Appendix D

Pennsylvania Sites on the Federal National Priorities List

Sites are listed alphabetically by County.

This appendix contains a list of "active" sites on EPA's National Priorities List. This list includes sites that are designated as "Proposed," "Final," or "Deleted" where long-term monitoring or actions are required to be reviewed. Further information on the status of these sites is included on EPA's website at <u>epa.gov</u>.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Hunterstown Road	Responsible Party (RP)	SC	Adams	91	33	Groundwater is contaminated with toxic volatile organic compounds (VOCs). Soils contain toxic metals and asbestos.	The soil remedy is complete and operating as designed. Groundwater remediation is ongoing. In January 2020 an Explanation of Significant Differences made three remedy modifications. Intuitional controls were expanded to all areas of contamination. Groundwater performance standards were changed from background to federal Maximum Contaminant Levels (MCLs), federal non-zero Maximum Contaminant Level Goals (MCLGs) or Pennsylvania Medium- Specific Concentrations (MSCs). EPA is also requiring that a cumulative risk evaluation be performed once MCLs, MCLGs and MSCs for the contaminants of concern have been reached. The fourth five-year review was completed in August 2020.
Keystone Landfill	Responsible Party (RP)	SC	Adams	91	33	Groundwater and nearby surface water are contaminated with toxic volatile organic compounds (VOCs) and heavy metals.	The landfill cap and gas extraction system have been constructed. Groundwater extraction is ongoing. The off-site wells are showing declining VOC concentrations, which suggest containment of the impacted groundwater plume. No off-site residential wells are impacted. Some landfill cap repairs have been made and the conceptual Site model was updated.
Shriver's Corner	Responsible Party (RP)	SC	Adams	91	33	Groundwater is contaminated with toxic volatile organic compounds (VOCs) and has affected residential wells in the area.	Remedial actions are complete. The RPs continue to operate the groundwater remediation system and the residential water supply system. The remedy is working as intended in preventing exposure to site contaminants. Institutional controls remain in place to prevent exposure to site related contaminants.
Westinghouse Elevator	Responsible Party (RP)	SC	Adams	91	33	Groundwater and surface water are contaminated with trichloroethylene (TCE).	The fifth five-year review was completed in June 2021. The RP continues to operate the groundwater remediation system and collect annual groundwater samples from monitor wells and quarterly samples from on-site extraction wells. Institutional Controls in the form of well restrictions and EPA notifications will be placed on the Site.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Breslube Penn	Responsible Party (RP)	SW	Allegheny	44	37	Groundwater and soils are contaminated with toxic volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs). No residential wells have been impacted.	Construction is complete. A long-term groundwater monitoring plan was prepared by the RP and approved by EPA and DEP. The slurry wall is currently under evaluation because of the potential for outward migration of contaminants due to concerns with the waste management area.
Ohio River Park	Responsible Party (RP)	SW	Allegheny	45	42	Soils in the disposal pits contained benzene, toluene and phenols. Soil and groundwater have been impacted.	Construction is complete. Groundwater monitoring and operation and maintenance of the multi-layer cap are ongoing by the RP. Annual reports are being submitted to EPA and DEP. A site inspection is pending for the next EPA five year report.
PICCO Resin Disposal	Responsible Party (RP)	SW	Allegheny	39	37	Groundwater and surface water are contaminated with toxic volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs).	The Site is capped and leachate water is collected and pre-treated before discharge to the local sewage treatment plant. A new secondary groundwater interceptor trench and barrier wall began operating successfully in early 2021. Performance monitoring wells were installed in early May 2022 followed by well development tasks which are underway, to be followed next by groundwater sampling.
Craig Farm Drum Dump	Responsible Party (RP)	NW	Armstrong	63	41	Site is contaminated with toxic volatile organic compounds (VOCs) and other wastes from the production of resorcinol.	Remediation consisted of stabilization of the strip mine waste, disposal of the stabilized waste in a lined on-site disposal facility, collection and treatment of seeps and wetland mitigation. Construction was completed in 1995. EPA deleted the Site from the NPL in September 2013. The RP is conducting the necessary operation and maintenance activities. EPA finalized the fifth five-year review in March 2019.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Bally Groundwater	Responsible Party (RP)	SC	Berks	130	24	Groundwater is contaminated with toxic volatile organic compounds (VOCs) and threatens area drinking water supply.	Groundwater is being remediated through pump and treat by the RPs. A new, uncontaminated public well and water distribution system have been developed. Another public water supply well was brought online as a backup for the municipal water supply. Vapor intrusion was previously evaluated, and one mitigation unit was installed in 2010 and is operating properly. Additional vapor sampling was conducted in August 2021 and March 2022. Results are pending. The source plume has decreased in size and VOC concentrations are stable or decreasing.
Berks Landfill	Responsible Party (RP)	SC	Berks	129	29	Groundwater is contaminated with toxic volatile organic compounds (VOCs).	The RP is maintaining the landfill cap and leachate collection system. Joint periodic EPA- DEP site inspections are conducted. The fourth five-year review (FYR) was finalized in July 2020. The FYR found that the remedial action implemented at the Site is protective of human health and the environment. The leachate collection system effectively conveys leachate to the Site storage ponds; maintenance of the landfill caps prevents exposure to Site waste; long-term monitoring of the on-Site, sentinel, and residential wells continues to evaluate the effectiveness of the hydraulic containment mechanism; and institutional controls have been implemented to effectively limit Site use activities and ensure continued protectiveness.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Berks Sand Pit	State Funded O&M	SC	Berks	134	24	Groundwater and the Middle Branch of the Perkiomen Creek are contaminated with toxic volatile organic compounds (VOCs). Residential wells are regularly monitored to ensure pollutants remain within safe drinking water levels.	In 2011, it was determined that the existing groundwater (gw) remediation system showed signs of decreased efficiency and was taken off- line due to damage incurred after several lightning strikes. DEP has since conducted pilot studies to determine the most effective way to reduce the amount of VOCs in the gw. In early 2022, DEP replaced the pump and treatment system with gw injections involving a combination of in situ bioremediation and in situ chemical reduction (ISB/ISCR) technology. The ISB/ISCR technology is more effective than the pump and treat method for remediation of select wells with residual VOCs. Concentrations of the groundwater contamination are declining, the plume is contained to the Site property and reducing in size, there is no current exposure pathways to contamination, and institutional controls are in place. Additional injections may be needed.
Brown's Battery Breaking	Responsible Party (RP)	SC	Berks	124	29	Groundwater is contaminated with lead.	Contaminated soils have been remediated. Groundwater remediation was being performed by the RP. In March 2020, the RP performed an alkalinity injection and a round of groundwater monitoring. In May 2020, the RP filed for bankruptcy and work EPA and DEP are evaluating current Site conditions. DEP is expected to take primary responsibility for operation and maintenance at the site during the fall of 2022.
Crossley Farms	EPA Funded and State O&M	SC	Berks	134	24	Toxic volatile organic compounds (VOCs) have been detected in on-Site groundwater and residential wells down gradient of the Site.	EPA is operating the current groundwater pump and treat (P&T) system and associated groundwater extraction wells. A Record of Decision amendment was finalized in 2021. Additional extraction wells will be added to the P&T system treat areas of higher groundwater contamination. DEP conducts annual sampling of private water supply wells and performs operation and maintenance of existing residential well treatment systems and vapor intrusion systems.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Cryo-Chem	State Funded O&M	SC	Berks	130	24	Groundwater is contaminated with toxic volatile organic compounds (VOCs).	DEP has taken over operation and maintenance of the groundwater remediation system. Exposure pathways that could result in unacceptable risks are being controlled. The groundwater remedy is effective in reducing contaminant concentrations and all groundwater with concentrations above cleanup levels is hydraulically contained. The groundwater remedy is making measurable progress toward achieving cleanup levels; however, contaminants remain in groundwater at concentrations above cleanup levels. EPA conducts five-year reviews of the remedy. The next review is scheduled for September 2023.
Douglassville Disposal	EPA Funded and Responsible Party (RP)	SC	Berks	130	44	Groundwater, surface water and soils are contaminated with toxic volatile organic compounds (VOCs), heavy metals and polychlorinated biphenyls (PCBs).	EPA continues to evaluate the potential for contaminated groundwater to impact the Schuylkill River. Adverse effects of the contaminated groundwater plume on the Schuylkill River are not apparent. Free-phase petroleum hydrocarbon removal is ongoing at two wells. An operation & maintenance plan is forthcoming that will delineate which wells are to be sampled and indicate the long-term monitoring specifics. Groundwater monitoring is continuing as stated in the 1989 Record of Decision. EPA will conduct an investigation to include replacement of a monitoring well; sampling of groundwater, residential well, surface water, soil, and sediments; a seep survey; and a habitat assessment.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Exide Technologies Laureldale	EPA Funded and Responsible Party (RP)	SC	Berks	126	11	Significant quantities of lead-containing emission dust.	Exide Trust funds were inadequate to address all environmental issues from the facility. EPA initiated a time critical removal action in 2021. Removal activities focused on the decontamination of some of the most deteriorated baghouses and emissions control system ducting, associated with the Facility's smelter operations. To date, gross decontamination of eight baghouses and approximately 350 linear feet of associated ducting has been completed. Over 50 tons of lead-contaminated dust and debris removed from these structures has been prepped and staged for off-Site disposal. Transport and off-Site disposal of 12 tons of lead contaminated dust and debris have also been conducted. The response is on-going.
Price Battery	EPA Funded and Responsible Party (RP)	SC	Berks	124	29	Plant soils contain high levels of lead. Residential properties are contaminated with lead from historic air deposition.	The Site has been broken down into three operable units (OUs) to facilitate remediation. The RP began the process of taking the Site through the Act 2 process. An additional portion of Kaercher Creek has lead contamination above the Site-specific risked based level, so it will be added to OU3. A revised Feasibility Study and Proposed Remedial Action Plan is being prepared.

	Lead	DEP			a		
Site Name	Agency	Region	County	House	Senate	Threat	Status
Hamburg Kaercher Creek	EPA Funded and Responsible Party (RP)	SC	Berks	124	29	Soils, groundwater, and the creek are contaminated with lead.	A battery manufacturing facility operated in Hamburg Borough from 1920 to the mid-1990s. Battery casings were reused as fill material and deposited throughout the Hamburg area. EPA and the responsible party completed a Removal Action in 2004. However, in 2017, significant erosion on the banks of Kaercher Creek was discovered. A Removal Action was completed in October 2021 during which approximately 100,000 square feet of Kaercher Creek banks were remediated, including a flat area adjacent to the banks. In total 8,375.49 tons of soil and slag were removed and disposed of as hazardous waste, 8,938.8 tons of soil was removed and disposed as non-hazardous waste and 3.48 tons were removed and disposed as PCB waste. Where contaminated soil remained at the bottom of excavations, orange barrier fabric was placed and backfilled to notify people of the presence of contaminated soil in case of future excavation. Excavated creek banks were backfilled with clay, fabric separation layer and rip rap revetment stone, armoring the creek banks. Level areas were backfilled with clay, stone and topsoil and then revegetated. No further work is planned.
Ryeland Road Arsenic	EPA Funded	SC	Berks	129	29	Site soils are contaminated with arsenic and lead. Some private properties are also impacted.	The remedial action of operable unit 1 (OU-1) resulted in the removal of approximately 140,000 tons of contaminated soils, sediment, and waste material and resulted in preventing direct contact with exposed waste material. EPA is finalizing a Feasibility Study for OU2 to address the groundwater contamination remaining at the site. It is believed that arsenic waste is still present in the railroad embankment and in the southern source area.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Delta Quarries Landfill	Responsible Party (RP)	SC	Blair	80, 79	30	Groundwater and surface water are impacted by toxic volatile organic compounds (VOCs), including tetrachloroethylene (PCE), and heavy metals.	The RP continues extraction and treatment of groundwater at the site. Semiannual or triennial samples are collected from groundwater monitoring and recovery wells, a spring, and surface water. Effluent water is sent to a wastewater treatment plant for processing. Landfill gas is sampled annually, and the landfill's cap is maintained. EPA's Five-Year Review was finalized in May 2021.
Bell Landfill	Responsible Party (RP)	NC	Bradford	110	23	Leachate from the Site contains methylene chloride, vinyl chloride, manganese, and arsenic.	The two Site landfills have been closed. On-site treatment of leachate via spray irrigation is underway as well as evaluation of on-site treatment for discharge directly to the stream. The 2018 five-year review was completed with no significant problems or deficiencies. The next review is scheduled for 2023. Annual landfill gas, leachate, groundwater, surface water, and sediment sampling continue.
Boarhead Farms	Responsible Party (RP)	SE	Bucks	143	10	Groundwater is contaminated with toxic volatile organic compounds (VOCs), 1,4- dioxane, and per- and polyfluoroalkyl substances PFAS. Wetlands, ponds, and a small unnamed tributary to the Delaware River are affected by contaminated groundwater.	The responsible parties (RPs) are maintaining the granular activated carbon treatment systems installed on three residential water supplies. In February 2022, DEP's Clean Water Program issued final NPDES ARARs which include semiannual monitoring/reporting for PFOA and PFOS. EPA plans to complete its 4th Five Year Review of the remedy before October 2022. A cost recovery payment was received in June 2021.
Chem Fab	EPA Funded	SE	Bucks	143	10	Groundwater is contaminated with toxic volatile organic compounds (VOCs) and inorganic compounds. Contaminated groundwater threatens to impact nearby public water supply wells.	The Remedial Design of the groundwater extraction and treatment system (GWETS) was completed in 2019. EPA installed the extraction wells for the GWETS in Spring 2020 and conducted PFAS sampling of Cooks Run. Detections were below 70 ppt. EPA began construction of the GWETS in May 2021, and it is anticipated the system will be operational by Fall 2022.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Croydon TCE	State Funded O&M	SE	Bucks	141,140	6	Groundwater and eight residential wells are contaminated with trichloroethylene (TCE). Several VOCs were detected in the surface water samples from Hog Run Creek, a tributary of the Delaware River.	DEP currently performs annual sampling of surface water and monitoring wells to assess the long-term impact of the injections on the VOC concentrations in groundwater. In late May early June 2022, DEP's contractor will remove the GWETS equipment to allow the shell of the building to be used as bat habitat, in accordance with the wishes of the current property owner, the Heritage Conservancy. In 2022, DEP intends to submit a revised Request for Remedy Modification to EPA with updated results of the in-situ bioremediation pilot study.
Dublin TCE	Responsible Party (RP)	SE	Bucks	144	10	Groundwater is contaminated with trichloroethylene (TCE). Private water supplies were impacted.	A public waterline was extended to affected residences. EPA concluded there was no risk from vapor intrusion. Institutional controls permanently limit the 120 Mill Street property to commercial/industrial use with no residential use in the future. Groundwater use is prohibited. In August 2021, two monitoring wells were installed. EPA continues to analyze the geophysics of those wells. Discrete interval sampling of the existing monitoring well network began in October 2021 and finished in February 2022.
Fischer and Porter	Responsible Party (RP)	SE	Bucks	29	12	Groundwater is contaminated with toxic volatile organic compounds (VOCs) and has affected public water supply wells in the area.	Construction is complete. The RP continues to operate a groundwater pump and treat system. DEP oversees the permitted discharge from that treatment system. A five-year review was completed in 2019, and found the remedy is operating properly. In March 2021, the RPs sampled for PFAS in the treatment systems' influent and effluent and the results were below 70 ppt.

	Lead	DEP			_		
Site Name	Agency	Region	County	House	Senate	Threat	Status
Former Naval Air Warfare Center Warminster (NAWC)	Responsible Party (RP)	SE	Bucks	29	12	Groundwater is contaminated with toxic volatile organic compounds (VOCs) and per- and polyfluoroalkyl substances (PFAS). Soils and sediments are contaminated with heavy metals.	As of March 2022, 402 private drinking water wells have been sampled by the Navy for PFAS. 82 were found to exceed 70 ppt. The Navy connected 57 homes to the public water supply system and the remaining homes are receiving bottled water. In summer 2021 the Navy completed a Remedial Investigation (RI) to further investigate the extent of PFAS contamination at the Site. The groundwater
							extraction and treatment systems (GWETS) has Clean Water ARARs that limits discharge of PFOA and PFOS to less than a combined concentration of 70 ppt. The Navy is performing additional investigation of potential PFAS source areas which includes soil sampling and the installation of additional monitoring wells.
Revere Chemical	Responsible Party (RP)	SE	Bucks	143	24	Site soils were contaminated with heavy metals, toxic volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs). Shallow groundwater is contaminated with toxic VOCs. Surface water is contaminated with copper.	The responsible party group continues long-term operations and maintenance (O&M) of the site. O&M tasks include inspections of the security system, the cap, and the stormwater management system are conducted. The fifth Five-Year Review (FYR) was finalized in September 2021. Groundwater and surface water sampling are required during the year preceding each FYR. During the most recent sampling, surface water sampling found concentrations of copper (total) ranged between 2.5 μ g/l to 11 μ g/l and concentrations of copper (dissolved) ranged between 1.9ug/L to 10 μ g/l in surface water samples collected from the East tributary of Rapp Creek bordering the Site. Review of these results by DEP's Clean Water Program recommended further sampling to determine if additional remedial activities are warranted at the Site.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Watson Johnson Landfill	EPA Funded	SE	Bucks	145	24	compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs). and metals. Groundwater, surface water and sediments are impacted. Groundwater is contaminated with per- and	The Site is divided into operable units (OUs). OU1: DEP conducts monthly inspections of the Site. Soil gas sampling was conducted in June and October 2021. Leachate level and gas vent monitoring was conducted in April 2022. In accordance with the operations and maintenance plan, one third of the cap was mowed in April 2022. OU2: After the discovery of PFAS in monitoring wells, EPA made the decision to proceed to the full scale Enhanced In-Situ Bioremediation (EISB) implementation. Injections were implemented in December 2020 and September 2021. In February 2022, DEP and EPA conducted the operational and functional inspection. OU3: EPA is planning to address PFAS as a third OU.
Bruin Lagoon	State Funded O&M	NW	Butler	64	41		Stabilization of sludge waste and construction of a multi-layer impervious cap was completed in 1991. The Site was deleted from the NPL in 1997. Bruin Borough residents were connected to the Petroleum Valley regional waterline in 2005. EPA's sixth five-year review in September 2019 determined that the remedy remains protective. In 2020, EPA and DEP revised the operation & maintenance (O&M) plan and finalized a Superfund State Contract Amendment to establish ongoing O&M activities for the Site. DEP conducts O&M activities as required. The Annual Post Closure Monitoring Report was finalized in Feb 2022.

	Lead	DEP					
Site Name	Agency	Region	County	House	Senate	Threat	Status
Palmerton Zinc	Responsible Party (RP)	NE	Carbon	122	14	Metals impacted the Aquashicola Creek, Lehigh River, and large areas of Blue Mountain and Stoney Ridge. Soil and groundwater are contaminated with zinc and lead.	A zinc smelter and related industrial processes operated at the Site from the 1890s to the 1980s. The Five-Year Review for the Site was completed in spring 2022. The Site is divided into four operable units (OUs). OU1: Blue Mountain field work includes wood chipping; thinning out overcrowded areas; invasive plants control; collecting soil samples. OU2: Surface water was diverted around the Cinder Bank waste pile and semi-annual inspections occur. OU3: 117 remediated properties were partially deleted from the NPL in May 2021. OU4: Wetland inspections and maintenance are ongoing. Test plots were created to control water flow and stabilize and promote vegetative growth at the Eastern drainage ditch.
Tonolli Corporation	Responsible Party (RP)	NE	Carbon	122	14	Site soils, groundwater and the Nesquehoning Creek are contaminated with lead, cadmium, and other heavy metals.	The RPs are conducting operation and maintenance of the landfill cap and semi-annual groundwater monitoring. Leachate continues to be transported off-site for treatment and disposal. The RPs submitted the Groundwater Monitoring Report in February 2022.
Centre County Kepone	Responsible Party (RP)	NC	Centre	171	34	Soil, sediment, groundwater, and surface water are contaminated with toxic volatile organic compounds (VOCs). Fish in Spring Creek were impacted. A portion of the Site has been deleted from the NPL.	A groundwater pump and treat system was operational from 2000 to 2020, following a successful pilot study. The work plan submitted for shut-down of the system has been implemented with a one-year trial period in 2021 to determine the impact to site conditions and to evaluate whether there is an opportunity for remedy optimization. A formal report of monitoring results and proposed next steps to optimizes the Site remedy is in progress. The soil vapor extraction system is expected to be taken off-line since that portion of the site has been approved for conditional reuse by EPA.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
AIW Frank/Mid- County Mustang	State Funded O&M	SE	Chester	167	19	Site groundwater is contaminated with toxic volatile organic compounds (VOCs). Contaminated groundwater has spread beyond the property boundaries, affecting private drinking water supply wells.	In 2018, a new Superfund State Contract was finalized to outline DEP's operation and maintenance obligations under the revised remedy. In October 2021, an Environmental Covenant was recorded for the Site source properties to facilitate residential development efforts which are currently underway. In November 2021, DEP again requested EPA's permission to decommission the GWETS based on the results of this sampling. EPA is considering DEP's request. DEP is scheduled to begin the next round of injections following review of the results from EPA's January 2022 full round of groundwater sampling at the Site.
Blosenski Landfill	Responsible Party (RP)	SE	Chester	26	44	Soil, groundwater, and surface water contain toxic volatile organic compounds (VOCs) and heavy metals.	A public waterline was installed to provide clean drinking water for residents. Results of the February 2021 sampling event indicate that current groundwater conditions are protective of downgradient receptors. The overall footprint of VOCs above MCLs has reduced from 2010, and VOC concentrations remain stable or continue to decline. In December 2021, EPA issued a Proposed Remedial Action Plan (PRAP) to replace the current GWETS Remedy for OU3 with Enhanced In-Situ Bioremediation and continued Existing Groundwater Use Restrictions. EPA estimates that the ROD amendment will be completed in 2022.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Foote Mineral	Responsible Party (RP)	SE	Chester	167	19	Contaminants of concern include lithium, boron, chromium, and toxic volatile organic compounds (VOCs) and are in the soil and groundwater. Some on-Site soil is slightly radioactive.	Long term monitoring of the impacted groundwater shows decreasing concentrations, indicating that the remedy is working. The RP continues to collect annual groundwater and surface water samples. The property owner is exploring redevelopment options for the Site which may include the construction of a power generation station to supply power to a data center facility at or near the Site. In March 2022, DEP and EPA participated in a Permit Application Consultation Tool (PACT) meeting with the property owner to answer questions about redevelopment, potential permits and land use controls that would come into play during and after construction.
Kimberton TCE	Responsible Party (RP)	SE	Chester	155	44	Groundwater is contaminated with trichloroethylene (TCE). A tributary to French Creek was also contaminated with volatile organic compounds (VOCs).	The RP continues to operate a groundwater extraction and treatment system (GWETS). The RPs continue to sample the influent and effluent and monitor the GWETS according to the Post Construction Sampling and Analysis Plan. In April 2019, EPA issued the sixth five-year review, which concluded that the remedy continues to be protective and the plume is contained.
Malvern TCE	Responsible Party (RP)	SE	Chester	167	19	Groundwater and soil are contaminated with trichloroethylene (TCE), Vinyl Chloride, and 1,4-Dioxane. Contaminated groundwater has affected area residential wells.	In March 2021, a revised conceptual site model for the FDA was submitted with the Remedial Investigation (RI)/Focused Feasibility Study (FFS) update. In August 2021, a final Soil and Groundwater Remediation FFS was submitted. In October 2021, DEP provided comments on the FFS. DEP identified Act 2 MSCs as ARARs; EPA is evaluating whether or not to utilize Act 2 MSCs or require the calculation of site-specific risk-based numbers. EPA is planning to issue a Proposed Remedial Action Plan in summer 2022. A vapor intrusion investigation work plan has been drafted to analyze risks for a nearby residential property. Sampling is expected to occur during fall/winter 2022.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Old Wilmington Road	EPA Funded	SE	Chester	26	44	Groundwater is contaminated with toxic volatile organic compounds (VOCs), manganese, and per- and polyfluoroalkyl substances (PFAS). Private drinking wells have been impacted.	In February 2021, DEP notified EPA that the public supply well servicing the mobile home park located within the Site boundaries is
Paoli Rail Yard	Responsible Party (RP)	SE	Chester	157, 167	19, 26	Soil, groundwater, and surface water sediments are contaminated with polychlorinated biphenyls (PCBs).	Regularly scheduled monitoring and sampling of both rail yard and non-rail yard properties continues as part of the operation and maintenance (O&M) activities. Stream monitoring, sediment removal, and deer repellant applications occur quarterly as part of routine O&M activities. The 2nd quarter sediment removal event will occur in June 2022. DEP's review of the draft March 2021 5-Year Review and files revealed that EPA had not implemented Institutional Controls in accordance with its ROD. EPA has indicated that they would address the oversight.
Strasburg Landfill	State Funded O&M	SE	Chester	158	19, 9	Site was contaminated with toxic volatile organic compounds (VOCs) and metals.	Under the Consent Order & Agreement the current property owner continues to conduct routine Operation & Maintenance (O&M) tasks they are responsible for performing at the Site. Under the current NPDES equivalency issued for the Site, DEP collects samples from the onsite treatment wetland on a quarterly basis. The next round of sampling is planned for July 2022.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Welsh Road	EPA Funded and Responsible Party (RP)	SE	Chester	26	44	Soils and groundwater are contaminated with toxic volatile organic compounds (VOCs) and metals. Private wells were impacted.	Construction is complete. The RPs installed a cap over contaminated soils and a public waterline to affected residences. The RP Group conducts operation and maintenance activities, including groundwater sampling and landfill gas monitoring. Institutional controls in the form of deed notices were placed on all properties that comprise the Site. The fifth Five-Year Review was completed in April 2021 and found that remedies for the Site remain protective.
William Dick Lagoons	Responsible Party (RP)	SE	Chester	26	44	Soil and groundwater are contaminated with toxic volatile organic compounds (VOCs). Soils also contain pesticides.	Homes with private wells are routinely sampled to ensure any treatment systems operate effectively. The groundwater extraction and treatment system is effectively removing VOCs on-Site. In October 2021, DEP reviewed a draft Proposed Remedial Action Plan (PRAP) for the final groundwater remedy to address bedrock groundwater contamination. In January 2022, DEP provided comments on a Proposed Investigative Activities Memo which described activities to be conducted at the Site in support of the PRAP development for OU2. A Revised Work Plan was submitted for drilling additional boreholes in early-April 2022. This work was completed in early May 2022.
Jackson Ceramix	EPA Funded	NC/NW	Clearfield, Jefferson	75, 66	25	Soils are contaminated with lead sludge waste and toxic volatile organic compounds (VOCs). Groundwater is contaminated VOCs.	The site is divided into 3 Operable units (OUs). DEP concurred with the Record of Decision for OU1 in March 2021. EPA's preferred alternative includes: repair of the existing soil cover over the Former Manufacturing Area (FMA); In-Situ Thermal Remediation of the VOC-contaminated soil, dense non-aqueous phase liquid and groundwater in the FMA; In-Situ Stabilization of Surface Soils in the Northern Drainage Channel; Excavation with Ex-Situ Stabilization and Off- Site Disposal for Sediments and Subsurface Soil Hotspot in the Former Lagoon; and Institutional Controls. EPA is currently reviewing remedial alternatives for OU2 and OU3.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Drake Chemical	EPA Funded and Responsible Party (RP)	NC	Clinton	76	25	Soils and groundwater are contaminated with toxic volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs).	EPA completed remediation of contaminated soil (incineration). The RP continues to monitor and treat groundwater contamination. The most recent five-year review (FYR) was completed in 2018. Future sampling for per- and polyfluoroalkyl substances (PFAS) is being considered. The next FYR is due in 2023.
Safety Light	EPA Funded	NC	Columbia	109	27	Activities at the Site have resulted in radioactive contamination of soil, surface water, sediment, and ground water. The Site owner is financially unable to complete the remedial actions.	EPA used the Removal Program to demolish contaminated buildings in 2014. EPA's Remedial Program completed cleanup of the buildings in 2015. In 2018, the soils in and around the former canals and onsite dumps were excavated and delineated. EPA has completed the removal action in the West Lagoon, East Dump, and East Lagoon. Further excavation will be needed around the former canal area. A feasibility study was submitted for this work in May 2022. Groundwater is still being evaluated and EPA submitted the draft final Remedial Investigation/Feasibility Study to DEP in January 2022.
Saegertown Industrial Site Area	Responsible Party (RP)	NW	Crawford	6	50	Groundwater is contaminated with toxic volatile organic compounds (VOCs) from previous industrial activities.	The RP continues to evaluate the effectiveness of bioremediation injections on the reduction of VOCs in the groundwater and abandon monitoring wells as they become unnecessary. In 2019, the RP began a five-year renovation of the facility in conjunction with EPA and DEP's Environmental Cleanup, Waterways and Wetlands, and Waste Management Programs. For human health and environmental safety, the RP continues implementation of institutional controls, health and safety management planning, and groundwater use restrictions.

	Lead	DEP			_		
Site Name	Agency	Region	County	House	Senate	Threat	Status
Naval Support Activity Site (Navy Ship Parts Control Center)	Responsible Party (RP) - (US Military)	SC	Cumberland	87	31	metals and toxic volatile organic	The Site has been broken down into several operable units (OUs) to facilitate remediation. Removal and remedial actions are ongoing. In August 2021, the annual groundwater sampling report concluded that some wells could be eliminated, and some wells could be sampled less frequently (OU4). Site-wide investigation for per- and polyfluoroalkyl substances (PFAS) is underway.
Middletown Airfield	Responsible Party (RP)	SC	Dauphin	106	48	Groundwater and soils are contaminated with toxic volatile organic compounds (VOCs). Perfluorooctanesulfonic acid (PFOS) contamination is in the public water supply.	Current Site conditions remain protective of human health. The RP continues to monitor the groundwater and surface water. The RP submitted a draft permit modification for their drinking water system to incorporate granular activated carbon to treat the water for PFOS. The Site visit for the Five Year-Review was in March 2022.
Havertown PCP Site	State Funded O&M	SE	Delaware	166, 163	17		In June 2021, DEP ceased operation of the groundwater extraction and treatment system (GWETS), and EPA began the operation of a temporary GWETS, and demolished the old GWETS. EPA is constructing a new GWETS that will be able to treat twice as much water per minute as the existing GWETS, preventing the contaminated groundwater from surfacing. EPA is expected to operate the new GWETS for at least one year to ensure it is operating properly. DEP's annual costs to maintain the new GWETS are expected to increase. DEP is responsible to continue operations and maintenance of certain parts of the system and to continue long-term monitoring of groundwater, surface water and aquatic biota. A Township Ordinance prohibits the installation of groundwater wells sitewide

	Lead	DEP					
Site Name	Agency	Region	County	House	Senate	Threat	Status
Lower Darby Creek	EPA Funded and Responsible Party (RP)	SE	Delaware, Philadelphia	185, 191	1, 8	Area groundwater and seeps are contaminated with metals, volatile organic compounds (VOCs), 1-4 dioxane, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and lead. Contamination is seeping into Darby Creek.	This Site is broken down into two Landfills/Operable Units (OUs). Clearview Landfill (OU1): The Residential Yard component of the cleanup initiated in 2017 was completed in June 2021. As a result of this cleanup, 195 residential properties were remediated and restored. The construction of the evapotranspiration cover commenced in 2019 and is expected to be completed in 2023, a year earlier than expected due to receipt of additional funding from the Bipartisan Infrastructure Law. In January 2022, DEP issued a HSCA 512 Order to secure the land use restrictions. Folcroft Landfill (OU2): The Remedial Investigation was completed in 2018. The RP group is currently conducting treatability studies of the groundwater contamination and are expected to complete the Feasibility Study in 2022. For Groundwater (OU3): EPA expects to complete a Focused Feasibility Study to evaluate options to prevent further contamination from leaving the landfill boundary. In 2021, EPA created the new OU4 which encompasses the aquatic environments within the creeks, marsh and larger John Heinz National Wildlife Refuge that may be impacted from contamination related to the landfills.
Metro Container	EPA Funded and Responsible Party (RP)	SE	Delaware	159	9	Soil and groundwater are contaminated with toxic volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), metals and polycyclic aromatic hydrocarbons (PAHs).	The RPs continue the Focused Remedial Investigation (FRI) field work and are currently performing supplemental Phase 2 FRI investigation activities in response to EPA/DEP comments dated April 29, 2021. DEP has agreed to participate in pursuing a Natural Resource Damage claim for the Site.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Lord-Shope Landfill	Responsible Party (RP)	NW	Erie	17	49	Groundwater is contaminated with toxic volatile organic compounds (VOCs) and heavy metals.	The RP continues to maintain the composite cap installed over the landfill and operate and maintain the groundwater pump and treat system in conjunction with an in-situ vapor stripping and thermal treatment system. The RP is proposing two changes to current site operations. The first is to discontinued use of the thermal oxidizer, which treats vapors collected in the landfill. Over the years, the quantity of vapors produced in the landfill has decreased. The second is a pilot test to evaluate the effectiveness of Enhanced Reductive Dechlorination (ERD) on the contamination in the groundwater. In November 2021, EPA issued an Explanation of Significant Differences which updates the groundwater cleanup levels to the current federal drinking water standards; adds a contaminant of concern; adds ten parameters to the groundwater monitoring program; and requires cumulative risk goals for groundwater cleanup.
Millcreek Dump Site	State Funded O&M	NW	Erie	3	49	Groundwater is highly contaminated with toxic volatile organic compounds (VOCs).	EPA completed construction of a groundwater treatment system at the site in 1992. In 2001, a nine-hole golf course, serving as a cap, was built over the former industrial and municipal waste dump. Wetlands and a flood retention basin for storm water control were also constructed at that time. Since 2007, DEP operates and maintains the groundwater treatment system. EPA completed its sixth Five-Year Review in 2021 and determined that the groundwater treatment system and vegetated soil cap are both protective of human health and the environment. DEP and EPA are currently working on ways to make the treatment plant more effective and efficient.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Letterkenny Property Disposal Office Area	Responsible Party (RP) - (US Military)	SC	Franklin	89, 90	33	Groundwater is contaminated with toxic volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs). Site soils contain toxic VOCs and heavy metals. Residential wells could be threatened.	The Site has been broken down into several operable units (OUs) to facilitate remediation. OU2 includes evaluating natural attenuation parameters to verify that the plume is not migrating off-site. The annual report was conducted in September 2021. OU4 includes soil, sediment, and groundwater associated with the oil burn pit. The remedial design was revised to raise the groundwater treatment temperatures to the boiling point. OU5 includes the drainage area. Fish samples were taken in 2021. Base-wide PFAS investigation is underway. The Five-Year Review began in Spring 2022.
Letterkenny Southeastern Area	Responsible Party (RP) - (US Military)	SC	Franklin	89, 90	33	Groundwater and Site soils are contaminated with toxic volatile organic compounds (VOCs). Residential wells are potentially affected. Potential for lead contamination at the small arms firing range.	The Site has been broken down into several operable units (OUs) to facilitate remediation. OU5: Plans to complete the application of the soil amendment and install the soil cover are underway. The OU9 In Situ Bioremediation amendments are planned for summer 2022. Annual OU10 groundwater sampling was conducted in March 2021. OU12 annual landfill cap operation and maintenance is ongoing. The OU15 annual vapor intrusion sampling was conducted in February 2022. The OU16 Record of Decision for Off-post vapor intrusion was finalized in November 2021. The selected remedy alternative sub-slab depressurization at residences. Base-wide PFAS investigation is underway. The Five-Year Review began in Spring 2022.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Aladdin Plating	Responsible Party (RP)	NE	Lackawanna	114, 113	22	Groundwater was contaminated with chromium and other metals and threatened local water supplies.	The Site has been deleted from the NPL. Nearby home wells were sampled, and results were non- detect for Site contaminants. EPA would like to transition the site from a Removal to a Remedial Action, however, DEP does not concur. In September 2021, the five-year review inspection was conducted, and residential and monitoring wells were sampled. EPA is waiting for dates from the hauler for the Hazardous waste pickup and is hoping to schedule a joint inspection with DEP at that time.
Lackawanna Refuse	State Funded O&M	NE	Lackawanna	114	22	On-Site groundwater was contaminated with nitrate, heavy metals, and toxic volatile organic compounds (VOCs). Off- Site groundwater was contaminated with the pesticide dieldrin.	DEP turned over operation and maintenance (O&M) responsibilities to the property owner. In October 2019, EPA submitted the final five-year review and placed the Site on the Ready-for- Reuse database. Clean Choice is proposing the site for a solar farm and meetings and planning are ongoing. An O&M site visit occurred in October 2021.
Lehigh Electric	State Funded O&M	NE	Lackawanna	114	22	Site soils contain polychlorinated biphenyls (PCBs) and trichlorobenzene contamination.	The Site has been deleted from the NPL. DEP was performing operations and maintenance (O&M). The property was purchased in April 2020 and the new property owner has assumed responsibility for the O&M obligations.
Taylor Borough Dump	Responsible Party (RP)	NE	Lackawanna	114	22	Soils and groundwater are contaminated with toxic volatile organic compounds (VOCs) and heavy metals.	The Site has been deleted from the NPL. The city of Scranton is conducting operation and maintenance of the Site. DEP continues to monitor Site security. A developer and conservation organization has expressed interest in the purchase and reuse of the Site as a solar farm, discussions are ongoing.

Site Norme	Lead	DEP	Country	Полого	Samata	Thurst	Status
Site Name Berkley Products Landfill	Agency State Funded O&M	Region SC	County Lancaster	House 37	Senate 36	Threat Groundwater is contaminated with low levels of toxic volatile organic compounds (VOCs), 1,4-dioxane and heavy metals.	Status Remediation activities completed in 2002 included repositioning and compacting of waste and placing a soil cover over the waste. DEP is responsible for maintaining the landfill cap. EPA also installed a treatment system on the residential well that was most impacted from 1,4-dioxane. In 2016/2017, EPA conducted a Remedial Investigation to determine the extent of 1,4- dioxane contamination in the groundwater and a feasibility Study to evaluate remedial alternatives in 2019. EPA submitted the final Remedial Investigation report and Feasibility Study in May 2020. DEP and EPA are evaluating alternatives.
Elizabethtown Landfill	Responsible Party (RP)	SC	Lancaster	98	36	Groundwater is contaminated with toxic volatile organic compounds (VOCs) and contamination seeps into the Conoy Creek.	Construction of the soil cap and gas extraction system is complete. The current remedy consists of in-situ bioremediation in conjunction with groundwater pump and treat. A 2021 Explanation of Significant Differences modifies the remedy. This adds institutional controls beyond the landfill property, eliminates the need for an air stripper, modifies cleanup levels, and states that treated groundwater, oxygen and propane will be reinjected into aquifer wells instead of being discharged to Conoy Creek.
UGI Columbia	Responsible Party (RP)	SC	Lancaster	98	36	Groundwater is contaminated with toxic volatile organic compounds (VOCs). Site soils and sediments in the Susquehanna River are contaminated with coal tar.	The RP continues to monitor contaminated groundwater. Concentrations of the chemicals of concern detected in wells within the Technical Impracticability waiver zone are generally steady. The groundwater flow direction toward the Susquehanna River indicates that natural gradient flushing is occurring in accordance with the approved dissolved phase plume remedy.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Whitmoyer Laboratories	Responsible Party (RP)	SC	Lebanon	102	48	Soil and groundwater are contaminated with toxic volatile organic compounds (VOCs) and arsenic.	Construction of a soil capping system is completed and protected by institutional controls. A groundwater extraction and treatment system is currently operating. In February 2022, EPA issued the fifth ESD which modified the groundwater remedy to include an interceptor trench to collect overburden groundwater as part of the groundwater extraction and treatment system. The NPDES permit equivalency will need to be updated after the interceptor trench is installed and routed to the treatment facility.
Dorney Road Landfill	Responsible Party (RP)	NE	Lehigh	187	16	Site soils are contaminated with heavy metals and the groundwater is contaminated with toxic volatile organic compounds (VOCs). Groundwater contamination has migrated from the Site into residential wells.	The final five-year review was received in April 2018. The Site is now delisted. The RP continues operation and maintenance activities. Residential and monitoring well sampling are conducted on a yearly basis. Landfill cap inspections occur on a quarterly basis.
Heleva Landfill	EPA Funded and Responsible Party (RP)	NE	Lehigh	187	16	Groundwater is contaminated with trichloroethylene (TCE) and has affected a nearby municipal water supply well.	DEP continues to work with EPA and the RP on the groundwater treatment system. Institutional controls were added to the Site in October 2020. The annual groundwater sampling event occurred in December 2021. DEP received the Annual Groundwater Extraction Report and Operations Report in March 2022. The Five-Year Review Site visit occurred in May 2022.
Novak Landfill	Responsible Party (RP)	NE	Lehigh	183	16	Leachate and groundwater are contaminated with toxic volatile organic compounds (VOCs) and heavy metals. Residential wells were impacted.	The RP Group continues operation and monitoring activities at the Site. The Five-Year Review was finalized in May 2021. The Annual Groundwater Monitoring Report was submitted in February 2022. In August 2021, the Annual Landfill Gas Monitoring Report was submitted. Two probes continue to exceed the LEL for methane. The RPs are working on a plan to address the exceedances. No residential air exceedance were seen.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Rodale Manufacturing	Responsible Party (RP)	NE	Lehigh	131	18	Groundwater is contaminated with toxic volatile organic compounds (VOCs) and has migrated off-Site.	A groundwater pump and treat system is being maintained by the RP. DEP received the 2020 Annual Groundwater Monitoring Report in March 2022. The appropriateness of some groundwater sampling and well purging technics need addressed. The results of PFAS sampling were well below 70 ppt.
Butler Mine Tunnel	Responsible Party (RP)	NE	Luzerne	118	14	Area groundwater and surface water are contaminated with semi-volatile organic compounds (SVOCs) and petroleum hydrocarbons.	On September 14, 2021, EPA announced that they deleted the Butler Mine Tunnel Site from the NPL. This deletion indicates that the Site no longer poses a threat to public health and the environment and is a major milestone for Superfund impacted communities. Copies of all three (3) ECs for this site were sent on September 14, 2021 to EPA for their records and input into any remaining relevant documents needed. No Further Work is Planned.
Foster Wheeler/ Church Road/Mountain Top TCE Site	Responsible Party (RP)	NE	Luzerne	119	20	Groundwater is contaminated with trichloroethylene (TCE). Private water supply wells were impacted and have been permanently replaced.	EPA has proposed the Site for the National Priority List. In December 2019, the United States entered a Consent Decree with Foster Wheeler Energy Corporation. The Mountain Top Final Cap Over Source Area Soils Interim Remedial Action Report was completed in July 2021. In April 2022, the Operational & Functional Determination for Cap and Sediment Interim Remedial Actions for the Foster Wheeler Energy Corporation/Church Road TCE Superfund Site occurred, and the Mountain Top Final groundwater extraction treatment system Optimization Interim Remedial Action report was completed.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Valmont TCE Site	EPA Funded	NE	Luzerne	119, 116	14	with trichloroethylene (TCE). Five area residences have toxic volatile organic compounds (VOCs) in the indoor air above the acceptable human health risk-based levels. Groundwater is contaminated with per- and polyfluoroalkyl substances (PFAS).	EPA is moving forward with the TCE issues independently of the PFAS contamination. In September 2021 an interim Record of Decision was finalized. DEP, EPA Region 3, and EPA Office of Research and Development collaborated on Non-Targeted Analysis at the Site in July 2021. EPA drafted a scope of work in October 2021. EPA's contractor conducted a Site visit in May 2022 and further site investigation has begun.
Avco (Textron) Lycoming	Responsible Party (RP)	NC	Lycoming	83	23		A pump and treat system continues to treat contaminated groundwater. The RP continues to operate and maintain that system. Vapor intrusion mitigation systems have been installed in two residences next to the facility. EPA recorded an environmental covenant which places land use restrictions on the property. EPA conducted the 5 th FYR for the Site. An expanded groundwater sampling program and evaluation of the treatment system are needed.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Sharon Steel	EPA Funded and Responsible Party (RP)	NW	Mercer	7	50	Groundwater contains elevated levels of metals. Site wetlands and the tributary from the wetlands to the Shenango River also show metals contamination.	EPA is implementing a remedial action at the Site which is separated into two Operable Units (OUs). OU1: Remedial activities resulted in the restoration of an 11-acre flood plain, a 22-acre biosolids-enhanced cap, and 2-acre constructed wetland. The U.S. Army Corps of Engineers is currently tasked with operation and maintenance (O&M) of the remedy. DEP anticipates taking over O&M at the Site in October 2022. In May 2022, EPA issued an Explanation of Significant Differences due to changes in the design to better address contamination from the sludge and biosolids mixture and for a cumulative risk assessment of the groundwater to ensure the protectiveness of the remedial action.OU2: From 2017 to early 2020, the RP covered exposed slag with asphalt or clean fill to prevent releases of heavy metals and polyaromatic hydrocarbons and ensure there is no exposed waste. In 2021, EPA completed its first Five Year Review of OU2. As part of the review, a Site walk was conducted in April 2021 to ensure that the remedy is, and will be, protective of human health and the environment.
Westinghouse Sharon	Responsible Party (RP)	NW	Mercer	7	50	Soil, sediment, and groundwater were contaminated with toxic volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and metals.	The RP is currently operating and maintaining the Site. A "DO NOT EAT" advisory for all fish species caught in the Shenango River in Mercer and Lawrence Counties was issued in August 2017. In Fall 2019, DEP installed the advisory signage along the river in areas identified by local stakeholders. The RP is addressing contamination to Shenango River sediments in a Remedial Action Work Plan dated January 2021. Along with EPA, this work plan was reviewed and commented on by DEP's HSCA, Clean Water, Wetlands and Waterways, and Safe Drinking Water programs. EPA approved the plan in April 2022. Dredging of the Shenango River is anticipated to occur in Fall 2022.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Jacks Creek	Responsible Party (RP)	SC	Mifflin	171, 82	34	contaminated with heavy metals and	Construction is complete. The fourth five-year review process was finalized in March 2021 and determined the remedy is functioning as intended. The RP Group conducts long-term maintenance activities at the site. These activities include quarterly inspection of the site's security fencing and gates, erosion controls, multi-layer cap integrity, fishing advisory signs, stormwater management system, groundwater monitoring wells, wetlands and building areas. The RP Group also conducts semi-annual groundwater and sediment monitoring at the site and fish and biota sampling every five years. The next sampling event will occur in 2024.
Brodhead Creek MGP	EPA Funded and Responsible Party (RP)	NE	Monroe	115	40	Groundwater, surface water and soils were contaminated with coal tar.	Construction is complete. The annual sampling of groundwater and additional Site activities occurred in September 2021, including polyethylene device (PED) deployment for passive sampling. PED recovery successfully occurred in October 2021. In March 2022, a revised Site contingency plan was received from the UGI/PPL contractor.
Butz Landfill	State Funded O&M	NE	Monroe	176	40	Activities at the Site have resulted in high levels of toxic volatile organic compounds (VOCs) in domestic wells south of the landfill.	Quarterly influent and effluent sampling continue. The annual well sampling event occurred in October 2021. DEP is currently performing operation and maintenance of the groundwater remediation (pump and treat) system, the most recent occurred in July and August 2021. EPA sent the five-year review report in August 2021 and no issues were found.
Tobyhanna Army Depot	Responsible Party (RP)	NE	Monroe	115	22	Residential wells are contaminated with organic solvents, primarily trichloroethylene (TCE) and tetrachloroethylene (PCE). Groundwater is contaminated with Per- and polyfluoroalkyl substances (PFAS).	Affected residences are receiving public water. Sampling for PFAS occurred in 2021 and exceedances of 70 ppt were noted at several locations including a historical fire training area, a former chromium plating facility, and at an industrial wastewater treatment plant. DEP followed up with sampling public supply wells nearby and detection of PFAS below 70ppt were found.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Ambler Asbestos	Responsible Party (RP)	SE	Montgomery	148	12	Soils are contaminated with asbestos waste.	The RP completed the removal of regulated fill in August 2021 and began the removal of reclamation fill in January 2022. As of May 2022, reclamation fill within Parcel E has been almost completely removed. The Final Fill Removal Project is scheduled to be completed by February 2023. The Five-Year Review site inspection was conducted in November/December of 2021.
Baghurst Alley	EPA Funded	SE	Montgomery	147	24	Groundwater is contaminated with toxic volatile organic compounds (VOCs).	The EPA removal program has completed installation of the water main from the Perkiomen Creek to the affected residents (including laterals); construction of a storage tank and pumping station are underway; and connection to the water authority system and crossing of the Perkiomen Creek will be completed when stream conditions allow. The new waterline will be operated by the water authority after construction is completed. In May 2022, DEP issued an amended concurrence letter for EPA's draft April 2022 ROD to address the source and hotspot areas on the Miller Farm. EPA is selecting In Situ Thermal Remediation (ISTR) for the source area soil/bedrock and groundwater, In Situ Chemical Oxidation (ISCO) for two groundwater hotspot areas and Institutional Controls to ensure exposure pathways remain closed and to protect the remedy.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
BoRit Asbestos	EPA Funded	SE	Montgomery	151, 148	12, 7, 17	Site was contaminated with asbestos and asbestos-containing materials.	An Environmental Covenant was recorded for the Park parcel in 2020, for the Reservoir Parcel in 2021, and a HSCA 512 order executed for the Pile Parcel in September 2021, documenting institutional controls for the individual parcels. Whitpain Township plans to convert the Park parcel into a recreational park and is in preliminary talks with DEP and EPA concerning permitting requirements for those plans. In September 2021 Site-wide soil, air, surface water, and sediment sampling was completed as part of the long-term monitoring plan. No asbestos was detected in surface soil or air samples; however, it was detected in surface water samples from Wissahickon Creek, Tannery Run, and Rose Valley Creek. In December 2021, 15 cubic yards of ACM was removed from the Wissahickon Creek streambanks between the mouth of Rose Valley Creek and the Butler Pike bridge.
Commodore Semiconductor	Responsible Party (RP)	SE	Montgomery	150	44	Groundwater is contaminated with toxic volatile organic compounds (VOCs) and freon and has affected area residential wells.	In September 2020, DEP and EPA participated in a meeting with the owner of 960 Rittenhouse Road, adjacent to the Commodore Site, to discuss results of a completed site investigation. The property owner intended to take the property through the Act 2 program, however, based on the results from the preliminary investigation, there is evidence that 960 Rittenhouse Road is a source of contamination for the Commodore Site, and the groundwater plumes are comingled. In January 2021 EPA sent a General Notice Letter to the owner of the property identifying them as RP for the Site. EPA is currently working a on response to the letter regarding the property owner's liability. In December 2021, DEP attended a site walk/scoping meeting with EPA's Environmental Response Team, who will be conducting additional investigation activities at the 960 Rittenhouse Road property, which are planned to begin in 2022.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Crater Resources	Responsible Party (RP)	SE	Montgomery	149	17	Soil and groundwater are contaminated with volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs).	Permanent capping of Quarry 1 & 2 was completed by a developer and has entered the operation and maintenance phase. The RP group has remediated Quarry 3. Quarry 4 was backfilled, capped with soil, and is partially covered with a parking lot and a portion of an office building foundation. In April 2022, the RP group's contractor submitted the 2021 Monitored Natural Attenuation Report which is currently under review by EPA and DEP. In January 2022, DEP received a NPDES Stormwater Construction permit application for a combined project at the properties; 2501 Renaissance will be an office building, 2901 Renaissance will be a multi-family residential building. Geotechnical investigations of Quarry 1 soil were completed in April 2022. Building construction is expected to begin in summer 2022.
Henderson Road	Responsible Party (RP)	SE	Montgomery	149	17	Groundwater and the Upper Merion reservoir are contaminated with toxic volatile organic compounds (VOCs).	In March 2021 the RP group finalized the Focused Feasibility Study for Operational Unit (OU) 1. The Proposed Remedial Action Plan (PRAP) for OU1 was issued in February 2022, and the public comment period ended March 3, 2022. The PRAP called for replacing the groundwater extraction and treatment system with Aerobic & Anaerobic In-Situ Bioremediation, upgrading the current Vapor Extraction System and placement of an absorbent sock in the injection well to remove residual light non- aqueous phase liquid (LNAPL). EPA anticipates issuing the Record of Decision by September 2022. Institutional controls are in the form of deed notices.

Site Name	Lead	DEP	Country	Шанка	Samata	Thursd	Status
Site Name Moyer Landfill	Agency State Funded O&M	Region SE	County Montgomery	<u>House</u> 150	Senate 44	Threat Leachate from the Site contains trichloroethylene (TCE) and nickel.	Status In fall 2021, DEP participated in the site inspection as part of the Five-Year Review for the Site. As part of this process DEP also conducted active air monitoring for methane gas at the landfill, with readings ranging from 0-50% LEL. In winter 21/22, DEPs contractor completed repairs of erosion damage of the landfill access road and installed preventative measures to aide in stormwater runoff control. DEP is evaluating the potential of discharging leachate onsite under a NPDES equivalency permit. The Five-Year Review was finalized in May 2022.
Former Naval Air Station Joint Reserve Base (NAS JRB), Willow Grove and Biddle ANG Base (formerly Horsham Air Guard)	Responsible Party (RP)	SE	Montgomery	151	12	Drinking water supply wells are contaminated with toxic volatile organic compounds (VOCs) and per- and polyfluoroalkyl substances (PFAS).	As of May 2021, 737 private drinking water wells have been sampled for PFAS. 169 were found to exceed 70 ppt. The Navy and Air National Guard (ANG) have connected 163 homes to the public water supply system and the remaining homes are receiving bottled water. A permanent system capable of treating 500 gallons per minute is in the process of being designed and will be based on the performance of the two pilot studies. The US Navy began capping of two former disposal areas in March 2022; completion of both caps is expected in 2022. The ANG has completed a Facility Investigation of the Biddle ANG Base and has initiated a RI of PFAS. ANG has installed a temporary stormwater treatment system to limit PFOA and PFOS. ANG was issued a NPDES permit for a permanent treatment system which limited discharges of PFOA and PFOS to less 70 ppt in March 2021, which they appealed to the Environmental Hearing Board. Litigation is ongoing. ANG is planning a pilot study to address one or more sources areas in 2022.

	Lead	DEP					
Site Name	Agency	Region	County	House	Senate	Threat	Status
North Penn 1	State Funded O&M	SE	Montgomery	53	12	Groundwater is contaminated with toxic volatile organic compounds (VOCs).	In 2009, DEP took over operation and maintenance of the groundwater remedy. DEP samples the onsite monitoring wells semiannually and the discharge to the sewer quarterly. The five- year review recommended the installation of additional monitoring wells and performing a capture zone analysis to ensure that the operable unit 2 remedy is protective in the long term. EPA installed one new monitoring well in 2018, and EPA is working to install additional monitoring wells. Institutional Controls are in the form of a Municipal Ordinance and Montgomery County regulations which prevents exposure to the groundwater contamination and installations of new wells by their permitting process.
North Penn 2	Responsible Party (RP)	SE	Montgomery	53	12	Wetland soils and surface water sediments are contaminated with heavy metals. Groundwater is contaminated with trichloroethylene (TCE). Potential per- and polyfluoroalkyl substances (PFAS) contamination.	TCE levels continue to decrease in the groundwater with continued use of the groundwater extraction system. In 2019, sampling of extraction and monitoring wells for PFAS revealed concentrations above 70 ppt in select extraction and upgradient monitoring wells. EPA collected samples at nearby residential wells for PFAS analysis. None of the private wells sampled contained PFAS at concentrations exceeding 70 ppt. EPA's Site Assessment section continues to evaluate the potential source(s) of PFAS contamination. DEP participated in a Site inspection for the second Five-Year Review (FYR) in November 2021. In the 2022 FYR Report, EPA recommended recording the Sub- slab Depressurization System remedy component and required monitoring and maintenance in a decision document and updating the Operations & Maintenance Plan and institutional controls, accordingly.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
North Penn 5	EPA Funded & Responsible Party (RP)	SE	Montgomery, Bucks	53	10, 12	Site groundwater is contaminated with trichloroethylene (TCE). Contamination has affected one of the North Penn Water Authority production wells.	The Site has been broken down into operable units (OUs) to facilitate remediation. OU1: By 2021, all additional monitoring and extraction wells were installed, and aquifer testing was completed from six wells as described in the Pre- Remedial Design Investigation (PRDI). A revised PRDI Work Plan was approved in March 2022, which proposed retesting two of the extraction wells. The completed PRDI report is expected by Fall 2022. OU2: In July 2021, the RP group completed investigative work via compound specific isotope analysis (CSIA). EPA concluded that the CSIA data "does not support or disprove" a claim of different sources of TCE, and therefore must rely on other lines of evidence presented in the 2020 Conceptual Site Model. In February 2022, EPA proposed locations for an additional 7 bedrock monitoring well clusters and 3 individual wells to continue plume delineation. In May 2022, the RP declined to install the proposed wells or perform groundwater sampling on the wells after installation. EPA is prepared to install these wells.OU3: EPA performed an abiotic dechlorination evaluation within the bedrock aquifer which showed that VOC concentrations have continued to decrease. A focused feasibility study is expected.
North Penn 6	EPA Funded & State Funded O&M	SE	Montgomery	53	24	Site groundwater is contaminated with toxic volatile organic compounds (VOCs). Contamination has affected several of the North Penn Water Authority production wells.	DEP currently performs operation and maintenance (O&M) and groundwater monitoring at 4 of the 5 properties on Site. DEP is expected to take over O&M at the fifth site in June 2022. EPA is planning to install new monitoring wells at several locations at the Site in 2022 to further the groundwater characterization of the Site. EPA will be excavating contaminated soil from the J.W. Rex property in Summer 2022. In February 2022, an environmental covenant was recorded for the Rogers Mechanical/Andale Green properties.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
North Penn 7	Responsible Party (RP) & EPA Funded	SE	Montgomery	61	12	Site groundwater is contaminated with toxic volatile organic compounds (VOCs). Contamination has affected several of the North Penn Water Authority production wells.	EPA removed areas of soil contamination. The Site has been broken down into operable units (OUs) to facilitate remediation. OU1: EPA indicated that a Record of Decision for this alternative will be postponed due to soil removal scheduled to begin at the Site, which will occur following Teleflex's agreement with EPA's Removal Administrative Order on Consent (AOC). DEP received the Compliance Assurance Notification from EPA regarding the Removal AOC in March 2022. OU3: The results of a pilot study which occurred between 2013 and 2015 have been incorporated and evaluated as a remedial alternative in the Site's groundwater Feasibility Study. A Proposed Plan is expected to be issued in 2022.
North Penn 12	Responsible Party (RP)	SE	Montgomery	70	44	Groundwater in the area is contaminated with toxic volatile organic compounds (VOCs).	Construction is complete. The RP is maintaining the groundwater treatment plant. An in-situ chemical oxidation (ISCO) recirculation pilot study started in 2016. Additional monitoring wells were installed in 2021 to complete groundwater delineation needed to finalize the ISCO recirculation pilot study. Analytical results from the new wells will be incorporated into a final report on the ISCO pilot study. Additional vapor intrusion investigation work was completed in March 2022 and a report is expected in Summer 2022. Institutional Controls include Declaration of Easements and Restrictions Agreements.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Occidental Chemical	Responsible Party (RP)	SE	Montgomery	146	44	Groundwater and soils are contaminated with toxic volatile organic compounds (VOCs).	The RP continues to sample the existing recovery wells and treatment system monthly. In August 2021, the RP submitted the 2020 Report on Optimization. According to the report, the implementation of the 2019 Optimization Plan successfully improved the efficiency of groundwater remediation by increasing the rate of mass recovered per volume of groundwater pumped and treated. The Report recommends that remedial alternatives, alternate technologies, and/or the use of the existing institutional controls be evaluated as means to attain remediation goals. As of May 2022, the groundwater treatment system continues to operate successfully and meets the required clean-up criteria without the use of the air stripping process.
Raymark NPL Site	State Funded O&M	SE	Montgomery	152	12	Groundwater is contaminated with toxic volatile organic compounds (VOCs). Contaminated groundwater has migrated off-Site.	DEP continues to perform operations and maintenance (O&M), treating approximately 100,000 gallons per day. DEP's annual sampling of the 13 monitoring wells in November 2021 showed concentrations of contaminants of concern remaining consistent with previous years' sampling. In March 2022, the sump pump and air stripper belts both failed and were repaired. DEP and its contractor plan to re-pipe the treatment plant to bypass the carbon filtration tanks and allow water from the air strippers to discharge directly to the sewer. Valves will be installed if the carbon filtration tanks would ever be needed in the future.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Salford Quarry	EPA Funded & Responsible Party (RP)		Montgomery	147	24	Residential wells are contaminated with boron.	In the design phase of OU1, EPA found the remedy in the 2013 ROD could not be constructed because of insufficient space for equipment and materials in and around the quarry. In September 2021, EPA issued its ROD Amendment. EPA's selected alternative consists of the construction of a perimeter wall and Resource Conservation and Recovery Act (RCRA) cap to contain quarry waste and contaminated soil onsite. The implementation of the new remedy will be Fund- lead. EPA has indicated that there is a special account that has been established for this Site which may supplement DEP's cost share responsibilities. In early May 2022, DEP attended EPA's virtual kickoff meeting to begin the remedial design planning phase.
Stanley Kessler	Responsible Party (RP)	SE	Montgomery	149	17	Soil and groundwater are contaminated with toxic volatile organic compounds (VOCs).	Kessler conducts semi-annual groundwater sampling to monitor the effectiveness of the system, with the most recent event occurring in March 2022. Results show Site COCs have been decreasing consistently since 1996.
Tyson's Dump	Responsible Party (RP)	SE	Montgomery	149	17	Soils and groundwater are contaminated with toxic volatile organic compounds (VOCs). The Schuylkill River is impacted.	Groundwater monitoring is conducted on a semiannual basis; the results continue to confirm the removal of contaminants by Site environmental controls. The RP submitted the 2021 Annual Report in March 2022. The Wet Soil Cover seep discharge was diverted to mix with the groundwater treatment plant discharge in 2019. Several extraction wells were damaged in September 2021 as a result of flooding caused by Hurricane Ida, but repairs were quickly completed once flood waters receded. The remedy continues to be effective. Pursuant to a 1984 Consent Decree, on an annual basis DEP seeks personnel costs for the DEP's employees who provided general oversight.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
MW Manufacturing	Responsible Party (RP)	NC	Montour	107	27	Soil and groundwater are contaminated with chlorinated solvents.	A waste pile, drums, underground storage tanks, and highly contaminated soils were disposed off- site. A water line was constructed to supply water to affected residences and businesses and remaining contaminated soil and wastes were treated and capped on-site. A groundwater pump and treat system was constructed and continues to operate successfully. The Ultraviolet Oxidation system portion of the treatment system has been discontinued and the air stripper portion remains. No exceedances have occurred since, but monitoring continues.
Hellertown Mfg. Site	State Funded O&M	NE	Northampton	136	18	Groundwater is contaminated with trichloroethylene (TCE), which has migrated off-Site toward the nearby Saucon Creek.	Annual groundwater monitoring conducted in October 2021 showed that one of the four monitoring wells have a TCE concentration greater than the cleanup standard. Ongoing discussions and plans are occurring among all parties to redevelop the site. Wells that have met the cleanup goals were abandoned in October 2021.
Industrial Lane	Responsible Party (RP)	NE	Northampton	136	18	Groundwater is contaminated with toxic volatile organic compounds (VOCs). Several private water supply wells have been impacted.	Waterlines have been installed to replace impacted wells. The waste disposal area has been capped. A groundwater remediation system was installed and continues to operate. The remedy continues to be protective. Fluoride contamination was detected in some of the landfill wells and DEP has asked EPA to encourage the property owner to go through the Act 2 process before delisting the Site.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
Enterprise Avenue Landfill	Responsible Party (RP)	SE	Philadelphia	185	1	Soil and groundwater are contaminated with toxic volatile organic compounds (VOCs) and metals.	The 6th Five Year Review (FYR) began in August 2021 with a tour of the Site attended by EPA, DEP and representatives from the City. The FYR was signed in February 2022. With the FYR, EPA also forwarded the October 2021 Technical Basis for Amending the work required by the 2008 Administrative Order by Consent (AOC). EPA is using this document to justify modifying the AOC to remove the requirement for the City to operate the Waste Bin Management System. EPA's legal staff are still crafting the modification to the AOC as of mid-May 2022.
Franklin Slag Pile	EPA Funded	SE	Philadelphia	177	5	Slag piles contain various heavy metals, including lead, beryllium, and copper.	In December 2021, DEP participated on a call with EPA and a potential buyer for the Site. EPA is currently working with Army Corps of Engineers to develop the remedial design for the Site. In April 2022, DEP attended a site visit with EPA and the Philadelphia Water Department (PWD), which owns a parcel adjacent to the Site. The visit was held to inform PWD of the anticipated remediation at the Site, as well as answer any questions PWD or DEP may have had regarding the proposed remediation process.
Metal Bank	Responsible Party (RP)	SE	Philadelphia	173	5	Groundwater, soils, and Delaware River sediments are contaminated with polychlorinated biphenyls (PCBs).	The Long-Term Monitoring Plan requires that bioaccumulation studies and sediment sampling in the Delaware River continue to be performed by the RPs. In late November 2021, DOJ provided notification that the Utility Group RP had paid the settlement for the impairment of, destruction of, loss of, diminution of value of, and/or loss of use of natural resources, including the reasonable costs of assessing the injuries, resulting from hazardous substances, primarily PCBs into the Natural Resource Damage Assessment and Restoration Fund, to be managed by the Department of the Interior for the joint benefit and use of the Trustees to pay for Trustee- sponsored natural resource restoration projects at the Site.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
State Road Metal Bank	EPA Funded and Responsible Party (RP)	SE	Philadelphia	173	5	Soil is contaminated with polychlorinated biphenyls (PCBs).	Under an agreement with EPA, PennDOT performed remedial activities and received reimbursement from a trust fund established by a court order. PennDOT completed all work at the Site, including sewer lining and waste disposal in October 2015. Under a settlement agreement between the RP Group and EPA, the remaining removal action components were completed in October 2016. DEP plans to evaluate the Site to determine if close-out is appropriate.
Eastern Diversified Metals (EDM)	Responsible Party (RP)	NE	Schuylkill	124	29	Waste piles and sediments contain heavy metals, polychlorinated biphenyls (PCBs) and toxic volatile organic compounds (VOCs).	The RPs continue to perform operation and maintenance of the treatment plant, which includes monthly inspections, ground water monitoring, surface water sampling, and annual maintenance activities. Repair activities on the stream gabions occurred June 2021. The next Five-Year Review Site visit is planned for August 2022.
McAdoo Associates	Responsible Party (RP)	NE	Schuylkill	124	29	Groundwater and soils are contaminated with toxic volatile organic compounds (VOCs) and heavy metals.	Construction is complete. Contaminated soils were removed from the Site. The RP continues to monitor groundwater. Annual sampling of the groundwater takes place in May. Environmental covenants were sent by EPA to perspective parties. DEP visited the Site in November 2021 and conditions were in order.
Allied Signal (former Bendix Flight Systems)	Responsible Party (RP)	NE	Susquehanna	111	23	Groundwater, surface water and some private wells are contaminated with toxic volatile organic compounds (VOCs).	Remediation of contaminated groundwater (pump and treat) is ongoing. DEP received the Baseline Ecological Risk Assessment/Screening Level Ecological Risk Assessment and the Human Health Risk Assessment for review in October 2021 The Bendix Flight Systems 6 th FYR site inspection occurred in November 2021.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
East Mt. Zion Landfill	State Funded O&M	SC	York	47	48	Groundwater is contaminated with toxic volatile organic compounds (VOCs). Residential wells show no signs of contamination, and the majority of residents are on public water.	DEP is responsible for operation and maintenance (O&M) of the landfill cap and monitoring groundwater contamination. In Spring 2020, DEP began to address the groundhog infestation at the Site. EPA and DEP have established an O&M plan modification which results in EPA being responsible for maintenance of the protective cap during the 2021 through 2023 seasons for the purpose of implementing their native vegetation re-establishment plan. By 2024 it is expected that the mowing rate for the native vegetation will be once every three to four years. During this time, DEP will continue other O&M requirements, such as gas monitoring well inspections, gas vent monitoring, and groundwater sampling. EPA continues to conduct 5-year reviews of the Site. A site inspection was conducted in Jan. 2022.
Modern Sanitation Landfill	Responsible Party (RP)	SC	York	94	28	Groundwater, surface water and soils are contaminated with toxic volatile organic compounds (VOCs). Contamination impacts area residential wells.	A landfill cap system and fencing were installed. Ongoing activities include surface water and groundwater sampling, landfill gas monitoring, and groundwater pump and treatment of the wastewater. VOCs are generally declining in concentration. Ongoing discussions are occurring on the potential landfill expansion. Per- and Polyfluoroalkyl Substances (PFAS) at the Site is being evaluated.
Old City of York Landfill	Responsible Party (RP)	SC	York	93	28	Groundwater and domestic wells are contaminated with toxic volatile organic compounds (VOCs) and 1,4-dioxane. Surface water contains heavy metals.	Groundwater contamination is being monitored and land use controls are in place. Groundwater is sampled triennially. Concentrations of all Contaminants of Concern in groundwater were below Maximum Contaminant Levels in all wells. Monitored natural attenuation appears to be occurring and is progressing as intended. However, there were detections of 1,4-dioxane in two monitoring wells and routine sampling for 1,4-dioxane will be incorporated into future groundwater sampling events.

Site Name	Lead Agency	DEP Region	County	House	Senate	Threat	Status
York County Landfill	Responsible Party (RP)	SC	York	93	28	volatile organic compounds (VOCs).	The RP continues to operate and maintain a groundwater pump and treat system and provides quarterly and annual progress reports. The Fifth Five Year Review Site visit occurred in March 2022. Mercury levels in the pump and treat discharge need to be addressed.

Abbreviations, Terms:

- Lead Agency: The entity that is performing the response actions. This could be EPA, DEP or the responsible parties (e.g. property owner, operator of facility, generators of waste disposed) as defined under federal law.
- DEP Region: DEP has six regional offices that directly oversee response actions: SE Southeast, NE Northeast, SC Southcentral, NC Northcentral, SW Southwest, NW Northwest. See DEP website for locations and phone numbers.
- NPL: "National Priorities List" A list of sites in the nation maintained by EPA. EPA scores threats posed by the release of hazardous substances and then proposes sites for the list. After a public comment period, EPA declares the site in final status and proceeds to investigate, develop and implement cleanup plans. Sites are deleted when remediation goals and standards in the cleanup plan are achieved; however, many sites require long-term monitoring and other actions to maintain the standard.
- Construction A stage of the project when remedial systems and controls have been installed or are operating that address all threats posed by contamination at the Site. However, the cleanup plan goals and standards have not been achieved; for instance, concentration of contaminants in the groundwater may still be higher than those levels determined to be safe for unrestricted use.
- O&M: "Operation and Maintenance" Actions required to maintain a response action or to operate a remedial system that has been constructed. For instance, groundwater "pump and treat" may be designed to operate for more than 30 years before groundwater contamination levels meet remediation goals. Landfill or contaminated soil covers need to be maintained in perpetuity.

- Land Use Controls: Environmental covenants and deed restrictions placed on property to prevent contact with contamination that is left at the site.
- Operable Unit: "Operable Unit" EPA frequently separates areas of contamination at sites into operable units (OU). This separates phases of work and allows more immediate threats to be addressed quicker.