid (PFHpA), and perfluorodecanoic acid (PFDA)). *Resolve to Protect Consumers of Public Drinking Water by Establishing Maximum Contaminant Levels for Certain Substances and Contaminants*, S.P. 64 - L.D. 129 (Resolution). The Resolution requires all community water systems and all nontransient, noncommunity water systems to conduct PFAS monitoring on or before December 31, 2022. Resolution, Section 2, paragraph 1. If any such monitoring confirms the presence of any of the six PFAS contaminants, either individually or in combination, above 20 ng/L (ppt), the Department of Health and Human Services shall require the water system to implement treatment or other remedies to reduce the combined PFAS contaminants in the drinking water of the water system to below 20 ppt. Resolution, Section 2, paragraph 4. The Resolution also requires that the Department of Health and Human Services follow proper administrative procedures to promulgate a maximum contaminant level (MCL) for PFAS on or before June 1, 2024. Resolution, Section 3. That MCL may be based on federal regulatory requirements established by EPA if such requirements are at least equal to or more stringent than 20 ppt. Resolution, Section 3, paragraph 3. Upon the effective date of the final rule establishing the MCL, the interim drinking water standard enacted in the Resolution will be repealed. Resolution, Section 4.

PFAS has not been sampled for at the Site. More evaluation/investigation of this class of constituents is recommended due to the history of the Site as military surplus storage and salvage yard as well as reports of a fire at the Site in 1976.⁸ The lack of PFAS data at the Site does not call into question the current protectiveness of the remedy because there are no exposures to contaminated groundwater and institutional controls effectively restrict the use of contaminated groundwater in the northern plume area.

- ***1,4-Dioxane***

Using 2013 updated Integrated Risk Information System (IRIS) toxicity information and the standard Superfund risk assessment approach, EPA's carcinogenic risk range of 10^{-6} to 10^{-4} for 1,4-dioxane equates to a concentration range of 0.46 µg/L to 46 µg/L (parts per billion [ppb]).

Groundwater samples regularly underwent analysis for 1,4-dioxane between 2002 and 2011. As noted in the 2006 FYR Report, sampling results from the northern plume exhibited three detections in 2003 above the laboratory detection limit of 100 µg/L with concentrations ranging from 140 µg/L to 170 µg/L. Limited estimated detections ranging from 14 µg/L to 91 µg/L were also reported during the fall 2003 sampling event. Sampling results did not detect 1,4-dioxane beyond the northern part of the Site at that time.

Following 2003, groundwater results did not exhibit concentrations of 1,4-dioxane in excess of the laboratory reporting limits (i.e., generally 100 µg/L as specified in the applicable Quality Assurance Project Plan [QAPP]). This included samples from both the northern and southern plumes collected in June/July 2006 and reported a non-detect at a laboratory reporting limit of 10 µg/L. More recently, 1,4-dioxane results for the northern plume were reported in association with the June 2013 and October 2013 long-term monitoring events. No detections were reported to exceed of laboratory reporting limits (i.e., generally 50 µg/L); however, the reporting limits once again exceeded the federal risk range of 0.46 µg/L to 46 µg/L.

⁸ Section E.2 of the Final RI Report, July 1999.

Additional evaluation of 1,4-dioxane in groundwater is recommended due to the historical detection of 1,4-dioxane in groundwater above 100 µg/L, which is above the acceptable federal risk range of 0.46 µg/L to 46 µg/L (ppb). The lack of recent 1,4-dioxane data with reporting limits consistently within the acceptable risk range does not call into question the current protectiveness of the remedy because there are no exposures to contaminated groundwater and institutional controls effectively restrict the use of contaminated groundwater within the northern plume area.

- ***Federal Floodplain Management***

Federal regulations at 40 CFR Part 6, Appendix A, identified in the 2000 ROD were withdrawn. Furthermore, these regulations, and therefore the current CERCLA remedy, only addressed potential floodplain impacts up to the 100-year flood elevation. Current federal floodplain regulations at 40 CFR Part 9 require a greater assessment of potential floodplain impacts, including preventing the release of contamination from waste management units and other remedial infrastructure up to the 500-year floodplain elevation. EPA has assessed potential floodplain impacts from a 500-year flood event on the groundwater monitoring wells and other remedial components. Because EPA has not identified any protectiveness issues at this time, we do not include a recommendation to add this requirement as an ARAR in a future determination.

Changes in Toxicity and Other Contaminant Characteristics

- ***2020 Trans-1,2-dichloroethylene Noncancer Toxicity Value***

In November 2020, EPA finalized a new reference concentration (RfC) for trans-1,2-dichloroethylene (trans-1,2-DCE) based on a new provisional peer-reviewed toxicity value (PPRTV). There previously was no RfC for trans-1,2-DCE.

Although not a ROD COC, trans-1,2-DCE is monitored regularly at the Site. Trans-1,2-DCE was detected at a maximum concentration of 9 µg/L (IN-15B1) during the December 2019 sampling event. The maximum concentration is below EPA's tapwater regional screening level (RSL) of 68 µg/L, which incorporates the updated toxicity value.

- ***2016 PFOA/PFOS Noncancer Toxicity Values***

In May 2016, EPA issued final lifetime drinking water health advisories for PFOA and PFOS, which identified a chronic oral reference dose (RfD) of 2×10^{-5} milligrams per kilogram per day (mg/kg-day) for PFOA and PFOS (USEPA, 2016a and USEPA, 2016b). These RfD values should be used when evaluating potential risks from ingestion of contaminated groundwater at Superfund sites where PFOA and PFOS might be present, based on site history. Potential estimated health risks from PFOA and PFOS, if identified, would likely increase total site risks due to groundwater exposure. Further evaluation of potential risks from exposure to PFOA and PFOS in other media at the Site might be needed based on site conditions and may also affect total Site risks.

PFAS has not been sampled for at the Site. More evaluation/investigation of this class of constituents is recommended due to the history of the Site as military surplus storage and salvage yard as well as reports of a fire at the Site in 1976.

- ***2014 PFBS Noncancer Toxicity Value***

Perfluorobutanesulfonic acid (PFBS) has a chronic oral RfD of 2×10^{-2} mg/kg-day based on an EPA PPRTV (USEPA, 2014a). This RfD value should be used when evaluating potential risks from ingestion of contaminated groundwater at Superfund sites where PFBS might be present based on site history. Potential estimated health risks from PFBS, if identified, would likely increase total site risks due to

groundwater exposure. Further evaluation of potential risks from exposure to PFBS in other media at the Site might be needed based on Site conditions and may also affect total Site risks.

PFAS has not been sampled for at the Site. More evaluation/investigation of this class of constituents is recommended due to the history of the Site's use as military surplus storage and salvage yard as well as reports of a fire at the Site in 1976.

- ***Lead in Soil Cleanups***

EPA continues to examine the science around lead exposure. Updated scientific information indicates that adverse health effects are associated with blood lead levels (BLLs) at less than 10 micrograms per deciliter ($\mu\text{g}/\text{dL}$). Several studies have observed "clear evidence of cognitive function decrements in young children with mean or group BLLs between 2 and 8 $\mu\text{g}/\text{dL}$."

Based on this updated scientific information, EPA is including an evaluation of potential lead risks with a goal to limit exposure to residential and commercial soil lead levels such that a typical (or hypothetical) child or group of similarly exposed children would have an estimated risk of no more than 5% of the population exceeding a 5 $\mu\text{g}/\text{dL}$ BLL. This is based on evidence indicating cognitive impacts at BLLs below 10 $\mu\text{g}/\text{dL}$. A target BLL of 5 $\mu\text{g}/\text{dL}$ reflects current scientific literature on lead toxicology and epidemiology that provides evidence that the adverse health effects of lead exposure do not have a threshold.

EPA's 2017 OLEM memorandum "Transmittal of Update to the Adult Lead Methodology's Default Baseline Blood Lead Concentration and Geometric Standard Deviation Parameters" (OLEM Directive 9285.6-56) provides updates on the default baseline blood lead concentration and default geometric standard deviation input parameters for the Adult Lead Methodology (ALM). These updates are based on the analysis of the National Health and Nutritional Examination Survey (NHANES) 2009-2014 data, with recommended updated values for the baseline blood lead concentration being 0.6 $\mu\text{g}/\text{dL}$ and a geometric standard deviation of 1.8.

Using updated Integrated Exposure Uptake Biokinetic (IEUBK) and ALM parameters at a target BLL of 5 $\mu\text{g}/\text{dL}$, site-specific lead soil screening levels (SLs) of 200 parts per million (ppm) and 1,000 ppm are developed for residential and commercial/industrial exposures, respectively.

Given the ongoing review of information, the above SLs are considered in this FYR for informational purposes.

The 1999 NTCRA selected a soil cleanup level of 350 mg/kg. After completion of the removal action, the average lead concentration in soil remaining on-Site is 62 mg/kg (ppm) (Table 1 of the 2000 ROD). The average lead concentration is below the updated SLs.

Changes in Risk Assessment Methods

There have been no changes in risk assessment methods since the 2016 FYR that could affect the protectiveness of the remedy.

Changes in Exposure Pathways

- ***2018 EPA VISL Calculator***

In February 2018, EPA launched an online Vapor Intrusion Screening Level (VISL) calculator that can be used to obtain risk-based screening level concentrations for groundwater, sub-slab soil gas and indoor air. The VISL calculator uses the same database as the RSLs for toxicity values and physiochemical parameters and is automatically updated during the semi-annual RSL updates. Please see the User's

Guide for further details on how to use the VISL calculator: <https://www.epa.gov/vaporintrusion/vapor-intrusion-screening-level-calculator>.

The vapor intrusion pathway at the Site is currently incomplete. Groundwater contaminated with VOCs is contained within the Site boundaries and beneath property owned by the State in the northern part of the Site. There are no occupied structures on the State-owned property. Environmental covenants in place require an approved sub-slab vapor barrier and ventilation system if buildings are constructed on the property in the future.

Expected Progress Toward Meeting RAOs

The first RAO – preventing ingestion of groundwater contaminants exceeding MCLs, MCLGs, state MEGs or in their absence, an excess cancer risk of 1×10^{-6} or an HQ of 1 per contaminant – has been met. There are no drinking water wells on the part of the Site where groundwater contaminants exceed cleanup goals (i.e., the northern plume area and well MW58B1). Environmental covenants that prohibit use of groundwater are in place for the northern plume area properties.

The second RAO – preventing off-Site migration of contaminated groundwater – has also been met. Current monitoring data do not suggest off-Site migration above the cleanup levels. However, more monitoring is necessary to ensure these conditions are maintained over time.

EPA is making progress toward achieving the third RAO – restoring groundwater to meet MCLs, MCLGs, state MEGs or in their absence, an excess cancer risk of 1×10^{-6} or an HQ of 1 per contaminant. Groundwater performance standards for the southern plume have been met but they have not been met for the northern plume. Implementation of the EISB groundwater remedy is ongoing for the northern plume and is expected to reduce COC concentrations over time.

The fourth RAO – to provide long-term monitoring of surface water, sediments, groundwater, and fish – is also ongoing for groundwater. Following surface water and sediment monitoring in 2008 and biota sampling in 2002 and 2003 with results below levels of concern, EPA determined sampling of these media was no longer necessary.

Several chemicals, including vinyl chloride, 1,2-DCA and arsenic, have been detected in groundwater above MCLs or state MEGs, but the ROD did not identify these chemicals as COCs or establish cleanup goals. The presence of these additional chemicals is not expected to impact the RAOs or remedy protectiveness. They will continue to be monitored in groundwater.

QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?

No. The DSF, in consultation with EPA and MEDEP intends to dismantle an unused hydroelectric dam (i.e., the powerhouse structure) on the Dennys River next to the Site in 2021 to improve fish passage. Planning for the removal of the powerhouse structure is currently ongoing, with preliminary drawings developed in April 2021. After the demolition and removal of the hydroelectric infrastructure, DSF intends to restore the riverbed geomorphology and widen the river channel in the immediate vicinity of the former structure. Soil and sediment near the dam are not believed to pose a risk to human or ecological receptors based on confirmatory sampling following the 1999 NTCRA.

VI. ISSUES/RECOMMENDATIONS

| Issues/Recommendations | |
|--|--|
| OU(s) without Issues/Recommendations Identified in the FYR: | |
| None | |

| |
|--|
| Issues and Recommendations Identified in the FYR: |
|--|

| | | | | |
|--------------------------------------|---|--------------------------|------------------------|-----------------------|
| OU(s): OU1 | Issue Category: Monitoring | | | |
| | Issue: 1,4-Dioxane was historically detected in groundwater above a reporting limit of 100 µg/L, which is above the acceptable federal risk range of 0.46 µg/L to 46 µg/L (ppb). | | | |
| | Recommendation: Sample Site groundwater for 1,4-dioxane to determine current concentrations and the need for further evaluation. | | | |
| Affect Current Protectiveness | Affect Future Protectiveness | Party Responsible | Oversight Party | Milestone Date |
| No | Yes | EPA | EPA/State | 9/28/2022 |

| | | | | |
|--------------------------------------|--|--------------------------|------------------------|-----------------------|
| OU(s): OU1 | Issue Category: Monitoring | | | |
| | Issue: PFAS has not been sampled for at the Site. | | | |
| | Recommendation: Sample a subset of monitoring wells for PFAS including PFOA, PFOS, PFHxS, PFNA, PFHpA and PFDA. | | | |
| Affect Current Protectiveness | Affect Future Protectiveness | Party Responsible | Oversight Party | Milestone Date |
| No | Yes | EPA | EPA/State | 9/28/2022 |

OTHER FINDINGS

Several additional recommendations were identified during the FYR. These recommendations do not affect current and/or future protectiveness.

- The 2011 FYR noted that the southern extraction system was deactivated in November 2010 because the RAO for that area (i.e., southern plume) had essentially been met as IGCLs for all Site contaminants except PCE had been attained and PCE concentrations had stabilized at its IGCL. As a result, the 2016 FYR determined that institutional controls on the southern portion of the Site were no longer necessary (as the ROD contemplated, institutional controls would only be implemented until the groundwater was restored to cleanup levels); however, a second seasonal home was constructed following completion of the 2016 FYR. Therefore, sampling of the private wells for the seasonal homes on the parcel south of Route 191 is recommended to verify performance standards continue to be met.
- Several chemicals/metals, including vinyl chloride, 1,2-DCA and arsenic, have been detected in groundwater above MCLs or state MEGs, but the ROD did not identify these chemicals as COCs or establish cleanup goals. The 2017 ESD acknowledged detection of these analytes in groundwater, but the

ESD does not identify them as COCs or establish cleanup goals. The need for contaminants not identified in the ROD (e.g., vinyl chloride associated with the reductive dechlorination) to meet federal MCLs, the 1992 MEGs or other standards or TBC, should be further considered in association with monitoring to assess the potential achievement of cleanup goals.

- Future groundwater monitoring should consider the inclusion of wells outside the current northern plume area, such as upgradient wells, to monitor the effects of treatment and contaminant migration.

VII. PROTECTIVENESS STATEMENT

| Sitewide Protectiveness Statement |
|---|
| <i>Protectiveness Determination:</i> Will be Protective |
| <i>Protectiveness Statement:</i> The remedy is expected to be protective of human health and the environment upon completion. In the interim, the remedial activities completed to date have adequately addressed all exposure pathways that could result in unacceptable risk. Groundwater cleanup standards have been attained for the southern part of the Site. EISB treatments and monitoring are ongoing for the northern part of the Site. Institutional controls and access controls are in place to prevent current and future exposures in the northern portion of the Site. For the remedy to be protective in the long term, the following actions need to be taken: 1) Re-sample Site groundwater for 1,4-dioxane to determine current concentrations and the need for more evaluation; and 2) Sample a subset of monitoring wells for PFAS. |

VIII. NEXT REVIEW

The next FYR Report for the Eastern Surplus Company Superfund site is required five years from the completion date of this review.

APPENDIX A – REFERENCE LIST

2013 Annual Data Summary Report, Long-Term Monitoring Activities at Eastern Surplus Company Site, Meddybemps, Maine. Prepared by Nobis Engineering, Inc. for EPA Region 1. January 2015.

2014 Annual Data Summary Report, Long-Term Monitoring Activities at Eastern Surplus Company Site, Meddybemps, Maine. Prepared by Nobis Engineering, Inc. for EPA Region 1. July 2015.

2015 Groundwater Monitoring Event Report. Prepared by Campbell Environmental Group, Inc. for MEDEP. May 2016.

Action Memorandum – Request for Non-Time Critical Removal Action at the Eastern Surplus Company Superfund Site, Meddybemps, Maine. Prepared by EPA Region 1. May 20, 1999.

Cleanup Status Report, Eastern Surplus Company Superfund Site, Meddybemps, Maine. Prepared by Nobis Engineering, Inc. for EPA Region 1. February 2020.

Data Summary for October 2016 Northern Plume Area Groundwater Monitoring at Eastern Surplus Superfund Site, Meddybemps. Prepared by Maine Department of Environmental Protection. May 26, 2017.

Declaration of Environmental Covenant by the State of Maine through and by the Maine Department of Environmental Protection. July 28, 2017.

Declaration of Environmental Covenant by the State of Maine through and by the Maine Department of Environmental Protection. August 25, 2017.

Draft 2005 Annual Data Summary, Long-Term Response Action, Eastern Surplus Company Site, Meddybemps, Maine. Prepared by Tetra Tech NUS, Inc. for EPA Region 1. April 2006.

Explanation of Significant Differences, Eastern Surplus Company Superfund Site, Meddybemps, Maine. Prepared by EPA Region 1. September 26, 2017.

Final Basis of Design Report, Eastern Surplus Superfund Site, Meddybemps, Maine. Prepared by Nobis Engineering, Inc. for EPA Region 1. August 2018.

Final Remedial Investigation Report, Eastern Surplus Company Site, Meddybemps, Maine. Prepared by Tetra Tech NUS, Inc. for EPA Region 1. July 1999.

Five-Year Review, Eastern Surplus Company Superfund Site, Meddybemps, Maine. Prepared by EPA Region 1. September 29, 2006.

Letter from EPA to MEDEP, Re: Abandonment of Southern Plume Monitoring Wells, Eastern Surplus Company Site, Meddybemps, Maine. Prepared April 4, 2016.

Memorandum: Eastern Surplus Company Superfund Site Final Inspection. Prepared by Nobis. March 16, 2020.

Record of Decision, Eastern Surplus Company Superfund Site, Meddybemps, Washington County, Maine. Prepared by EPA Region 1. September 28, 2000.

Second Five-Year Review, Eastern Surplus Company Superfund Site, Meddybemps, Maine. Prepared by EPA Region 1. September 29, 2011.

Third Five-Year Review Report for Eastern Surplus Company Superfund Site, Washington County, Maine.
Prepared by EPA Region 1. September 28, 2016.

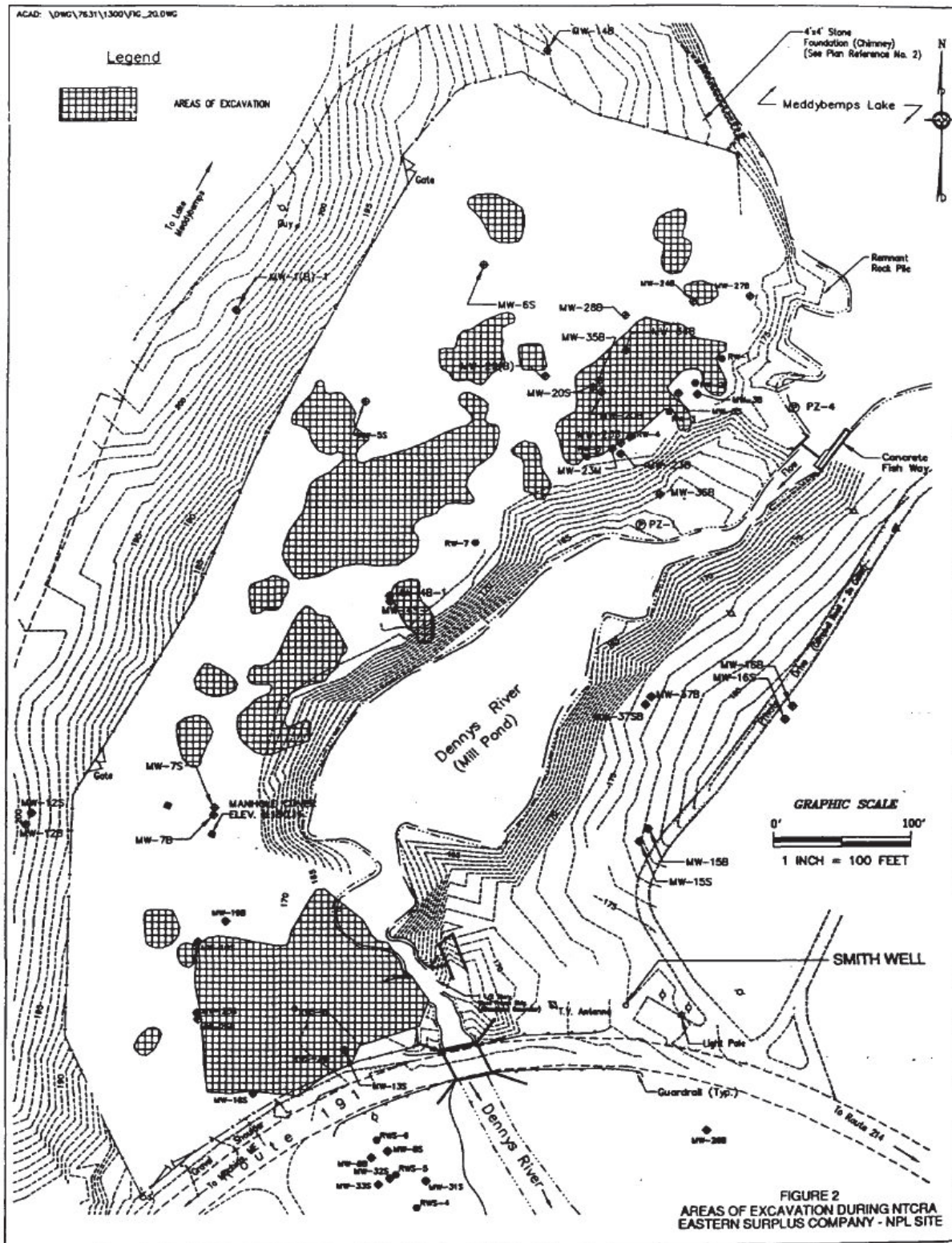
APPENDIX B – SITE CHRONOLOGY

Table B-1: Site Chronology

| Event | Date |
|--|--------------------------------|
| The Eastern Surplus Company operated a storage and salvage yard on site | 1946 to 1976 |
| MEDEP identified the Site as an uncontrolled hazardous waste site and began a removal action | 1985 |
| EPA continued the removal action | 1986 to 1990 |
| EPA added the Site to the NPL | June 1996 |
| EPA began the RI/FS | August 1996 |
| EPA conducted an NTCRA | 1998 to 1999 |
| EPA completed an HHRA and ecological risk assessment | 1999 |
| U.S. District Court for the District of Maine approves a cash-out Consent Decree that EPA and the State of Maine entered into with DOD and other Site property owners | March 1999 |
| EPA constructed a groundwater extraction and treatment system under the NTCRA | 2000 |
| EPA, the State of Maine Historic Preservation Officer, the Passamaquoddy Tribe, and the Advisory Council on Historic Preservation entered into a Memorandum of Agreement for Recovery of Significant Information and Mitigation of Adverse Effects | July 2000 |
| EPA finalized the RI/FS reports and issued the ROD | September 2000 |
| EPA began the remedial design | December 2000 |
| EPA began the remedial action and upgraded the groundwater extraction and treatment system | July 2001 |
| EPA completed the remedial design Full-scale operation of the extraction and treatment system began | August 2001 |
| Site's remedy achieved construction completion milestone | September 2001 |
| EPA conducted a pilot study and full-scale application of potassium permanganate | 2002 to 2003 |
| EPA issued the Site's first FYR Report | September 2006 |
| EPA shut down the extraction system for the southern plume | 2010 |
| EPA issued the Site's second FYR Report | September 2011 |
| EPA shut down the extraction system for the northern plume | December 2011 |
| EPA transferred O&M responsibilities to MEDEP | December 2012 |
| EPA conducted an EISB pilot test | 2012 and 2013 |
| EPA issued the Site's third FYR Report | September 2016 |
| MEDEP recorded Environmental Covenants for the parcels north of Route 191 | July and August 2017 |
| EPA issued an ESD to add EISB as a component of the remedy | September 2017 |
| EPA conducted the remedial design for EISB The EISB remedial action began | June 2017 to September 2018 |
| The Site achieved the Sitewide Ready for Anticipated Use performance measure | October 2017 |
| EPA began Phase I of the EISB treatment activities | December 2018 |
| EPA conducted Phase I performance monitoring | March 2019 |
| EPA conducted Phase II of the EISB treatment activities | August 2019 |
| EPA conducted Phase II performance monitoring | December 2019 |

APPENDIX C – SITE BACKGROUND

Figure C-1: NTCRA Soil Removal Areas



Source: Figure 2 of the 2000 ROD.

APPENDIX D – EVALUATION OF 1999 REMOVAL ACTION SOIL CLEANUP LEVELS

To evaluate if the soil cleanup levels from the 1999 Action Memorandum remain valid, this FYR conducted a screening-level risk evaluation. The screening-level risk evaluation compared the 1999 removal action soil cleanup levels to the EPA’s 2021 non-residential soil RSLs, which are based on established and provisional toxicity values and conservative default exposure assumptions. Non-residential soil RSLs were selected for the evaluation because institutional controls are in place that prohibit excavation, site development and any other ground disturbance without MEDEP’s permission.

Table D-1 shows that the soil cleanup levels for PCBs, PCE, TCE, methylene chloride, cadmium and chromium are equivalent to risks below 1×10^{-4} . A 10^{-4} risk level corresponds to the upper end of EPA’s generally acceptable risk range of 1×10^{-6} to 1×10^{-4} . The noncancer HQs for PCE, TCE, methylene chloride, cadmium and chromium are below EPA’s threshold of 1. The soil cleanup level for lead is below the EPA’s current soil RSL of 1,000 mg/kg for non-residential use. The soil cleanup levels from the 1999 NTCRA remain valid for non-residential land use.

Table D-1: Soil Cleanup Level Risk Screening – Non-Residential Land Use

| Soil Contaminant | 1999 Action Memorandum Soil Cleanup Level (mg/kg) | Non-residential RSLs ^a (mg/kg) | | Risk ^b | HQ ^c |
|-------------------------|---|---|-------------------------|---------------------|-----------------|
| | | Carcinogenic (1 x 10 ⁻⁶ target risk) | Noncancer (target HQ=1) | | |
| PCBs | 2 | 0.94 ^d | -- | 2×10^{-6} | -- |
| Tetrachloroethene (PCE) | 0.06 | 100 | 390 | 6×10^{-10} | 0.0002 |
| Trichloroethene (TCE) | 0.06 | 6 | 19 | 1×10^{-8} | 0.003 |
| Methylene chloride | 0.02 | 1,000 | 3,200 | 2×10^{-11} | 0.00001 |
| Cadmium | 27 | 9,300 | 980 | 3×10^{-9} | 0.03 |
| Chromium | 450 | 6.3 ^e | 3,500 | 7×10^{-5} | 0.1 |
| Lead | 350 | 1,000 ^f | | -- | -- |

Notes:

a) Current EPA RSLs for a composite worker, dated May 2021, are available at <http://www2.epa.gov/risk/risk-based-screening-table-generic-tables> (accessed 5/17/2021).

b) Cancer risk calculated using the following equation: cancer risk = (cleanup goal ÷ cancer-based RSL) × 10⁻⁶.

c) Noncancer HQ calculated using the following equation: HQ = (cleanup goal ÷ noncancer RSL).

d) RSLs for PCBs (high risk) used as conservative measure in the absence of specific Aroclor data.

e) RSLs for hexavalent chromium used as conservative measure in absence of chromium speciation data.

f) EPA has no consensus reference dose or cancer slope factor for lead. Therefore, the EPA uses the ALM to estimate screening levels for an industrial setting.

-- = not applicable; toxicity data unavailable

APPENDIX E – PRESS NOTICE

2/26/2021

EPA to Review Cleanups at Seven New England Superfund Sites This Year | U.S. EPA News Releases | US EPA

An official website of the United States government.



News Releases from Region 01

EPA to Review Cleanups at Seven New England Superfund Sites This Year

02/25/2021

Contact Information:

Dave Deegan (deegan.dave@epa.gov)
(617) 918-1017

BOSTON – The U.S. Environmental Protection Agency (EPA) will conduct comprehensive reviews of previously-completed cleanup work at seven National Priorities List (NPL) Superfund sites in New England this year. The sites, located in Connecticut, Maine, Massachusetts and New Hampshire, will undergo a legally-required Five-Year Review to ensure that previous remediation efforts at the sites continue to protect public health and the environment.

"Five-Year Reviews are designed to ensure that cleanup remedies continue to protect human health and the environment over time," said **EPA New England Acting Regional Administrator Deborah Szaro**. "These reviews also identify if changing circumstances or scientific understanding might require EPA to take additional actions at the site. By doing this work EPA provides assurance to community that health protection measures are adequate and working."

The Superfund program, a federal program established by Congress in 1980, investigates and cleans up the most complex, uncontrolled or abandoned hazardous waste sites in the country and works to facilitate activities to return them to productive use. EPA oversees Superfund studies and cleanups at 123 NPL sites across the six New England states. There are many phases of the Superfund cleanup process including considering future use and redevelopment and conducting post-cleanup monitoring of sites. EPA must ensure completed remedies continue to be protective of public health and the environment.

The Superfund sites where EPA will complete Five-Year Reviews in 2021 are listed below, and the web links provide detailed information on site status and past assessment and cleanup activity. Once the Five-Year Review is complete, its findings will be posted to the website in a final report.

Five-Year Reviews of Superfund sites in New England to be completed in 2021

2/26/2021

EPA to Review Cleanups at Seven New England Superfund Sites This Year | U.S. EPA News Releases | US EPA

Durham Meadows, Durham, Conn. www.epa.gov/superfund/durham
Callahan Mine, Brooksville, Maine www.epa.gov/superfund/callahan
Eastern Surplus, Meddybemps, Maine www.epa.gov/superfund/eastern
AMTL (Materials Technology Lab), Watertown, Mass.

www.epa.gov/superfund/amtl

Fort Devens - Sudbury Training Annex, Sudbury, Mass.

www.epa.gov/superfund/sudburyannex

Coakley Landfill, N. Hampton, N.H. www.epa.gov/superfund/coakley

Savage Municipal Water Supply, Milford, N.H. www.epa.gov/superfund/savage

More information on Superfund and other cleanup sites in New England:

<https://www.epa.gov/cleanups/cleaning-new-england>

LAST UPDATED ON FEBRUARY 25, 2021

APPENDIX F – INTERVIEW FORMS

| EASTERN SURPLUS SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM | |
|---|--|
| Site Name: Eastern Surplus | |
| EPA ID: MED981073711 | |
| Interviewer name: N/A | Interviewer affiliation: N/A |
| Subject name: Rebecca Hewett | Subject affiliation: Maine Department of Environmental Protection |
| Subject contact information: (207) 287-8554; Rebecca.L.Hewett@maine.gov | |
| Interview date: 6/7/21 | Interview time: N/A |
| Interview format (select one): In Person Phone Mail Email Other: | |
| Interview category: MEDEP (State Agency) | |

1. What is your overall impression of the project, including cleanup, maintenance, and reuse activities (as appropriate)?

Progress is being made on various aspects of the site – 1) cleanup activities, specifically in-situ bioremediation work in the northern plume area, began in 2018 but have been delayed since early 2020 when EPA’s oversight contract ended; 2) the MEDEP is working to transferring ownership of the site property to the Passamaquoddy Tribe; and 3) other entities are working on removal of the remains of the concrete from the former powerhouse structure (not part of the Superfund site cleanup) that spans the Dennys River abuts the site property near Route 191.

2. What is your assessment of the current performance of the remedy in place at the Site?

The remedy in place is protective of human health and the environment.

3. Are you aware of any complaints or inquiries regarding site-related environmental issues or remedial activities from residents in the past five years?

No, not aware of any complaints. MEDEP has had inquiries from the Downeast Atlantic Salmon Federation (DASF) regarding site access for Smith family representatives to remove the turbine from the former powerhouse structure, past site cleanup activities information and future access for removal of the former powerhouse structure.

4. Has your office conducted any site-related activities or communications in the past five years? If so, please describe the purpose and results of these activities.

Yes, MEDEP has 1) worked with EPA on site cleanup activities – amending the Record of Decision and Superfund State Contract for and implementation of full-scale in-situ bioremediation cleanup activities, etc.; 2) placed 2 environmental covenants on the site property, 3) conducted annual site visits/inspections; 4) work with the Town of Meddybemps to resolve their tax liens interest in the site property; 5) prepare and submit a legislative resolve to transfer a portion of the site property to the Passamaquoddy Tribe; 6) preparing an updated environmental covenant based on current deed citations 7) discuss with DASF past site cleanup activities and former powerhouse structure removal and allow site access, etc.

5. Are you aware of any changes to state laws that might affect the protectiveness of the Site’s remedy?

No.

6. Are you comfortable with the status of the institutional controls at the Site? If not, what are the associated outstanding issues?

Based on the Town of Meddybemps recent release deed to the State of Maine/MEDEP for their prior tax liens, the MEDEP plans to prepare and record an updated environmental covenant based on current deed citations.

7. Are you aware of any changes in projected land use(s) at the Site?

No.

8. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?

MEDEP is looking forward to continuing the in-situ bioremediation activities once EPA hires a contractor to conduct the work.

9. Do you consent to have your name included along with your responses to this questionnaire in the FYR report?

Yes.

| EASTERN SURPLUS SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM | |
|--|--|
| Site Name: Eastern Surplus | |
| EPA ID: MED981073711 | |
| Interviewer name: Darriel Swatts | Interviewer affiliation: EPA Region 1 |
| Subject name: Donald Soctomah | Subject affiliation: Passamaquoddy Tribe – Tribal Historic Preservation Officer |
| Subject contact information: (207) 214-4051 | |
| Interview date: 5/12/21 | Interview time: 11:00 am |
| Interview format (select one): In Person <u>Phone</u> Mail Email Other: | |
| Interview category: Tribal Representative | |

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

Yes, I have known about the Site for years and I was at the Site when the cleanup first began.

2. Do you feel well-informed regarding the Site’s activities and remedial progress? If not, how might EPA convey site-related information in the future?

I keep track of everything that goes on at the Site and am well-informed of what is happening. I read the EPA newsletter that comes out once in a while and it keeps me updated on activities.

I liked the site visit activity that occurred relatively recently and, once again, the newsletter is helpful.

3. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism, or trespassing?

I don’t see any problems at the Site. In addition to the regular monitoring, the dam/powerhouse structure was partially removed.

4. Are you aware of any changes to local regulations that might affect the protectiveness of the Site’s remedy?

No.

5. Are you aware of any changes in projected land use(s) at the Site?

I know the ownership at the Site is in question. That EPA does not want to own the property and that the State is currently overseeing the property and there is a question of what the future holds for the Site. The Tribe continues to be very interested in maintaining the Site and keeping ownership due to the cultural and traditional links to the tribe.

6. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site?

As far as I know, the Tribe has been well informed. I don’t know about the neighbors or town of Meddybemps.

7. Do you have any comments, suggestions, or recommendations regarding the project?

It has been like “night and day” from the very beginning, looking at the Site from when the cleanup first started to today. Every year the Site is improving. I would like to see the dam/powerhouse fully removed and the ownership clarified. The Tribe wants to be good stewards of the property. I noticed that a few trees that were planted to beautify the area are sprouting.

8. Do you consent to have your name included along with your responses to this questionnaire in the FYR report?

Yes.

| EASTERN SURPLUS SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM | |
|--|--|
| Site Name: Eastern Surplus | |
| EPA ID: MED981073711 | |
| Interviewer name: Darriel Swatts | Interviewer affiliation: EPA Region 1 |
| Subject name: Dale Mitchell | Subject affiliation: Passamaquoddy Tribe – Tribal Member & Site Caretaker |
| Subject contact information: dalem@wabanaki.com | |
| Interview date: 6/11/21 | Interview time: 12:00 pm |
| Interview format (select one): In Person <u>Phone</u> Mail Email Other: | |
| Interview category: Tribal Representative | |

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

Yes, I am but maybe not completely. I don't have a full understanding of it, but I know that it's a Superfund site, so the answer is "yes."

2. Do you feel well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future?

Yes, pretty well.

3. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism, or trespassing?

None that I'm aware of.

4. Are you aware of any changes to local regulations that might affect the protectiveness of the Site's remedy?

No.

5. Are you aware of any changes in projected land use(s) at the Site?

No.

6. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

I can only speak for the Tribe, I'm not sure about surrounding neighborhood, but answer would be "yes" to that from [the Tribe's] perspective.

I think they have got it is pretty well handled as far as what is available online as long as people know how to navigate to the information.

7. Do you have any comments, suggestions, or recommendations regarding the project?

At present, no. I've worked for the Brownfields Program and I realize that the Superfund site is beyond the purview of Brownfields, but I was wondering if the Tribe might be considered as a potential contractor to do

some of the work with the contractor that I have onboard. Just curiosity on my part. I know that the Tribe has, with other federal agencies, engaged in 638 contracting. I think we have the wherewithal and track record to be able to accomplish whatever any other contractor and/or the State has up to this point.

8. Do you consent to have your name included along with your responses to this questionnaire in the FYR report?

Yes.

| EASTERN SURPLUS SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM | |
|--|--|
| Site Name: Eastern Surplus | |
| EPA ID: MED981073711 | |
| Interviewer name: N/A | Interviewer affiliation: N/A |
| Subject name: Brett Ciccotelli, Restoration & Engagement Coordinator | Subject affiliation: Downeast Salmon Federation (NGO) |
| Subject contact information: (207) 812-0288; brett@mainesalmonrivers.org | |
| Interview date: 5/26/21 | Interview time: N/A |
| Interview format (select one): In Person Phone Mail <u>Email</u> Other: | |
| Interview category: State Agency, Organizations, etc. NGO | |

1. What is your overall impression of the project, including cleanup, maintenance, and reuse activities (as appropriate)?

I've been impressed with the dedication and commitment to project. Overall looks great.

2. What is your assessment of the current performance of the remedy in place at the Site?

N/A

3. Are you aware of any complaints or inquiries regarding site-related environmental issues or remedial activities from residents in the past five years?

No.

4. Has your office conducted any site-related activities or communications in the past five years? If so, please describe the purpose and results of these activities.

We've worked with EPA staff for materials related to site remediation and have coordinated fisheries restoration related activities on the Site.

5. Are you aware of any changes to state laws that might affect the protectiveness of the Site's remedy?

No.

6. Are you comfortable with the status of the institutional controls at the Site? If not, what are the associated outstanding issues?

Yes.

7. Are you aware of any changes in projected land use(s) at the Site?

Potential new ownership pending.

8. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?

No.

9. Do you consent to have your name included along with your responses to this questionnaire in the FYR report?

Yes.

| EASTERN SURPLUS SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM | |
|--|--|
| Site Name: Eastern Surplus | |
| EPA ID: MED981073711 | |
| Interviewer name: N/A | Interviewer affiliation: N/A |
| Subject name: Ernie Atkinson, Marine Resources Scientist | Subject affiliation: Maine Department of Marine Resources |
| Subject contact information: ernie.atkinson@maine.gov | |
| Interview date: 6/9/21 | Interview time: N/A |
| Interview format (select one): In Person Phone Mail <u>Email</u> Other: | |
| Interview category: State Agency, Organizations, etc. | |

1. What is your overall impression of the project, including cleanup, maintenance, and reuse activities (as appropriate)?

The project has come a long way since it began. Other than the remnant powerhouse structure it will be hard to tell that was ever a Superfund site. The powerhouse is slated to be taken out summer of 2021.

2. What is your assessment of the current performance of the remedy in place at the Site?

I'm not qualified to say. From appearances it appears that all has been mitigated.

3. Are you aware of any complaints or inquiries regarding site-related environmental issues or remedial activities from residents in the past five years?

No, I haven't heard of anything like that. In fact, only positive comments on how much better it was looking.

4. Has your office conducted any site-related activities or communications in the past five years? If so, please describe the purpose and results of these activities.

We have not done any fisheries assessment in and around the Site. An NGO, The Downeast Salmon Federation has been conducting counts of river herring into the lake. MDMR has done some survey work in the stream and we have contracted with an engineer related to the proposed removal of the powerhouse structure.

5. Are you aware of any changes to state laws that might affect the protectiveness of the Site's remedy?

No, I'm not aware.

6. Are you comfortable with the status of the institutional controls at the Site? If not, what are the associated outstanding issues?

Yes, I'm comfortable with the controls in place. This is not my area of expertise but the explanations I have received over the years make sense conceptually.

7. Are you aware of any changes in projected land use(s) at the Site?

As I understand it, the land will be designated as an area of cultural significance to the Passamaquoddy. Other than that, I don't know of any changes.

8. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?

No, I don't.

9. Do you consent to have your name included along with your responses to this questionnaire in the FYR report?

Yes, I consent to having my name included.

| EASTERN SURPLUS SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM | |
|---|--|
| Site Name: Eastern Surplus | |
| EPA ID: MED981073711 | |
| Interviewer name: Darriel Swatts | Interviewer affiliation: EPA Region 1 |
| Subject name: Pete Trouant | Subject affiliation: Board of Selectmen |
| Subject contact information: ptrouant@gmail.com | |
| Interview date: 6/10/21 | Interview time: 1:00 pm |
| Interview format (circle one): In Person Phone Mail Email Other: | |
| Interview category: Local Government (Board of Selectmen) | |

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

Yes.

2. Do you feel well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future?

Fairly.

A far as I know, we get notices whenever there is going to be testing. Things have come to a halt, but then all of a sudden something comes up and testing continues. As far as I know the Town is notified when activities are going to occur at the Site.

3. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism, or trespassing?

Not that I'm aware of, no. The fence is there and as far as I know the person who does the mowing hasn't spoken of any issues.

4. Are you aware of any changes to local regulations that might affect the protectiveness of the Site's remedy?

No local ordinances that may affect the remedy; however, I'm not sure I understand the question. [Upon clarification of the question, the stated answer was "No."]

5. Are you aware of any changes in projected land use(s) at the Site?

No, still waiting to hear more [about the property transfer]. As far as I'm aware there is not much [the Tribe] can do with [the property]. It is good if the Indians get [the property] because it is a sacred site to them. I'm not aware of any changes.

6. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

I can't speak for the neighbors, but I have been informed whenever they are going to be there.

The Meddybemps, ME community center is really the only means of communication. We post our meeting notices at the Post Office which is part of our community center. There is very poor activism, as few people

read the announcements. The local paper sometimes has announcements. The best way would be to place announcements in the Calais Advertiser (local paper), Quoddy Tides (local paper) and Bangor Daily News. Those are likely the only options.

7. Do you have any comments, suggestions, or recommendations regarding the project?

No. I thought at one time it was going to be five years before the public can use it, but now it appears that is going to be never. I don't know what happened to the five years and don't know the status now. I know the State is still managing the property, but unsure of the status, what's going on or what needs to be done.

8. Do you consent to have your name included along with your responses to this questionnaire in the FYR report?

Yes.

| EASTERN SURPLUS SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM | |
|--|---|
| Site Name: Eastern Surplus | |
| EPA ID: MED981073711 | |
| Interviewer name: Kirby Webster | Interviewer affiliation: Skeo |
| Subject name: Cary James | Subject affiliation: Lake Meddybemps Association |
| Interview date: 6/9/21 | Interview time: 8:30 a.m. |
| Interview format (select one): In Person <u>Phone</u> Mail Email Other: | |
| Interview category: Local Government, Organization, etc. | |

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

100 percent.

2. Do you feel well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future?

100 percent.

3. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism, or trespassing?

I would say yes. The Site is now an Indian archeological site. There is a lot of disagreement between the Indians and the locals. I am not aware of any vandalism but there is animosity between the groups and the potential is there for vandalism.

4. Are you aware of any changes to local regulations that might affect the protectiveness of the Site's remedy?

No, with a caveat. The dam at the outlet of the lake is controlled by the Atlantic Salmon Commission. They are in close proximity. I am sure they are in direct contact with EPA. The spillway is always being open and closed, that could somehow possibly impact it, but I doubt it.

5. Are you aware of any changes in projected land use(s) at the Site?

Yes. The property was turned over to Maine DEP who cannot own property in the State of Maine. The Passamaquoddy want to take control of it. I am unsure of why the Town does not want to do that.

6. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site?

Yes, they are fantastic. Terrie from EPA has been incredible.

7. Do you have any comments, suggestions, or recommendations regarding the project?

No, nothing other than what I have already told you. I think everyone should be aware of the land dispute. It would be nice to see that resolved quickly. The land is an Indian archeological site, they should own it and they are willing to own it.

8. Do you consent to have your name included along with your responses to this questionnaire in the FYR report? *Yes, definitely.*

APPENDIX G – DATA REVIEW TABLES AND FIGURES

Table G-1: VOC Historical Data and Select EISB Parameters

| Sample Location | Sample Date | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | Vinyl Chloride | Ethane | Ethene | Methane | Chloride | DHC | ORP (mv) | DO | pH |
|-----------------|-------------|-------------------|-----------------|------------------------|----------------|--------|--------|---------|----------|-----------|----------|------|------|
| IN-1B1 | 5/23/2012 | 370 | 2.5 | 2.5 | 2.5 | | | | | -- | -- | -- | -- |
| | 11/28/2012 | 100 | 16 | 500 | 13 | | | | | -- | -- | -- | -- |
| | 1/29/2013 | 280 | 11 | 77 | 5 | 0.05 | 0.9 | | | -- | -- | -- | -- |
| | 4/16/2013 | 120 | 7.8 | 630 | 50 | 0.18 | 9.6 | | | -- | -- | -- | -- |
| | 6/27/2013 | 280 | 24.5 | 385 | 19.5 | 10 | 23 | 265 | | -- | -- | -- | -- |
| | 10/24/2013 | 265 | 22.5 | 74 | 7.45 | 5 | 11.5 | 15 | | -- | -- | -- | -- |
| | 5/21/2014 | 330 | 23 | 120 | 22 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/28/2014 | 270 | 5 | 16 | 2.7 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/20/2015 | 680 | 5.6 | 2.95 | 0.27 | 5 | 5 | 5 | | -- | -- | -- | -- |
| | 10/12/2016 | 180 | 3.9 | 0.65 | 1 | 5 | 5 | | | -- | -- | -- | -- |
| | 9/19/2017 | 510 | 13 | 4.7 | 2.5 | | | | | -- | 34.8 | 0.39 | 6.68 |
| | 12/10/2019 | 5 | 5 | 590 | 10 | 5 | 5 | 7600 | 5700 | 70,000 | -46.4 | 0.03 | 6.57 |
| IN-1B2 | 5/23/2012 | 85 | 2.5 | 2.5 | 2.5 | | | | | -- | -- | -- | -- |
| | 11/27/2012 | 170 | 0.89 | 0.25 | 0.25 | | | | | -- | -- | -- | -- |
| | 1/29/2013 | 85 | 5 | 22 | 5 | 0.05 | 0.2 | | | -- | -- | -- | -- |
| | 4/16/2013 | 270 | 13 | 220 | 17 | 0.048 | 4.2 | | | -- | -- | -- | -- |
| | 6/27/2013 | 13 | 1.0 | 1500 | 79 | 10 | 10 | 130 | | -- | -- | -- | -- |
| | 10/24/2013 | 22 | 1.0 | 270 | 99 | 5 | 87 | 73 | | -- | -- | -- | -- |
| | 5/21/2014 | 25 | 1.0 | 35 | 12 | 10 | 61 | 36 | | -- | -- | -- | -- |
| | 10/28/2014 | 23 | 3.0 | 22 | 7.9 | 10 | 81 | 48 | | -- | -- | -- | -- |
| | 10/20/2015 | 31 | 12 | 8.1 | 2.2 | 5 | 24 | 44 | | -- | -- | -- | -- |
| | 10/11/2016 | 89 | 19 | 11 | 1.1 | 5 | 2.6 | | | -- | -- | -- | -- |
| | 9/19/2017 | 110 | 40 | 7.6 | 2.5 | | | | | -- | -71.1 | 0.42 | 7.68 |
| | 12/10/2019 | 22 | 5.4 | 720 | 65 | 5 | 21 | 780 | 10000 | 1,000,000 | -99.5 | 0.03 | 6.76 |
| IN-2B1 | 5/23/2012 | 9.5 | 2.5 | 2.5 | 2.5 | | | | | -- | -- | -- | -- |
| | 11/27/2012 | 20 | 1.7 | 0.25 | 0.25 | | | | | -- | -- | -- | -- |
| | 1/30/2013 | 120 | 0.5 | 0.5 | 0.5 | 0.05 | 0.05 | | | -- | -- | -- | -- |
| | 4/16/2013 | 12 | 0.5 | 0.5 | 0.5 | 0.016 | 0.052 | | | -- | -- | -- | -- |
| | 6/26/2013 | 12 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 10/23/2013 | 580 | 3.0 | 10.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 5/21/2014 | 17 | 1.0 | 4.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/28/2014 | 87 | 1.0 | 4.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 9/19/2017 | 140 | 5.5 | 7.8 | 0.16 | | | | | -- | 1169.8 | 1.53 | 5.93 |
| | 3/28/2019 | 125 | 125 | 125 | 125 | 5 | 5 | 5 | | NA | 137.0 | 2.2 | 7.14 |
| | 12/10/2019 | 9.4 | 65 | 60 | 1.0 | 5 | 5 | 5300 | 3400 | 6,000 U | -38.9 | 0.45 | 5.56 |
| | IN-2B2 | 6/26/2013 | 59 | 4.0 | 1.0 | 0.25 | | | | | -- | -- | -- |
| 10/23/2013 | | 60 | 4.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| 5/21/2014 | | 61 | 3.0 | 1.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| 10/28/2014 | | 56 | 3.0 | 1.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| 3/28/2019 | | 125 | 125 | 125 | 125 | 5 | 5 | 5 | | -- | 115.6 | 0.07 | 8.09 |
| 12/10/2019 | 46 | 3.8 | 1.1 | 1.0 | 5 | 5 | 5 | 7500 | 3,000 U | -48.7 | 0.27 | 7.84 | |

| Sample Location | Sample Date | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | Vinyl Chloride | Ethane | Ethene | Methane | Chloride | DHC | ORP (mv) | DO | pH | |
|-----------------|-------------|-------------------|-----------------|------------------------|----------------|--------|--------|---------|----------|------------|----------|--------|------|------|
| IN-3B | 5/22/2012 | 0.3 | 2.5 | 2.5 | 2.5 | | | | | -- | -- | -- | -- | |
| | 11/26/2012 | 0.4 | 0.25 | 0.25 | 0.25 | | | | | -- | -- | -- | -- | |
| | 1/28/2013 | 0.5 | 0.5 | 0.5 | 0.5 | 0.05 | 0.05 | | | -- | -- | -- | -- | |
| | 4/16/2013 | 0.5 | 0.5 | 0.5 | 0.5 | 0.037 | 0.13 | | | -- | -- | -- | -- | |
| | 6/25/2013 | 1.0 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- | |
| | 10/22/2013 | 1.0 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- | |
| | 5/22/2014 | 1.0 | 1.0 | 1.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- | |
| | 10/28/2014 | 5 | 1.0 | 1.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- | |
| 9/20/2017 | 0.25 | 0.25 | 0.25 | 0.05 | 5 | 5 | 5 | | 4,000 U | 53 | 6.26 | 7.56 | | |
| IN-6B | 5/22/2012 | 12 | 3.0 | 2.9 | 2.5 | | | | | -- | -- | -- | -- | |
| | 11/27/2012 | 12 | 5.1 | 9.7 | 0.25 | | | | | -- | -- | -- | -- | |
| | 1/29/2013 | 4.0 | 1.8 | 14 | 0.5 | 0.05 | 0.6 | | | -- | -- | -- | -- | |
| | 4/16/2013 | 1.5 | 0.5 | 7.1 | 0.5 | 0.35 | 0.22 | | | -- | -- | -- | -- | |
| | 6/25/2013 | 11 | 3.0 | 14 | 0.25 | | | | | -- | -- | -- | -- | |
| | 10/22/2013 | 11 | 3.0 | 22 | 0.25 | | | | | -- | -- | -- | -- | |
| | 5/21/2014 | 53 | 10.0 | 28 | 0.25 | 10 | 10 | 340 | | -- | -- | -- | -- | |
| | 10/28/2014 | 37 | 7.0 | 34 | 0.25 | 10 | 10 | 390 | | -- | -- | -- | -- | |
| | 9/19/2017 | 43 | 5.5 | 43 | 2.5 | | | | | -- | -13.5 | 0.36 | 6.92 | |
| | 3/27/2019 | 1900 | 250 | 250 | 250 | 5 | 5 | 85 | 5400 | 0 U | 119.7 | 0.39 | 7.22 | |
| | 12/10/2019 | 25 | 280 | 1300 | 50 | 5 | 5 | 740 | 100000 | 40,000 | -- | -- | -- | |
| | IN-7B | 5/22/2012 | 170 | 2.5 | 2.5 | 2.5 | | | | | -- | -- | -- | -- |
| 11/27/2012 | | 98 | 8.1 | 5.2 | 0.25 | | | | | -- | -- | -- | -- | |
| 1/29/2013 | | 91 | 2.5 | 2.5 | 2.5 | 0.05 | 0.05 | | | -- | -- | -- | -- | |
| 4/16/2013 | | 93 | 2.5 | 2.5 | 2.5 | 0.33 | 0.12 | | | -- | -- | -- | -- | |
| 6/26/2013 | | 75 | 4.0 | 8.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- | |
| 10/22/2013 | | 270 | 12.0 | 32.0 | 0.9 | 5 | 5 | 50 | | -- | -- | -- | -- | |
| 5/21/2014 | | 120 | 3.0 | 3.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- | |
| 10/28/2014 | | 94 | 1.0 | 3.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- | |
| 10/20/2015 | | 190 | 3.3 | 6.3 | 0.125 | 5 | 5 | 5 | | -- | -- | -- | -- | |
| 10/12/2016 | | 110 | 6.2 | 27 | 2.1 | 5 | 5 | | | -- | -- | -- | -- | |
| 9/20/2017 | | 150 | 4.5 | 69 | 2.5 | 5 | 5 | 5 | | -- | 365 | 0 | 6.06 | |
| 3/27/2019 | | 250 | 250 | 950 | 250 | 5 | 5 | 320 | 13000 | 0 U | 34.9 | 0.1 | 6.87 | |
| 12/12/2019 | | 76 | 44 | 580 | 120 | 5 | 180 | 3100 | | 20,000,000 | -- | -- | -- | |
| IN-8B1 | | 7/18/2018 | 440 | 8.7 | 2.5 | 2.5 | | | | | -- | 40 | 0.29 | 7.41 |
| | | 3/26/2019 | 120 | 50 | 210 | 50 | 5 | 5 | 5 | 160000 | 400,000 | -195.1 | 0.01 | 6.44 |
| | 12/10/2019 | 20 | 11 | 11 | 10 | 5 | 5 | 5 | 240000 | 300,000 U | -582 | 0 | 7.12 | |
| IN-8B2 | 7/18/2018 | 390 | 15 | 5 | 5 | | | | | -- | 54.7 | 0.26 | 7.99 | |
| | 3/26/2019 | 500 | 500 | 500 | 500 | 5 | 5 | 5 | 780000 | 60,000 | -74.9 | -- | 7.94 | |
| | 12/10/2019 | 69 | 5 | 12 | 10 | 5 | 5 | 5 | 2000000 | 30,000 | -294 | 0 | 8.51 | |
| IN-9B1 | 7/16/2018 | 9,200 | 100 | 100 | 100 | | | | | -- | 56.9 | 0.32 | 8.57 | |
| | 3/26/2019 | 680 | 200 | 200 | 200 | 5 | 5 | 5 | 290000 | 5,000,000 | -185.2 | 0.23 | 8.23 | |
| | 12/10/2019 | 820 | 1300 | 1700 | 110 | 5 | 5 | 5 | 220000 | 4,000 J | -474.4 | 0 | 6.66 | |

| Sample Location | Sample Date | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | Vinyl Chloride | Ethane | Ethene | Methane | Chloride | DHC | ORP (mv) | DO | pH |
|-----------------|-------------|-------------------|-----------------|------------------------|----------------|--------|--------|---------|----------|-------------|----------|------|------|
| IN-9B2 | 7/16/2018 | 10,000 | 125 | 125 | 125 | | | | | -- | 101.9 | 0.71 | 8.45 |
| | 3/26/2019 | 1,100 | 100 | 690 | 410 | 5 | 91 | 99 | 540000 | 6,000,000 | -218.6 | 0 | 6.99 |
| | 12/10/2019 | 1,600 | 660 | 310 | 110 | 5 | 22 | 15 | 500000 | 400,000 | -490.4 | 0 | 6.85 |
| IN-10B1 | 7/13/2018 | 1,600 | 25 | 25 | 25 | | | | | -- | -57.2 | 0.15 | 7.89 |
| | 3/27/2019 | 11,000 | 50 | 50 | 50 | 5 | 5 | 5 | 410000 | 0 U | -43.0 | 0.1 | 6.93 |
| | 12/10/2019 | 9,100 | 3500 | 50 | 100 | 5 | 5 | 5 | 390000 | 20,000 J | -541.7 | 0.0 | 6.32 |
| IN-10B2 | 7/13/2018 | 1,900 | 25 | 25 | 25 | | | | | -- | -34.2 | 0.2 | 7.64 |
| | 3/27/2019 | 250 | 250 | 250 | 250 | 5 | 63 | 59 | 270000 | 200,000,000 | -65.0 | 0.0 | 8.66 |
| | 12/10/2019 | 770 | 25 | 310 | 160 | 5 | 41 | 43 | 270000 | 40,000,000 | -603.3 | 0.0 | 8.25 |
| IN-11B1 | 7/12/2018 | 1,300 | 12.5 | 12.5 | 25 | | | | | -- | -12.6 | 0.76 | 7.94 |
| | 3/27/2019 | 250 | 250 | 250 | 250 | 5 | 25 | 16 | 250000 | 200,000,000 | -147.9 | 0 | 8.24 |
| | 12/11/2019 | 20 | 82 | 230 | 60 | 5 | 5 | 400 | 49000 | 2,000 J | -294.8 | 0.06 | 6.36 |
| IN-11B2 | 7/12/2018 | 1,200 | 25 | 25 | 25 | | | | | -- | 79.8 | 0.75 | 8.01 |
| | 3/27/2019 | 200 | 200 | 200 | 200 | 5 | 33 | 24 | 270000 | 100,000,000 | -105.9 | 0.03 | 8.37 |
| | 12/11/2019 | 47 | 39 | 110 | 56 | 5 | 14 | 12 | 280000 | 10,000,000 | -492.3 | 0 | 8.29 |
| IN-12B1 | 7/17/2018 | 2,000 | 12.5 | 12.5 | 12.5 | | | | | -- | 35.4 | 0.69 | 7.9 |
| | 3/26/2019 | 25 | 25 | 1,100 | 57 | 5 | 5 | 33 | 21000 | 10,000 | -48.5 | 0.1 | 6.10 |
| | 12/11/2019 | 15 | 31 | 450 | 36 | 11 | 5 | 5200 | 100000 | 20,000 J | -233.5 | 0.09 | 5.76 |
| IN-12B2 | 7/17/2018 | 1,200 | 12.5 | 12.5 | 12.5 | | | | | -- | 60.7 | 0.85 | 8.07 |
| | 3/27/2019 | 140 | 50 | 310 | 140 | 5 | 17 | 10 | 340000 | 100,000 | -155.4 | 0 | 7.20 |
| | 12/11/2019 | 110 | 46 | 290 | 100 | 5 | 5 | 5 | 330000 | 400,000 | -570.5 | 0.01 | 6.95 |
| IN-13B1 | 7/19/2018 | 4,600 | 12.5 | 12.5 | 12.5 | | | | | -- | 4.9 | 1.32 | 7.88 |
| | 3/26/2019 | 50 | 50 | 710 | 50 | 23 | 5 | 180 | 31000 | 0 U | -115.3 | 0.05 | 6.44 |
| | 12/12/2019 | 5 | 32 | 1200 | 48 | 5 | 41 | 15000 | | 10,000 U | -166.1 | 0.07 | 5.84 |
| IN-13B2 | 7/19/2018 | 1,800 | 12.5 | 12.5 | 12.5 | | | | | -- | 34.4 | 0.41 | 8.35 |
| | 3/27/2019 | 140 | 50 | 140 | 50 | 5 | 5 | 5 | 620000 | 0 U | -104.5 | 0.02 | 5.91 |
| | 12/12/2019 | 120 | 83 | 190 | 10 | 5 | 5 | 25 | 580000 | 300,000 U | -516.2 | 0.02 | 6.7 |
| IN-14B1 | 7/19/2018 | 350 | 14 | 5 | 5 | | | | | -- | 221.54 | 1.64 | 8.67 |
| | 3/27/2019 | 250 | 250 | 250 | 250 | 5 | 5 | 17 | 640000 | 600,000 | 6.4 | 0.03 | 8.22 |
| | 12/12/2019 | 80 | 24 | 29 | 20 | 5 | 5 | 26 | | 300,000 | -357.5 | 0 | 7.67 |
| IN-14B2 | 7/19/2018 | 510 | 16 | 11 | 5 | | | | | -- | 168.1 | 2.1 | 8.8 |
| | 3/27/2019 | 250 | 250 | 250 | 250 | 5 | 5 | 31 | 260000 | 1,000,000 | -65.4 | 0.09 | 8.56 |
| | 12/12/2019 | 230 | 23 | 32 | 20 | 5 | 5 | 35 | | 900,000 | -292.2 | 0 | 8.6 |
| IN-15B1 | 7/17/2018 | 250 | 5 | 5 | 5 | | | | | -- | 153.4 | 0.61 | 9.29 |
| | 3/27/2019 | 250 | 250 | 250 | 250 | 5 | 5 | 5 | 140000 | 0 U | -59.1 | 0 | 6.28 |
| | 12/11/2019 | 2.5 | 50 | 430 | 5 | 5 | 5 | 180 | 27000 | 100,000 U | -249.7 | 0.02 | 5.41 |
| IN-15B2 | 7/17/2018 | 210 | 2.5 | 2.5 | 2.5 | | | | | -- | 155.7 | 0.76 | 8.93 |
| | 3/27/2019 | 250 | 250 | 250 | 250 | 5 | 5 | 5 | 240000 | 0 U | -219.1 | 0 | 7.61 |
| | 12/11/2019 | 98 | 37 | 8.3 | 5 | 5 | 5 | 5 | 240000 | 300,000 U | -589.9 | 0 | 7.64 |
| IN-16B1 | 7/18/2018 | 48 | 1 | 1 | 1 | | | | | -- | 66 | 172 | 8.64 |
| | 3/28/2019 | 50 | 50 | 50 | 50 | 5 | 5 | 5 | 41000 | 0 U | -49.2 | 0.3 | 7.28 |
| | 12/11/2019 | 1.4 | 12 | 100 | 5 | 5 | 5 | 92 | 49000 | 100,000 U | -285.8 | 0.04 | 6.01 |

| Sample Location | Sample Date | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | Vinyl Chloride | Ethane | Ethene | Methane | Chloride | DHC | ORP (mv) | DO | pH |
|-----------------|-------------|-------------------|-----------------|------------------------|----------------|--------|--------|---------|----------|-----------|----------|-------|------|
| IN-16B2 | 7/18/2018 | 69 | 2.6 | 1 | 1 | | | | | -- | 173.9 | 31.13 | 8.28 |
| | 3/27/2019 | 250 | 250 | 250 | 250 | 5 | 5 | 5 | 7000 | 0 U | 114.9 | 4.18 | 7.71 |
| | 12/12/2019 | 0.5 | 1.7 | 120 | 1 | 5 | 5 | 110 | 48000 | 100,000 U | -306.7 | 0.03 | 6.34 |
| MW-3B | 6/25/2013 | 4 | 4 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 10/22/2013 | 2 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 5/20/2014 | 14 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 10/20/2015 | 0.2 | 0.14 | 0.105 | 0.125 | 5 | 5 | 5 | | -- | -- | -- | -- |
| | 12/12/2019 | 1.9 | 0.5 | 0.5 | 1 | 5 | 5 | 5 | 1000 | -- | 89.6 | 2.12 | 4.99 |
| MW-20B | 5/23/2012 | 2.5 | 2.5 | 2.5 | 2.5 | | | | | -- | -- | -- | -- |
| | 11/27/2012 | 1.9 | 0.25 | 0.87 | 0.25 | | | | | -- | -- | -- | -- |
| | 1/29/2013 | 260 | 0.5 | 0.5 | 0.5 | 0.05 | 0.05 | | | -- | -- | -- | -- |
| | 4/16/2013 | 2.4 | 0.5 | 0.5 | 0.5 | 0.079 | 0.28 | | | -- | -- | -- | -- |
| | 6/26/2013 | 1.0 | 1.0 | 1.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/22/2013 | 675 | 5.0 | 5.0 | 1.25 | 5 | 5 | 2.5 | | -- | -- | -- | -- |
| | 5/21/2014 | 2.0 | 1.0 | 1.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/29/2014 | 32 | 1.0 | 1.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 9/19/2017 | 100 | 2.9 | 1.8 | 0.25 | | | | | -- | 1208.3 | 2.06 | 6.16 |
| | 12/12/2019 | 0.5 | 0.5 | 0.5 | 1 | 5 | 5 | 24 | 1000 | 10,000 | 199.6 | 4.63 | 8.06 |
| MW-23B | 5/23/2012 | 35 | 2.5 | 4.0 | 2.5 | | | | | -- | -- | -- | -- |
| | 11/27/2012 | 89 | 4.0 | 6.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 1/30/2013 | 45 | 2.5 | 5.5 | 2.5 | 0.05 | 0.05 | | | -- | -- | -- | -- |
| | 4/17/2013 | 64 | 2.4 | 3.8 | 0.5 | 0.015 | 0.049 | | | -- | -- | -- | -- |
| | 6/26/2013 | 120 | 6.0 | 20 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/22/2013 | 160 | 7.0 | 29.0 | 0.25 | 5 | 5 | 2.5 | | -- | -- | -- | -- |
| | 5/21/2014 | 130 | 6.0 | 21 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/29/2014 | 140 | 8.0 | 31 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/20/2015 | 140 | 5.5 | 14 | 0.125 | 5 | 5 | 5 | | -- | -- | -- | -- |
| | 10/12/2016 | 110 | 4.4 | 9.2 | 1.0 | 5 | 5 | | | -- | -- | -- | -- |
| | 9/20/2017 | 130 | 4.9 | 8.7 | 2.5 | 5 | 5 | 5 | | -- | 21.1 | 4.86 | 8.19 |
| | 3/27/2019 | 250 | 250 | 1,400 | 250 | 5 | 5 | 5 | 4400 | 0 U | 108.0 | 6.8 | 7.80 |
| 12/12/2019 | 16 | 38 | 260 | 19 | 5 | 5 | 620 | 40000 | 900,000 | -122.7 | 0.03 | 4.97 | |
| MW-34B1 | 5/23/2012 | 740 | 2.5 | 2.5 | 2.5 | | | | | | | | |
| | 11/29/2012 | 620 | 1.0 | 1.0 | 0.25 | | | | | | | | |
| | 6/27/2013 | 110 | 1.0 | 1.0 | 0.25 | | | | | | | | |
| | 10/22/2013 | 99 | 1.0 | 1.0 | 0.25 | | | | | | | | |
| | 5/20/2014 | 660 | 5.0 | 5.0 | 1.25 | | | | | | | | |
| | 12/11/2019 | 77 | 0.5 | 0.5 | 1.0 | 5 | 5 | 5 | 1000 | -- | 208.9 | 7.64 | 6.65 |
| MW-34B1R | 11/26/2012 | 9 | 0.25 | 0.25 | 0.25 | | | | | -- | -- | -- | -- |
| | 1/28/2013 | 3 | 0.5 | 0.5 | 0.5 | 0.05 | 0.05 | | | -- | -- | -- | -- |
| | 4/17/2013 | 2.7 | 0.5 | 0.5 | 0.5 | 0.014 | 0.021 | | | -- | -- | -- | -- |
| | 6/25/2013 | 6.0 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 9/20/2017 | 2.0 | 2.5 | 2.5 | 2.5 | 5 | 5 | 14 | | -- | 374.2 | 1.77 | 6.04 |
| | 12/11/2019 | 77 | 0.5 | 0.5 | 1.0 | 5 | 5 | 5 | | -- | 208.9 | 7.64 | 6.65 |

| Sample Location | Sample Date | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | Vinyl Chloride | Ethane | Ethene | Methane | Chloride | DHC | ORP (mv) | DO | pH |
|-----------------|-------------|-------------------|-----------------|------------------------|----------------|--------|--------|---------|----------|---------|----------|------|------|
| MW-34B2 | 5/23/2012 | 3.1 | 2.5 | 2.5 | 2.5 | | | | | -- | -- | -- | -- |
| | 6/27/2013 | 1.0 | 1.0 | 1.0 | 0.25 | 10 | 10 | | | -- | -- | -- | -- |
| | 10/22/2013 | 1.0 | 1.0 | 1.0 | 0.25 | 5 | 5 | | | -- | -- | -- | -- |
| | 5/20/2014 | 1.0 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 12/11/2019 | 0.5 | 0.5 | 0.5 | 1 | 5 | 5 | 5 | 11000 | 6,000 U | 177.4 | 3.67 | 7.96 |
| MW-35B | 5/24/2012 | 26 | 2.5 | 2.5 | 2.5 | | | | | -- | -- | -- | -- |
| | 8/30/2012 | 740 | 6 | 10 | 2 | 0.05 | 0.05 | 0.1 | 3400 | -- | -- | -- | -- |
| | 10/22/2012 | 30 | 16 | 10 | 1 | 0.05 | 0.1 | 0.3 | 8000 | -- | -- | -- | -- |
| | 11/27/2012 | 9.8 | 0.39 | 18 | 0.25 | | | | | -- | -- | -- | -- |
| | 11/30/2012 | 18 | 6 | 10 | 1 | 0.05 | 0.1 | 0.1 | | -- | -- | -- | -- |
| | 1/29/2013 | 150 | 6 | 10 | 1 | 0.05 | 0.2 | 0.6 | 2000 | -- | -- | -- | -- |
| | 2/26/2013 | 580 | 6.0 | 10 | 1.0 | 0.05 | 0.2 | 0.9 | | -- | -- | -- | -- |
| | 4/15/2013 | 47 | 10 | 240 | 6.1 | 0.2 | 1.6 | 500 | 3800 | -- | -- | -- | -- |
| | 6/27/2013 | 4.0 | 3.0 | 35 | 0.25 | 10 | 10 | 95 | 2500 | -- | -- | -- | -- |
| | 10/24/2013 | 950 | 3.0 | 12 | 0.25 | 5 | 5 | 150 | | -- | -- | -- | -- |
| | 5/21/2014 | 25.5 | 1.0 | 1.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/28/2014 | 410 | 13 | 12 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 12/10/2019 | 1 | 0.5 | 110 | 8.2 | 5 | 5 | 5200 | 4400 | 200,000 | -16.6 | 1.6 | 6.74 |
| | MW-35B1R | 5/23/2012 | 2.5 | 2.5 | 2.5 | 2.5 | | | | | -- | -- | -- |
| 11/26/2012 | | 9.3 | 0.25 | 0.25 | 0.25 | | | | | -- | -- | -- | -- |
| 1/30/2013 | | 6.2 | 0.5 | 0.5 | 0.5 | 0.05 | 0.05 | | | -- | -- | -- | -- |
| 4/16/2013 | | 8.5 | 0.5 | 0.5 | 0.5 | 0.064 | 0.094 | | | -- | -- | -- | -- |
| 6/25/2013 | | 5.0 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| 5/20/2014 | | 17 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| MW-36B1 | 9/19/2017 | 1.2 | 0.25 | 0.25 | 0.05 | | | | | -- | 821 | 0.11 | 11.4 |
| | 5/24/2012 | 60 | 3.9 | 3.6 | 2.5 | | | | | -- | -- | -- | -- |
| | 11/28/2012 | 93 | 4.8 | 3.3 | 0.5 | | | | | -- | -- | -- | -- |
| | 1/30/2013 | 59 | 2.5 | 5.3 | 2.5 | 0.1 | 0.05 | 2.9 | | -- | -- | -- | -- |
| | 4/17/2013 | 66 | 4.4 | 4.0 | 1.0 | 0.02 | 0.062 | | | -- | -- | -- | -- |
| | 6/24/2013 | 62 | 4.0 | 4.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 10/23/2013 | 85 | 5.0 | 4.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 5/22/2014 | 68 | 4.0 | 3.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/28/2014 | 65 | 4.0 | 3.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/20/2015 | 77 | 3.5 | 3.3 | 1.25 | 5 | 5 | 5 | | -- | -- | -- | -- |
| | 10/12/2016 | 67 | 3.6 | 2.3 | 1.0 | 5 | 5 | | | -- | -- | -- | -- |
| | 9/20/2017 | 81 | 4.1 | 0.93 | 2.5 | 5 | 5 | 5 | | -- | 5.94 | 5.05 | 8.28 |
| | 3/27/2019 | 25 | 25 | 25 | 25 | 5 | 5 | 5 | 7300 | 6,000 | 25.3 | 3.94 | 7.87 |
| | 12/11/2019 | 34 | 100 | 54 | 1.0 | 5 | 5 | 5 | 5200 | 4,000 U | 81.4 | 0.21 | 7.24 |
| MW-36B2 | 6/24/2013 | 24 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 10/23/2013 | 20 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 5/22/2014 | 13 | 1.0 | 1.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 9/20/2017 | 24 | 1.7 | 2.3 | 0.16 | 5 | 5 | 34 | | -- | -43.96 | 1.65 | 8.9 |
| | 3/28/2019 | 50 | 50 | 50 | 50 | 5 | 5 | 37 | 10000 | -- | 3.9 | 0.47 | 9.3 |
| 12/11/2019 | 7.1 | 8.3 | 180.0 | 2.0 | 5 | 5 | 17 | 14000 | 5,000 U | -114.6 | 0.04 | 7.8 | |

| Sample Location | Sample Date | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | Vinyl Chloride | Ethane | Ethene | Methane | Chloride | DHC | ORP (mv) | DO | pH |
|-----------------|-------------|-------------------|-----------------|------------------------|----------------|--------|--------|---------|----------|-----------|----------|------|------|
| MW-41B1 | 6/25/2013 | 10 | 4.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 10/23/2013 | 4 | 5.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 5/22/2014 | 6 | 5.0 | 1.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 12/11/2019 | 0.5 | 0.5 | 41 | 1.0 | 5 | 5 | 28 | 10000 | 100,000 | 86.8 | 1.08 | 6.65 |
| MW-41B2 | 6/26/2013 | 1 | 3.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 10/23/2013 | 1 | 3.0 | 4.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 5/22/2014 | 1 | 2.0 | 3.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 12/11/2019 | 0.5 | 0.5 | 3.4 | 1.0 | 5 | 5 | 5 | 2800 | 3,000 U | -101 | 0.04 | 7.41 |
| MW-51B | 5/23/2012 | 1100 | 7.9 | 2.5 | 2.5 | | | | | -- | -- | -- | -- |
| | 8/30/2012 | 140 | 6 | 10 | 2 | 1.9 | 2.3 | 11 | 3200 | -- | -- | -- | -- |
| | 10/22/2012 | 11 | 200 | 10 | 1 | 0.8 | 3 | 5.7 | 37000 | -- | -- | -- | -- |
| | 11/27/2012 | 5.5 | 9.1 | 170 | 0.25 | | | | | -- | -- | -- | -- |
| | 11/30/2012 | 10 | 6 | 180 | 4 | 6 | 24 | 100 | | -- | -- | -- | -- |
| | 1/29/2013 | 16 | 8.3 | 160 | 4.0 | 4.6 | 10 | 9780 | 150000 | -- | -- | -- | -- |
| | 2/25/2013 | 10 | 6 | 125 | 14 | 4.5 | 9.5 | 17930 | 170000 | -- | -- | -- | -- |
| | 4/15/2013 | 5 | 5 | 100 | 17 | 3.4 | 9.1 | 19000 | 160000 | -- | -- | -- | -- |
| | 6/27/2013 | 1 | 2.0 | 400 | 24 | 100 | 100 | 5700 | 87000 | -- | -- | -- | -- |
| | 10/24/2013 | 2.0 | 1 | 350 | 20 | 50 | 50 | 5400 | | -- | -- | -- | -- |
| | 5/21/2014 | 100 | 7.0 | 330 | 18 | 100 | 100 | 5700 | | -- | -- | -- | -- |
| | 10/29/2014 | 59 | 5.0 | 230 | 13 | 100 | 100 | 5100 | | -- | -- | -- | -- |
| | 10/20/2015 | 100 | 12 | 190 | 12 | 16 | 23 | 5300 | | -- | -- | -- | -- |
| | 10/11/2016 | 75 | 12 | 140 | 10.4 | 5 | 5 | 4600 | | -- | -- | -- | -- |
| | 9/20/2017 | 100 | 4.4 | 160 | 9.2 | 38 | 51 | 12000 | | -- | -302.3 | 0.14 | 8.08 |
| | 3/26/2019 | 50 | 50 | 190 | 50 | 5 | 14 | 5 | | 3,000,000 | -129.5 | 0.01 | 6.17 |
| 12/11/2019 | 2.5 | 210 | 540 | 11 | 5 | 14 | 510 | 31000 | 10,000 | -120.9 | 0.05 | 5.96 | |
| MW-52B | 11/27/2012 | 100 | 0.8 | 0.25 | 0.25 | | | | | -- | -- | -- | -- |
| | 1/29/2013 | 160 | 5.0 | 5.0 | 5.0 | 0.3 | 0.6 | 1.7 | | -- | -- | -- | -- |
| | 4/16/2013 | 400 | 5.8 | 2.5 | 2.5 | 0.17 | 0.44 | | | -- | -- | -- | -- |
| | 6/26/2013 | 700 | 8.0 | 9.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/22/2013 | 540 | 5.0 | 5.0 | 1.25 | 5 | 5 | 7 | | -- | -- | -- | -- |
| | 5/21/2014 | 690 | 5.0 | 5.0 | 1.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/29/2014 | 390 | 5.0 | 5.0 | 1.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 9/20/2017 | 620 | 2.9 | 2.5 | 0.5 | 5 | 5 | 13 | | -- | 203.5 | 0.18 | 9.98 |
| | 3/26/2019 | 50 | 130 | 160 | 50 | 5 | 5 | 5 | 150000 | 500,000 | -248.0 | 0.0 | 5.90 |
| 12/10/2019 | 2.5 | 130 | 460 | 39 | 5 | 5 | 1900 | 100000 | 200,000 | -97.9 | 0.41 | 5.78 | |
| MW-53B | 10/24/2013 | 45 | 1.0 | 1.0 | 0.25 | 5 | 5 | 2.5 | | -- | -- | -- | -- |
| | 5/22/2014 | 28 | 1.0 | 1.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/29/2014 | 200 | 1.0 | 1.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 12/10/2019 | 20 | 0.5 | 0.5 | 1 | 5 | 5 | 5 | 3000 | 3,000 U | 82.4 | 4.23 | 6.49 |

| Sample Location | Sample Date | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | Vinyl Chloride | Ethane | Ethene | Methane | Chloride | DHC | ORP (mv) | DO | pH | |
|-----------------|-------------|-------------------|-----------------|------------------------|----------------|--------|--------|---------|----------|-------------|----------|--------|------|------|
| MW-54B | 5/23/2012 | 2700 | 2.5 | 2.5 | 2.5 | | | | | -- | -- | -- | -- | |
| | 8/30/2012 | 1810 | 6 | 10 | 2 | 0.3 | 0.2 | 0.3 | 3100 | -- | -- | -- | -- | |
| | 10/22/2012 | 91 | 310 | 37 | 1 | 0.4 | 0.8 | 4.1 | 40000 | -- | -- | -- | -- | |
| | 11/27/2012 | 4750 | 975 | 3300 | 4.7 | | | | | -- | -- | -- | -- | |
| | 11/30/2012 | 10 | 6 | 1620 | 8 | 1.3 | 3.6 | 63 | | -- | -- | -- | -- | |
| | 1/29/2013 | 500 | 25 | 950 | 10 | 0.8 | 16.5 | 745 | 3600 | -- | -- | -- | -- | |
| | 2/25/2013 | 1630 | 34 | 1370 | 19 | 0.7 | 14.5 | 620 | 3400 | -- | -- | -- | -- | |
| | 4/15/2013 | 1100 | 420 | 3100 | 10 | 0.96 | 4.6 | 81 | 6200 | -- | -- | -- | -- | |
| | 6/27/2013 | 500 | 83 | 3700 | 30 | 20 | 10 | 300 | 6500 | -- | -- | -- | -- | |
| | 10/24/2013 | 56 | 10 | 220 | 25 | 25 | 110 | 960 | | -- | -- | -- | -- | |
| | 5/21/2014 | 2450 | 790 | 295 | 16 | 10 | 10 | 13 | | -- | -- | -- | -- | |
| | 10/29/2014 | 1600 | 76 | 890 | 38 | 10 | 20 | 30 | | -- | -- | -- | -- | |
| | 10/20/2015 | 3900 | 47 | 130 | 1.4 | 5 | 5 | 5 | | -- | -- | -- | -- | |
| | 10/12/2016 | 360 | 85 | 48 | 0.84 | 5 | 5 | 92 | | -- | -- | -- | -- | |
| 9/19/2017 | 1300 | 420 | 75 | 2.5 | | | | | -- | 345.7 | 0.19 | 7.1 | | |
| 3/26/2019 | 5.3 | 10 | 7300 | 230 | 5 | 5 | | | 17000 | 0 U | -82.6 | 0 | 6.29 | |
| 12/10/2019 | 50 | 50 | 9300 | 100 | 5 | 5 | 14000 | 100000 | 10,000 | | -118.3 | 0.05 | 5.82 | |
| MW-55B | 5/23/2012 | 12000 | 41 | 2.6 | 2.5 | | | | | -- | -- | -- | -- | |
| | 8/30/2012 | 2100 | 6 | 10 | 2 | 0.9 | 1.6 | 0.3 | 3000 | -- | -- | -- | -- | |
| | 10/22/2012 | 6 | 250 | 31 | 1 | 0.3 | 1.2 | 3.1 | 185000 | -- | -- | -- | -- | |
| | 11/27/2012 | 0.6 | 1.5 | 4800 | 52 | | | | | -- | -- | -- | -- | |
| | 11/30/2012 | 10 | 6 | 7040 | 56 | 4 | 39 | 420 | | -- | -- | -- | -- | |
| | 1/29/2013 | 5 | 5 | 7000 | 140 | 19 | 75 | 2170 | 190000 | -- | -- | -- | -- | |
| | 2/25/2013 | 10 | 6 | 6690 | 180 | 24 | 110 | 3360 | 170000 | -- | -- | -- | -- | |
| | 4/15/2013 | 50 | 50 | 6900 | 390 | 14 | 280 | 2600 | | -- | -- | -- | -- | |
| | 6/27/2013 | 1.0 | 3.0 | 4900 | 130 | 77 | 10 | 730 | 53000 | -- | -- | -- | -- | |
| | 10/24/2013 | 10 | 10 | 3000 | 420 | 50 | 170 | 4600 | | -- | -- | -- | -- | |
| | 5/21/2014 | 5 | 5 | 810 | 395 | 100 | 620 | 1900 | | -- | -- | -- | -- | |
| | 10/29/2014 | 8.5 | 5.5 | 17 | 10.5 | 100 | 790 | 4000 | | -- | -- | -- | -- | |
| | 10/20/2015 | 10 | 2.8 | 2.7 | 20 | 5 | 1000 | 6000 | | -- | -- | -- | -- | |
| | 10/12/2016 | 7.7 | 3.3 | 1200 | 470 | 400 | 5 | 2900 | | -- | -- | -- | -- | |
| | 9/19/2017 | 10 | 12.5 | 2800 | 730 | | | | | -- | 352.1 | 0.1 | 7.56 | |
| | 3/26/2019 | 350 | 50 | 350 | 290 | 5 | 39 | 31 | 230000 | 200,000,000 | | -205.3 | 0.02 | 7.44 |
| | 12/11/2019 | 2.5 | 98 | 520 | 5 | 5 | 5 | 1800 | 44000 | 20,000 J | | -109.5 | 0 | 5.76 |
| MW-56B1 | 11/28/2012 | 1.4 | 0.25 | 0.25 | 0.25 | | | | | -- | -- | -- | -- | |
| | 1/30/2013 | 0.5 | 0.5 | 0.5 | 0.5 | 0.05 | 0.5 | 2.8 | | -- | -- | -- | -- | |
| | 4/17/2013 | 0.5 | 0.5 | 0.5 | 0.5 | 0.044 | 0.64 | | | -- | -- | -- | -- | |
| | 6/26/2013 | 1.0 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- | |
| | 10/23/2013 | 2.0 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- | |
| | 5/21/2014 | 1.0 | 1.0 | 1.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- | |
| | 9/19/2017 | 11 | 0.25 | 0.25 | 0.05 | | | | | -- | 77.2 | 4.69 | 6.11 | |
| | 12/10/2019 | 0.5 | 0.5 | 0.5 | 1 | 5 | 5 | 5 | 1000 | 3,000 U | | 226.6 | 4.61 | 6.21 |

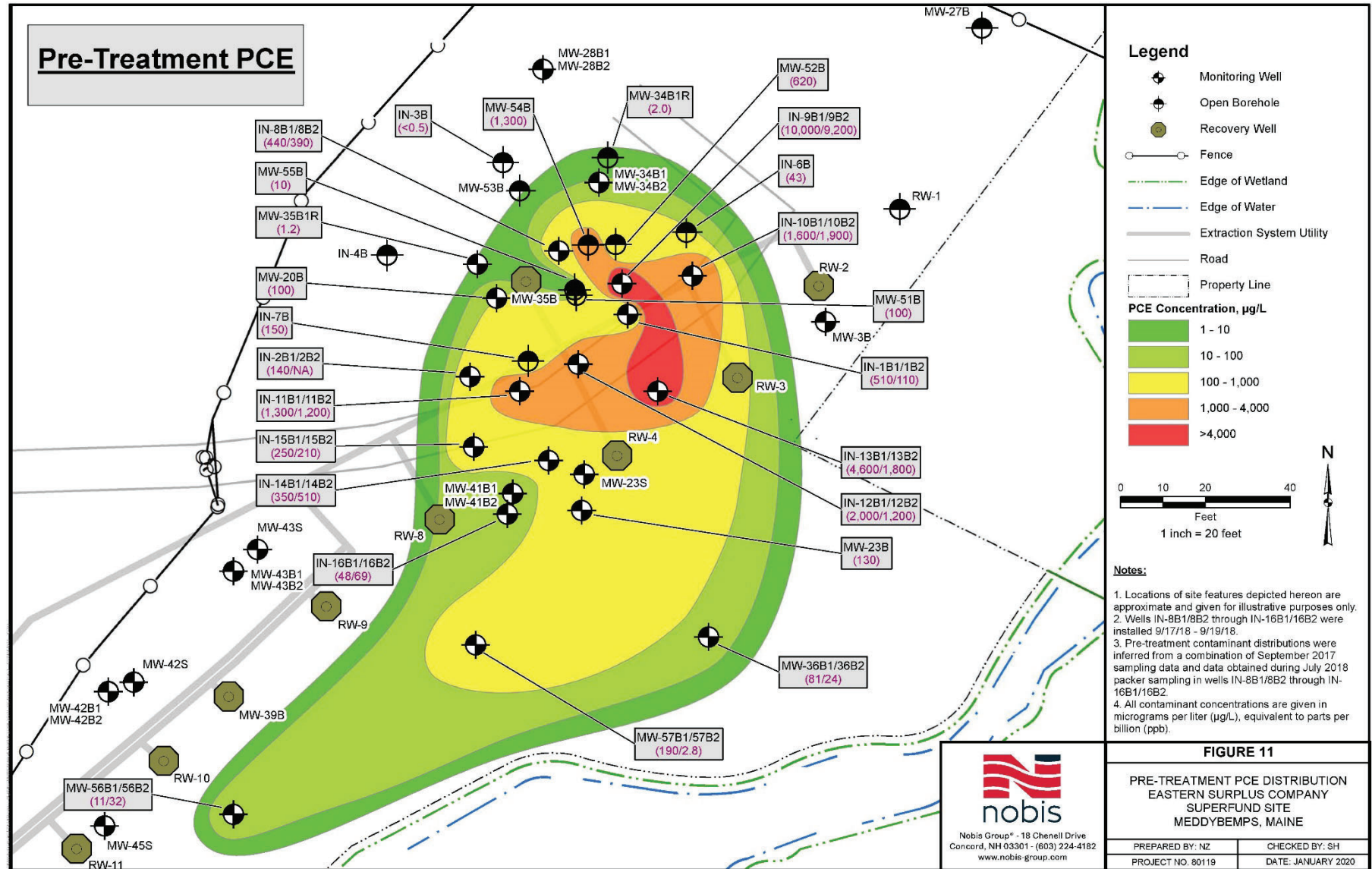
| Sample Location | Sample Date | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | Vinyl Chloride | Ethane | Ethene | Methane | Chloride | DHC | ORP (mv) | DO | pH |
|-----------------|-------------|-------------------|-----------------|------------------------|----------------|--------|--------|---------|----------|----------|----------|------|------|
| MW-56B2 | 6/26/2013 | 19.0 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 10/23/2013 | 30.0 | 2.0 | 5.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 5/21/2014 | 38.0 | 3.0 | 6.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/20/2015 | | | | | | | | | -- | -- | -- | -- |
| | 9/19/2017 | 32 | 2.5 | 2 | 2.5 | | | | | -- | 38.2 | 0.4 | 10.3 |
| 12/10/2019 | 31 | 2.6 | 1.3 | 1 | 5 | 5 | 5 | 3000 | 3,000 U | -29.6 | 0.21 | 9.78 | |
| MW-57B1 | 11/28/2012 | 53 | 0.59 | 0.53 | 0.25 | | | | | -- | -- | -- | -- |
| | 1/30/2013 | 70 | 5.2 | 36 | 2.5 | 0.05 | 0.1 | 1.4 | | -- | -- | -- | -- |
| | 4/17/2013 | 67 | 2.5 | 55 | 1.0 | 0.034 | 0.13 | | | -- | -- | -- | -- |
| | 6/26/2013 | 44 | 1.0 | 19 | 0.25 | | | | | -- | -- | -- | -- |
| | 10/23/2013 | 240 | 10.0 | 37 | 0.7 | | | | | -- | -- | -- | -- |
| | 5/21/2014 | 55 | 1.0 | 2.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/28/2014 | 200 | 6.0 | 8.0 | 0.25 | 10 | 10 | 5 | | -- | -- | -- | -- |
| | 10/20/2015 | 240 | 4.8 | 5 | 0.125 | 5 | 5 | 5 | | -- | -- | -- | -- |
| | 10/12/2016 | 130 | 4.5 | 2.4 | 1.0 | 5 | 5 | 5 | | -- | -- | -- | -- |
| | 9/20/2017 | 190 | 5.4 | 3 | 2.5 | 5 | 5 | 5 | | -- | 49 | 1.31 | 7.57 |
| | 3/28/2019 | 125 | 125 | 125 | 125 | 5 | 5 | 31 | | NA | 8.5 | 0.04 | 7.39 |
| | 12/12/2019 | 6 | 0.5 | 5.1 | 1 | 5 | 5 | 120 | 2000 | 30,000 U | 41.3 | 0.16 | 5.5 |
| MW-57B2 | 10/23/2013 | 3 | 1.0 | 1.0 | 0.25 | | | | | -- | -- | -- | -- |
| | 5/22/2014 | 3 | 1.0 | 1.0 | 0.25 | 10 | 10 | 18 | | -- | -- | -- | -- |
| | 10/20/2015 | 9.7 | 0.49 | 0.105 | 0.125 | 5 | 25 | 26 | | -- | -- | -- | -- |
| | 9/20/2017 | 2.8 | 0.84 | 0.25 | 0.25 | 5 | 32 | 25 | | -- | -50.7 | 4.49 | 13 |
| | 3/28/2019 | 50 | 50 | 50 | 50 | 5 | 46 | 26 | | -- | -53.9 | 0.38 | 12.5 |
| | 12/12/2019 | 2.4 | 0.5 | 0.5 | 1 | 5 | 50 | 28 | 11000 | 3,000 U | -120.2 | 0.51 | 8.9 |
| RW-3 | 12/11/2019 | 240 | 2.5 | 2.5 | 5 | 5 | 5 | 3300 | 10,000 U | 101.7 | 7.35 | 6.76 | |
| RW-4 | 12/11/2019 | 9.7 | 0.5 | 2.9 | 1 | 5 | 5 | 1000 | 20,000 | 116.9 | 4.5 | 6.82 | |
| RW-8 (95ft bgs) | 12/11/2019 | 0.5 | 0.5 | 0.5 | 1 | 5 | 5 | 4600 | 6,000 U | 127.3 | 11.2 | 6.5 | |
| RW-8 (35ft bgs) | 12/11/2019 | 0.5 | 0.5 | 0.5 | 1 | 5 | 5 | 1000 | 4,000 U | 160.4 | 11.3 | 6.17 | |

Notes:

1. Results are reported in micrograms per liter (µg/L), equivalent to parts per billion (ppb) unless otherwise noted.
2. "--" indicates that the parameter was not sampled for on the specified date.
3. For data from 2012 through 2019, values in *red and italicized* represent concentrations below the laboratory detection limit (non-detect) and are reported as half of the detection limit for plotting purposes.
4. Red shaded wells were used as injection locations during Phase 1 and/or Phase 2 treatments.
5. Blue shaded wells were "new" locations added to the Phase 2 treatment program performed in August 2019.
6. For wells IN-8 through IN-15 the 2018 results are reported from packer testing intervals that most closely match the current screened intervals.

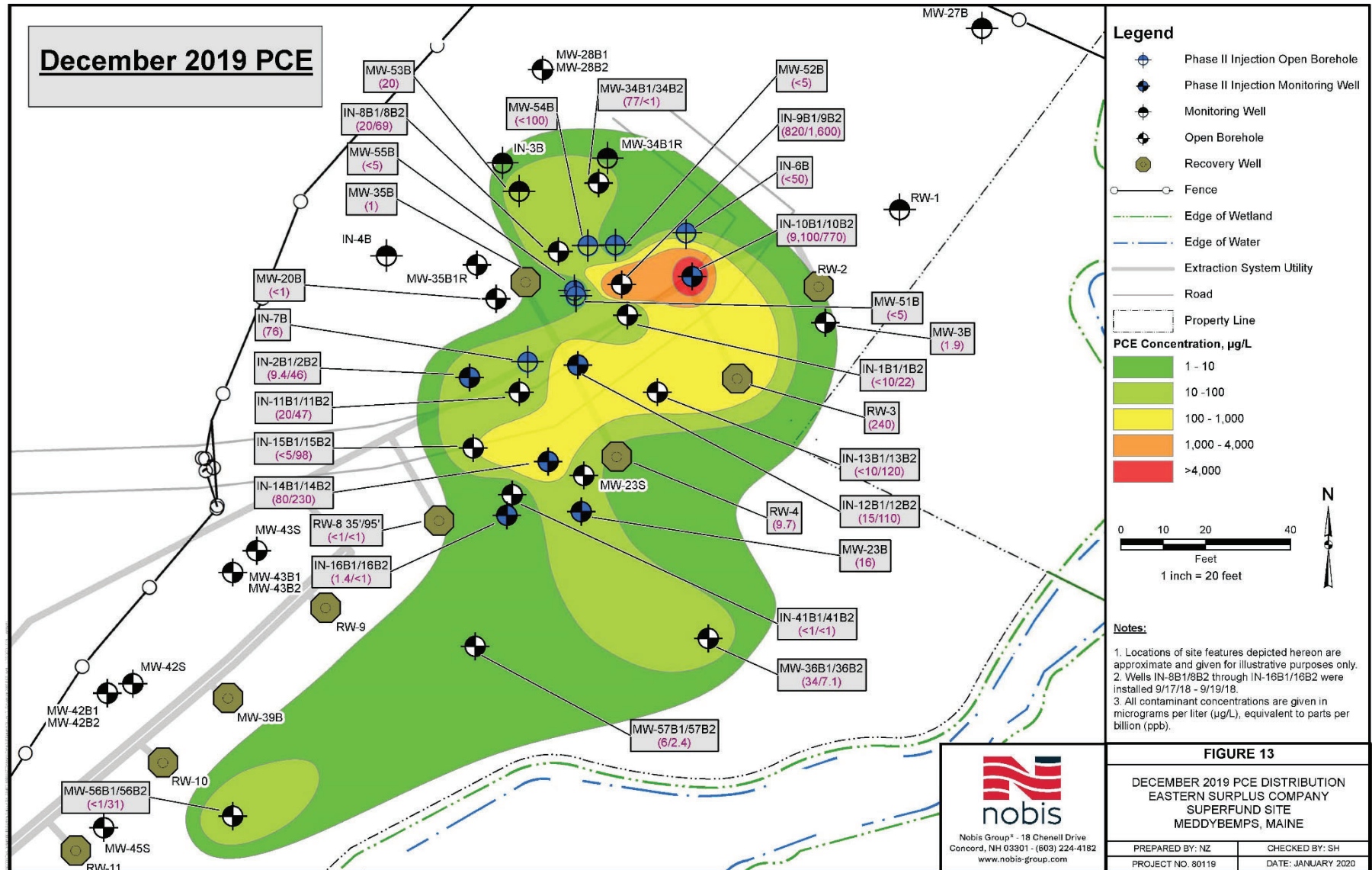
Source: Table 13 of the 2020 Final Cleanup Status Report.

Figure G-1: PCE Distribution – Pre-Treatment



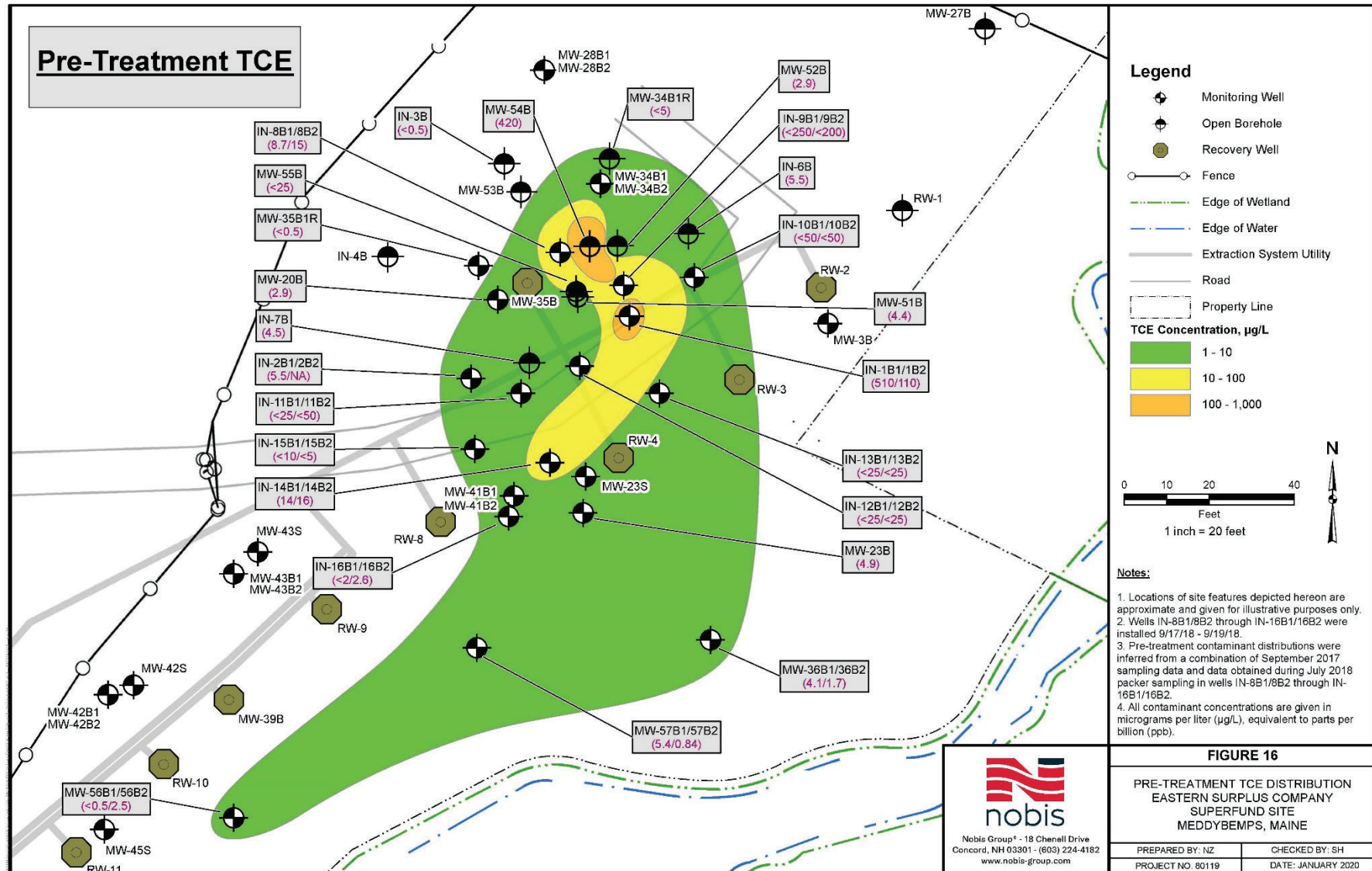
Source: Figure 11 of the 2020 Final Cleanup Status Report.

Figure G-2: PCE Distribution, December 2019



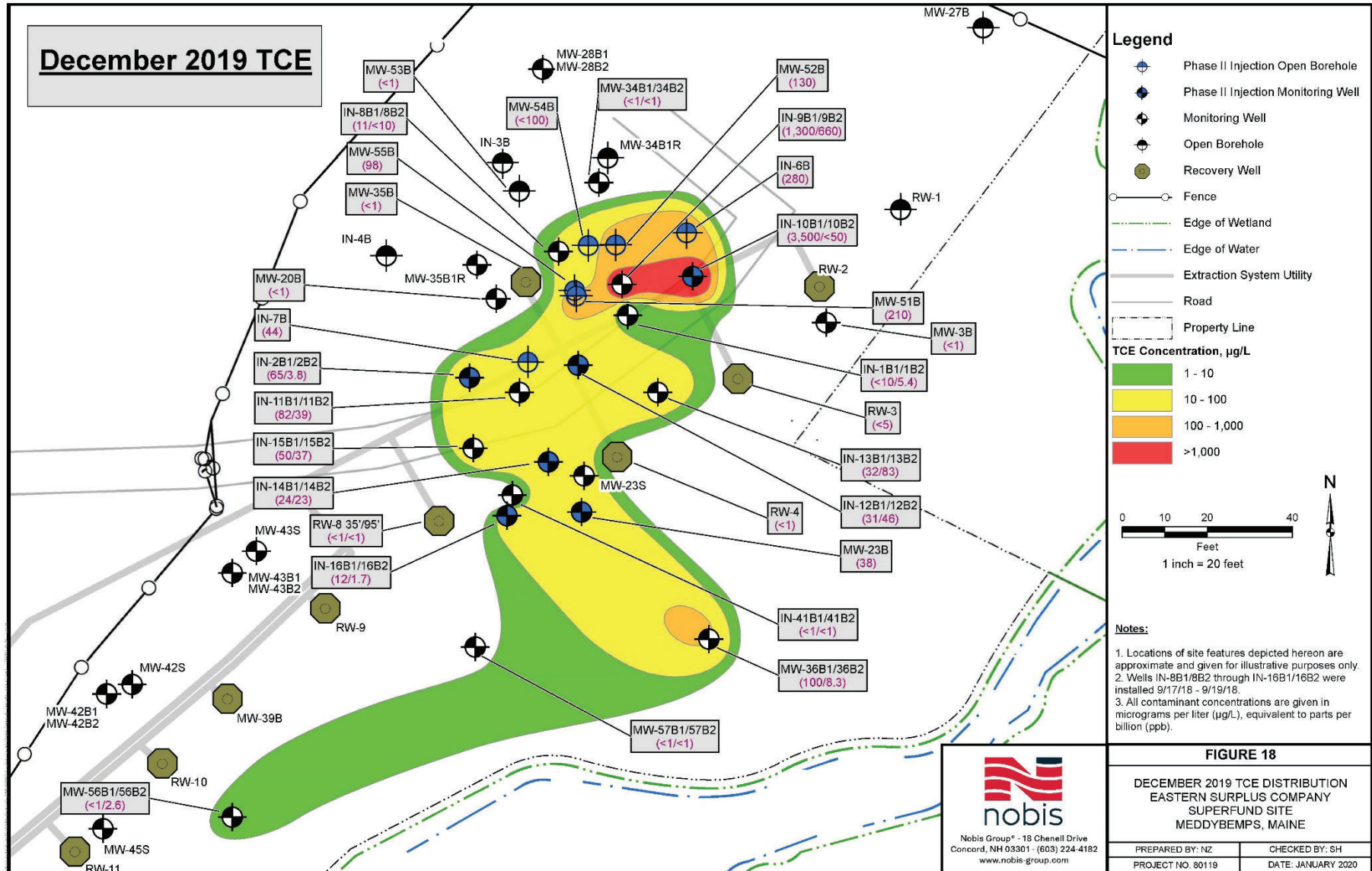
Source: Figure 18 of the 2020 Final Cleanup Status Report.

Figure G-3: TCE Distribution – Pre-Treatment



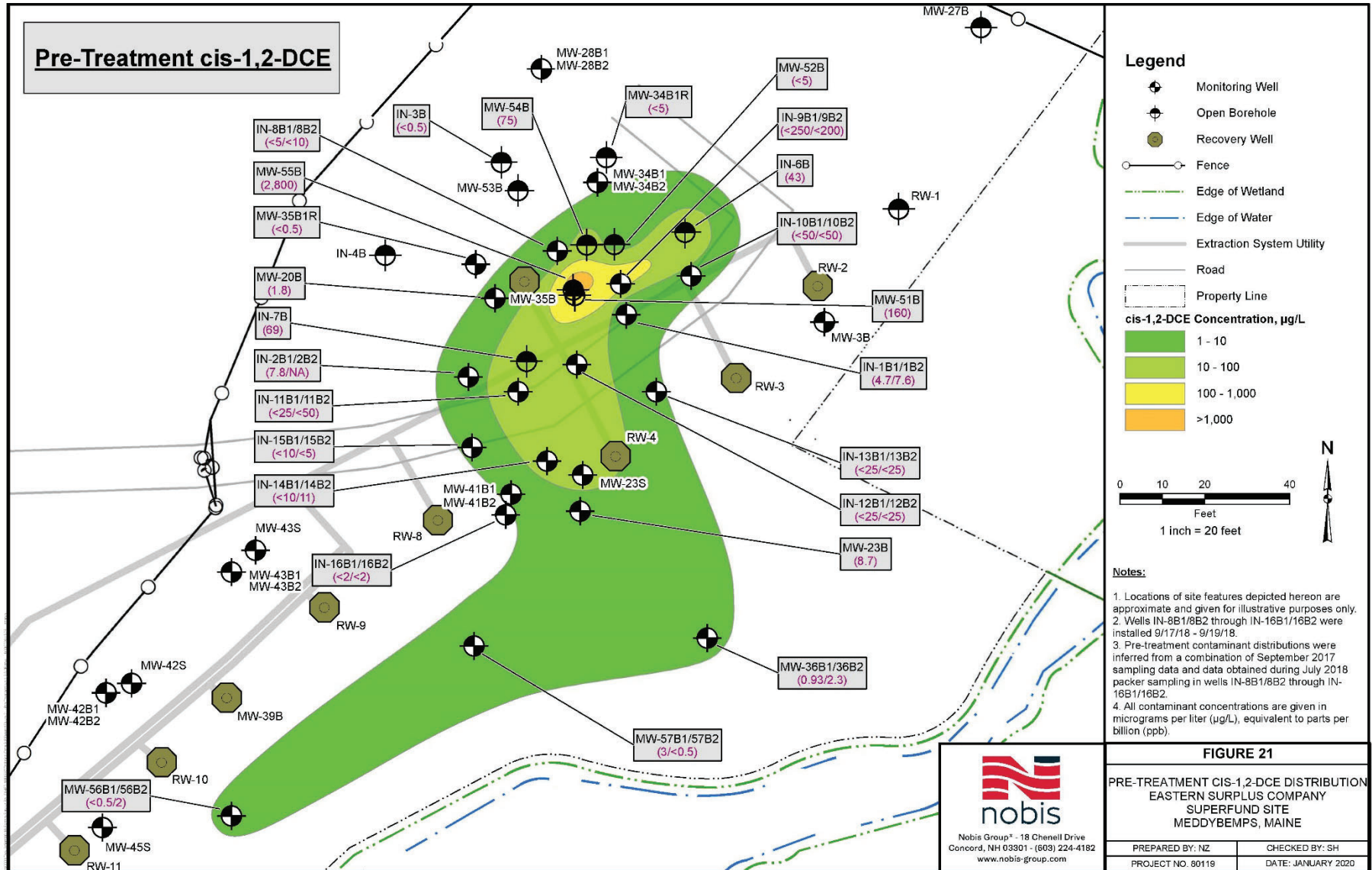
Source: Figure 16 of the 2020 Final Cleanup Status Report.

Figure G-4: TCE Distribution, December 2019



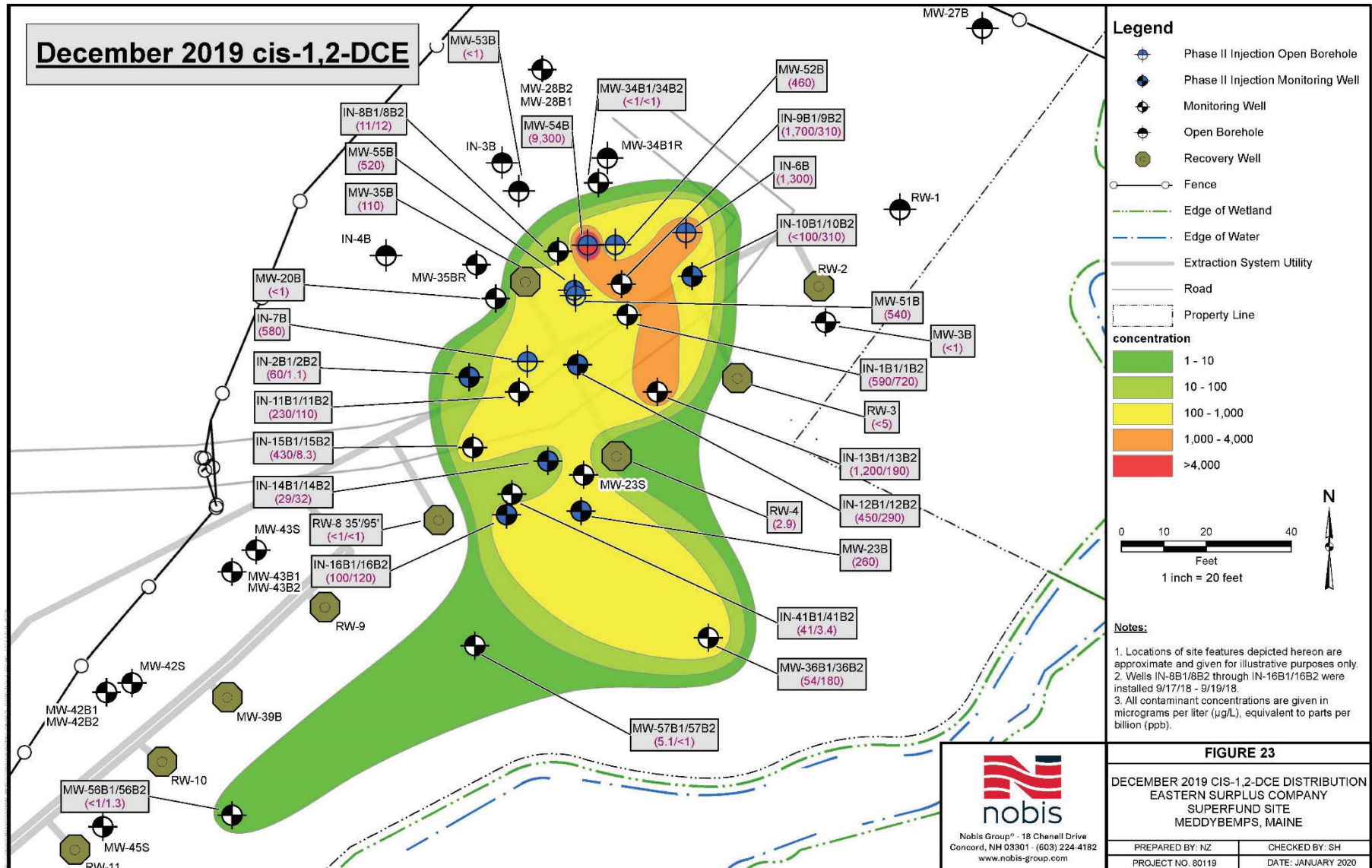
Source: Figure 18 of the 2020 Final Cleanup Status Report.

Figure G-5: Cis-1,2-DCE Distribution – Pre-Treatment



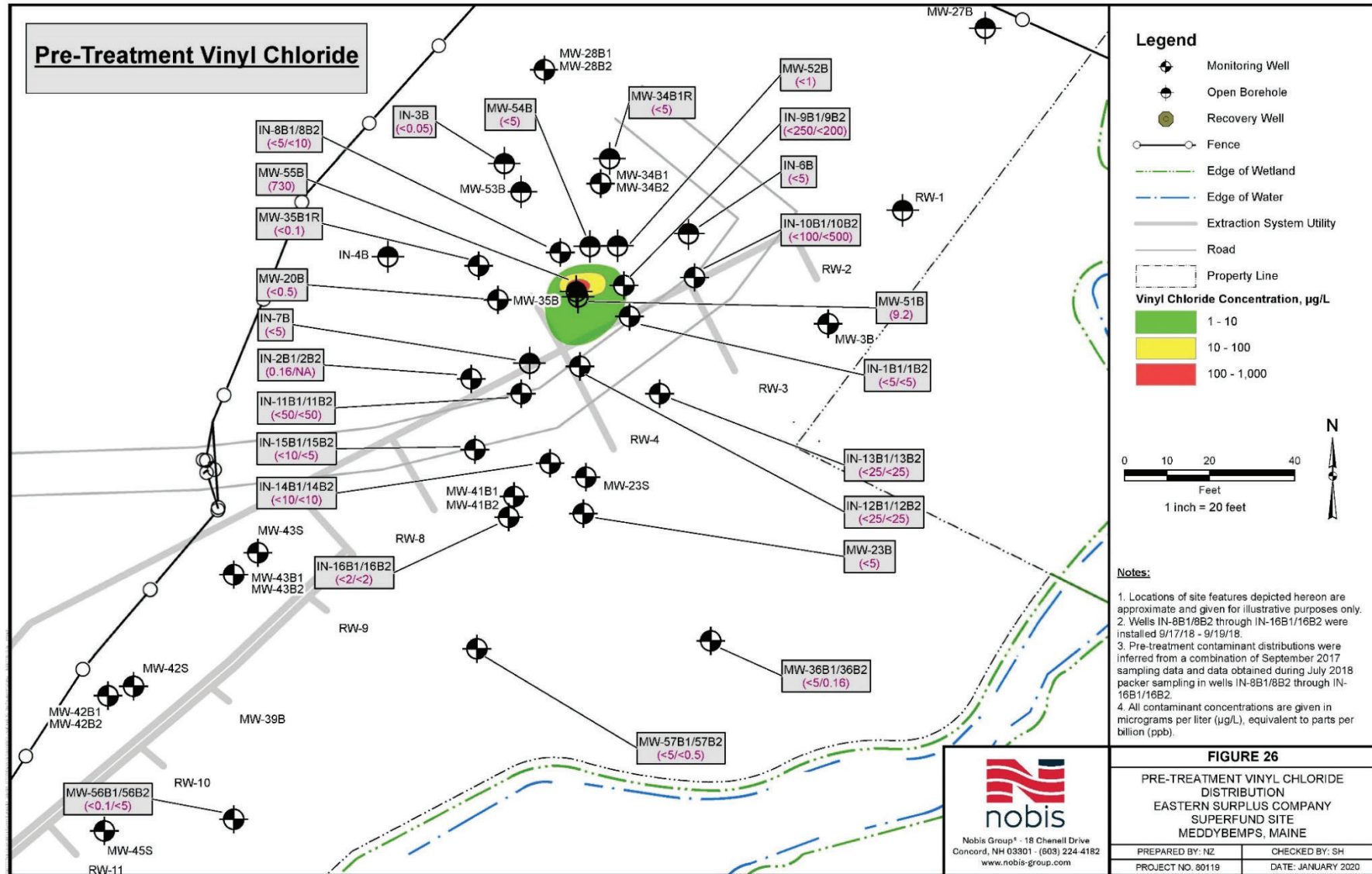
Source: Figure 21 of the 2020 Final Cleanup Status Report.

Figure G-6: Cis-1,2-DCE Distribution, December 2019



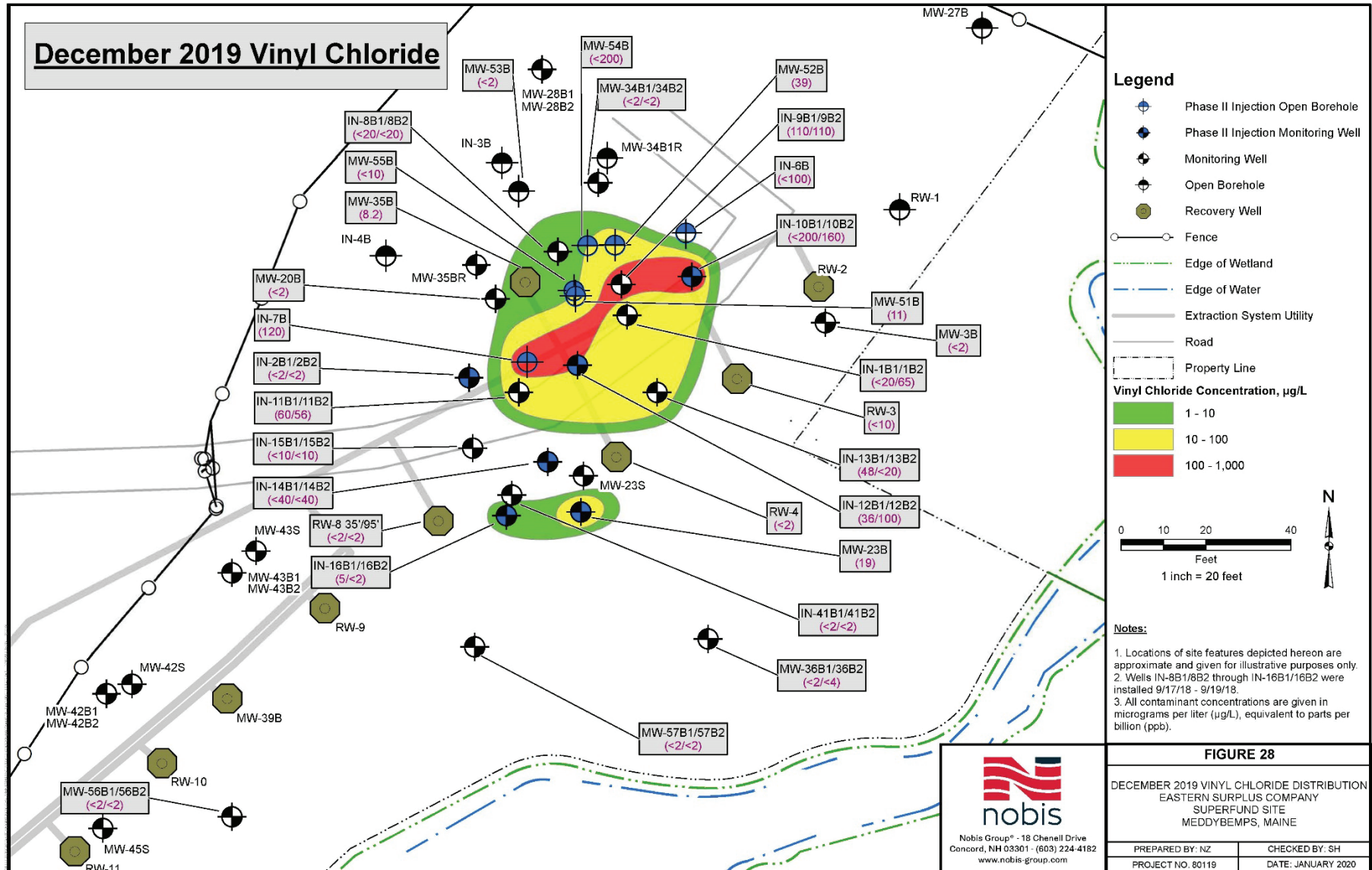
Source: Figure 23 of the 2020 Final Cleanup Status Report.

Figure G-7: Vinyl Chloride Distribution – Pre-Treatment



Source: Figure 23 of the 2020 Final Cleanup Status Report.

Figure G-8: Vinyl Chloride Distribution, December 2019



Source: Figure 23 of the 2020 Final Cleanup Status Report.

APPENDIX H – REVIEW OF GROUNDWATER ARARS

Groundwater cleanup levels were established primarily on federal drinking water non-zero MCLGs, MCLs and the 1992 Maine MEGs, all of which were identified as ARARs in the 2000 ROD. As noted in the 2017 ESD, Maine MEGs have been revised several times since the 2000 ROD, with the last revision in 2016. However, the 1992 MEGs remain the only values that have been referenced in state regulations, and therefore they remain as ARARs whereas the revisions are TBC criteria. In addition, in October 2018, MEDEP issued Maine Remedial Action Guidelines (RAGs) for Sites Contaminated with Hazardous Substances. The RAGs include guidelines for soil, indoor air, groundwater, and fish consumption. The RAGs for groundwater cleanup levels replace the 2016 MEGs. However, the new levels were not promulgated. Therefore, they do not constitute ARARs for the Site. MEDEP issued revised RAGs in May 2021.⁹

Table H-1 compares the 2000 ROD interim groundwater cleanup levels to the current federal ARARs. With the exception of PCBs, the interim groundwater cleanup levels remain valid as they are either the same as or more stringent than the current federal ARARs (MCLs). Historically, PCBs were primarily detected in the southern plume groundwater, beneath and downgradient of the soil PCB “hot spot.” In 2010, with concurrence from MEDEP, the southern extraction system was shut down because performance standards had essentially been met (PCE concentrations fluctuated between the MCL of 5 µg/L and the 1992 MEG of 3 µg/L).

The 2017 ESD notes that two additional contaminants are present in water but not identified in the ROD: vinyl chloride and 1,2-DCA. The 2017 ESD indicates that the federal MCL for vinyl chloride is 2 µg/L and its 1992 MEG is 0.15 µg/L. The 2017 ESD indicates that both the federal MCL and 1992 MEG for 1,2-DCA is 5 µg/L. These standards have not changed since the 2017 ESD.

Table H-1: Interim Groundwater Cleanup Levels Evaluation

| Groundwater COC | Interim Groundwater Cleanup Level ^a (µg/L) | Current Federal Standard ^c (µg/L) |
|------------------------------------|--|---|
| 1,1,2-Trichloroethane | 3 ^b | 5 |
| Bis(2-ethylhexyl) phthalate (BEHP) | 6 ^c | 6 |
| Chloromethane | 3 ^b | -- |
| Methylene chloride | 5 ^c | 5 |
| Tetrachloroethene (PCE) | 3 ^b | 5 |
| PCBs | 0.05 ^b | 0.5 |
| Trichloroethene (TCE) | 5 ^c | 5 |
| 1,1-Dichloroethane (1,1-DCA) | 5 ^b | -- |
| Antimony | 6 ^c | 6 |
| Cadmium | 5 ^c | 5 |
| Cis-1,2-DCE | 70 ^c | 70 |
| Lead | 15 ^d | 15 |
| Manganese | 200 ^b | -- |
| Xylene | 600 ^b | 10,000 |

⁹ Current Maine RAGs dated May 1, 2021, available at <https://www.maine.gov/dep/spills/publications/guidance/rag/Maine-Remedial-Action-Guidelines-2021-05-01.pdf> (accessed May 17, 2021).

| Groundwater COC | Interim Groundwater Cleanup Level ^a (µg/L) | Current Federal Standard ^e (µg/L) |
|--|---|--|
| <p><i>Notes:</i></p> <ul style="list-style-type: none"> a) Source is Table 30 of the 2000 ROD. b) Basis of IGCL is the 1992 MEG. c) Basis of the IGCL is the federal MCL or MCL/MCLG. d) Basis of the IGCL is the federal action level. e) Current MCLs/MCLGs available at https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations (accessed May 17, 2021). | | |