

**Site-Specific Justification for the Deletion of the
Land/Soil Portion of the Landfill Property and
47 Adjacent/Downgradient Parcels
of the Himco Dump Superfund Site from the
National Priorities List
Cleveland Township, Elkhart County, Indiana
February 2022**

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List of Acronyms

AMP	- Air Monitoring Plan
AOC	- Administrative Order on Consent
ARARs	- Applicable or Relevant and Appropriate Requirements
CD	- Consent Decree
CDA	- Construction and Debris Area
cis-1,2-DCE	- cis-1,2-dichloroethene
CERCLA	- Comprehensive Environmental Response, Compensation and Liability Act
COCs	- Contaminants of Concern
1,1-DCA	- 1,1-Dichloroethane
ELCR	- Excess Lifetime Cancer Risk
EPA	- U.S. Environmental Protection Agency
ERA	- Ecological Risk Assessment
ERC	- Environmental Restrictive Covenant
FR	- Federal Register
FS	- Feasibility Study
FYR	- Five Year Review
GIS	- Graphic Information System
HDPE	- High Density Polyethylene
HHRA	- Human Health Risk Assessment
HI	- Hazard Index
IAC	- Indiana Administrative Code
ICIAP	- Institutional Controls Implementation and Assurance Plan
ICs	- Institutional Controls
IDEM	- Indiana Department of Environmental Management
ISBH	- Indiana State Board of Health
LFG	- Landfill Gas
LTS	- Long-Term Stewardship
MCL	- Maximum Contaminant Level
mg/kg	- milligrams per kilogram (parts per million)
mg/l	- milligrams per liter (parts per million)
µg/kg	- micrograms per kilogram (parts per billion)
µg/l	- micrograms per liter (parts per billion)
µg/m ³	- micrograms per cubic meter
MIMP	- Methane Investigation and Monitoring Plan
MNA	- Monitored Natural Attenuation
MRAP	- Methane Remedial Action Plan
MSL	- Mean Sea Level
NCP	- National Oil and Hazardous Substances Pollution Contingency Plan
NOIPD	- Notice of Intent for Partial Deletion
NPL	- National Priorities List
O&M	- Operation and Maintenance
OSWER	- Office of Solid Waste and Emergency Response
PAHs	- Polynuclear Aromatic Hydrocarbons

PDI	- Pre-Design Investigation
PIN	- Parcel Identification Number
ppm	- parts per million
PRP	- Potentially Responsible Party
PVT	- Passive Vent Trench
QAPP	- Quality Assurance Project Plan
QA/QC	- Quality Assurance/Quality Control
RA	- Remedial Action
RAOs	- Remedial Action Objectives
RCRA	- Resource Conservation and Recovery Act
RD	- Remedial Design
RD/RA	- Remedial Design/Remedial Action
RI	- Remedial Investigation
RI/FS	- Remedial Investigation/Feasibility Study
ROD	- Record of Decision
RSLs	- Regional Screening Levels
RV	- Recreational Vehicle
SEMS	- Superfund Enterprise Management System
SGP	- Soil Gas Probe
SVOCs	- Semivolatile Organic Compounds
TAL	- Target Analyte List
TCL	- Target Compound List
USACE	- U.S. Army Corps of Engineers
USGS	- U.S. Geological Survey
UU/UE	- Unlimited Use/Unrestricted Exposure
VAS	- Vertical Aquifer Sampling
VOCs	- Volatile Organic Compounds
yd ³	- cubic yard

Site-Specific Justification for the Partial Deletion of the Himco Dump Superfund Site from the National Priorities List Cleveland Township, Elkhart County, Indiana

1.0 Purpose

The U.S. Environmental Protection Agency (EPA) Region 5 is proposing to partially delete the Himco Dump Superfund Site (Himco Dump Site or Site) located in Cleveland Township, Elkhart County, Indiana from the National Priorities List (NPL). This partial deletion pertains to the land/soil portion of:

- The landfill property (seven parcels),
- Two of the five adjacent soil removal properties (two parcels), and
- Forty-five properties located adjacent to and/or downgradient of the landfill (45 parcels).

The property included in this partial deletion is shown in Figure 1 and listed in Table 1.

This document provides information about the Himco Dump Site and explains how the portions of the Site proposed for deletion meet EPA's deletion criteria. EPA plans to publish a Notice of Intent for Partial Deletion (NOIPD) of the Himco Dump Site from the NPL in the Federal Register (FR) (the proposed rulemaking) and will open a 30-day public comment period on this proposed action. The documents which provide support for this report and the partial deletion are available for review in the Himco Dump Partial Deletion Docket (see Appendix A). This docket is available online at <https://www.regulations.gov>, Docket ID No. EPA-HQ-SFUND-1990-0010 and at EPA's webpage for the Site under "Site Documents & Data" at <https://www.epa.gov/superfund/himco-dump>.

The deletion or a partial deletion of a site from the NPL does not create, alter, or revoke any individual's or business's rights or obligations. The deletion or a partial deletion of a site from the NPL does not in any way alter the EPA's right to take enforcement actions, as appropriate. The NPL is designed primarily for informational purposes and to assist EPA management. Section 300.425(e)(3) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. § 300.425(e)(3), states that a deletion or partial deletion of a site from the NPL does not preclude eligibility for future response actions, should future conditions warrant such actions. Because the land/soil portion of the landfill property and the adjacent soil removal areas, and the municipal water supply connections, well abandonment, and ICs on the 45 downgradient residential parcels that EPA is proposing to delete from the NPL are part of the Himco Dump Site, Section 300.425(e)(3) is applicable to this proposed action.

EPA is proposing to delete these portions of the Site from the NPL because all cleanup actions have been implemented for the land/soil portions of the Site and no further response action is needed other than continued operation and maintenance (O&M) of the

soil cover, landfill gas (LFG) control system, fence, and other remedial components located on the landfill property; and long-term stewardship (LTS) of implemented institutional controls (ICs) and five-year reviews (FYRs) of the cleanup actions undertaken at the landfill property and the 47 adjacent and/or downgradient parcels.

Groundwater (including the groundwater below the parcels of land proposed for deletion) is undergoing a long term monitored natural attenuation (MNA) cleanup and will remain on the NPL. Two of the adjacent soil removal parcels and two residential parcels located downgradient of the landfill will also remain on the NPL because these parcels do not have enforceable ICs that run with the land and, therefore, do not meet the criteria for NPL deletion. Another residential parcel located adjacent to the landfill property will remain on the NPL because the IC restricting land and groundwater use on this parcel requires additional evaluation. These parcels are listed in Table 2.

During the partial deletion process, EPA identified a few other properties located downgradient of the landfill that require additional evaluation to determine whether any additional actions are necessary, such as a municipal water connection and/or enforceable ICs that run with the land. These properties are identified in Table 3.

2.0 Agency Concurrence

On January 18, 2022, EPA requested the IDEM's concurrence with proposing to delete the land/soil portion of the Himco Dump Site landfill property, two adjacent soil removal parcels, and 45 additional parcels located adjacent to and/or downgradient of the landfill from the NPL. IDEM issued a letter concurring with EPA's proposed partial deletion on January 26, 2022. A copy of IDEM's concurrence letter is in Appendix B.

EPA Headquarters completed review and comment on this Justification for Partial Deletion report on January 26, 2022. EPA Region 5 addressed EPA Headquarters' comments on the report and expects EPA Headquarters to propose the Site for partial deletion in the Federal Register in EPA's March 2022 NPL Deletions Update.

3.0 Community Notification and Opportunity for Review and Comment

EPA and IDEM conducted public participation activities throughout all response actions for the Site, satisfying the provisions of Sections 113(k) and 117, 42 U.S.C. §§ 9613(k) and 9617 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and the NCP, 40 C.F.R. §§ 300.415(n), 300.430(f), 300.815, and 300.820 (see Section 12.0 Community Involvement, of this report for additional details).

EPA will publish a notice advertising the availability of the NOIPD and the 30-day public comment period in a local newspaper, The Elkhart Truth, in Elkhart, Indiana, concurrent with the publication of the NOIPD in the Federal Register to satisfy public participation procedures required by Section 300.425(e)(4) of the NCP. EPA will also issue a press

release announcing the proposed partial deletion and public comment period. EPA expects to complete these activities in March 2022.

The documents that EPA relied on for this report and to support the deletion of the land/soil portion of the Site from the NPL are available for public review in the partial deletion docket (see Partial Deletion Docket Reports Index in Appendix A). This report and copies of the reports in the docket are available to the public online at <https://www.regulations.gov>, Docket ID EPA-HQ-SFUND-1900-0010 and at EPA's webpage for the Site at <https://www.epa.gov/superfund/himco-dump> under "Site Documents & Data".

4.0 Site Background and History

4.1 Site Location and Background

The 60-acre Himco Dump Site is an unlicensed and now-closed landfill located at the intersection of County Road 10 and John Weaver Parkway, in Cleveland Township, Elkhart County, Indiana (see Figure 2). The Site includes a 4-acre construction debris area (CDA) located directly south of the landfill which extended onto one commercial and seven adjacent residential parcels. A quarry pond that is approximately 30 feet deep is located in the northeast corner of the Site. Two smaller and shallower ponds are located on the west side of the Site. The Site is bordered to the north by agricultural lands, John Weaver Parkway and a residential area to the east, a residential area and County Road 10 to the south, and undeveloped land/agricultural properties to the west.

The Site is located within the St. Joseph River basin and was originally a mixture of marsh and grassland but is not in an environmentally sensitive area. A thick sequence of glacial outwash deposits consisting primarily of outwash sands and gravel that contain both minor lenses of silt and clay reflect the geology of the area. Regional groundwater flows south/southeasterly towards the St. Joseph River at depths ranging from 5 to 20 feet below ground surface.

4.2 Land and Resource Use

The Site is primarily urban due to its close proximity to the City of Elkhart with its mix of commercial/industrial and residential properties. Elkhart County has a population of about 197,000, which has grown rapidly over the past several decades mostly due to growth in the local recreational vehicle (RV) industry. The City of Elkhart, in which a small part of the Site is located, has a population of approximately 51,000, with a population density of 2,170 persons/square mile.

Due to the previous landfill operations at the Site and the reuse restrictions put on the landfill property as part of the cleanup, it is anticipated that reuse of the landfill would be limited to recreational and/or commercial purposes (e.g., soccer/baseball fields, RV parking lot). Elkhart prepared an economic development plan in 2003 that included plans

for potential redevelopment of the Site, which included the construction of recreational facilities, a cultural center, and/or other commercially viable facilities. No decisions have been made to reuse the landfill property, although it may be expected that redevelopment discussions could resume now that the construction of the remedy has been completed and the landfill property and other Site areas are being proposed for partial deletion.

4.3 History of Contamination

Himco Dump was an unlicensed landfill that operated from 1960 to 1976. The landfill was privately-owned by Himco Waste-Away Services Inc. (Himco). Wastes such as household refuse, construction rubble, medical waste, and calcium sulfate were disposed of at the Site. Materials were placed at ground surface across the landfill and in trenches excavated to approximately 10-15 feet deep in the eastern portion of the Site. Solid waste refuse was reportedly dumped in the trenches and burned. In 1976, the landfill was closed and covered with approximately 1 foot of sand overlying a 6-inch layer of calcium sulfate.

The 4-acre CDA is located directly south of the landfill, north of County Road 10. The CDA contained small piles of rubble, concrete, asphalt, and metal debris. The CDA extended beyond the landfill property onto seven adjacent residential and one commercial parcels.

The Indiana State Board of Health (ISBH) identified the Himco Dump Site as an open dump in 1971. In 1974, residents along County Road 10 south of the Site complained to the ISBH about color, taste, and odor problems in the water from their shallow private wells. The source of contamination was later shown to be the landfilled wastes. Water samples from six private wells along County Road 10 were sampled and contained high levels of manganese. The wells were replaced with deeper wells, going from 20 to 30 feet in depth to depths of 150 to 170 feet. However, the water in the deeper wells still showed elevated levels of sodium, which posed a chronic health threat.

In 1981 the U.S. Geological Survey (USGS), in cooperation with the Indiana Department of Natural Resources and the Elkhart Water Works, completed a three-year study that found the extent of a leachate plume potentially emanating from the Himco Dump Site using bromide concentrations in the groundwater as an indicator.

In 1984, an EPA field investigation team sampled the USGS monitoring wells and found that groundwater downgradient of the Himco Dump Site was contaminated with volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and metals. The VOCs and SVOCs detected in the groundwater included acetone, benzene, phenol, Freon, 4-methylphenol, trans-1,2-dichloroethene, 2-butanone, chloroethane, and pyrene. The detected metals included aluminum, arsenic, barium, chromium, cobalt, selenium, beryllium, cadmium, copper, zinc, manganese, lead, nickel, and mercury. The team also observed leachate seeps during the inspection.

4.4 NPL Listing

EPA proposed the Himco Dump Site to the NPL on June 24, 1988 (53 FR 23988). EPA finalized the Site listing on the NPL on February 21, 1990 (55 FR 6154).

4.5 Initial Investigations and Response Actions

Initial investigations and response actions conducted at the Himco Dump Site after the Site was listed on the NPL are summarized below and include:

April 1990 - EPA interviewed residents who lived south of the landfill who had private wells. Many of the residents complained about the taste, odor, and the color of their drinking water. EPA's removal program conducted follow-up sampling at 27 residential wells in the area. The samples contained relatively high concentrations of iron, manganese, and sodium. After reviewing the results, the Agency for Toxic Substances and Disease Registry recommended that an alternative source of potable water be provided to the residents due to the high levels of sodium in the water [3,600 milligrams per liter (mg/l) or parts per million (ppm)], which would have significant implications for persons suffering from hypertension, diabetes, or heart ailments.

September 1991- One of the test pits excavated during the remedial investigation (RI) found large quantities of leachate flowing from the landfill material near the southern edge of the landfill. The leachate was analyzed and contained organic solvents including ethylbenzene [6,400 milligrams per kilogram (mg/kg) or parts per million (ppm)], 2-hexanone (29,000 mg/kg), toluene (480,000 mg/kg), and xylene (44,000 mg/kg). The contaminants have flash points ranging from 40 to 90 degrees Fahrenheit and represented an inhalation and contact hazard to persons in close proximity. The test pit containing the hazardous substances (TL-5) was located within 50 yards of private residences.

November 1991- Municipal water service was provided to the residents living south of the Landfill along County Road 10. The municipal water service extensions were paid for by Himco, Miles Laboratories, and the City of Elkhart.

May 1992 - Himco signed an Administrative Order on Consent (AOC) with EPA to undertake and complete emergency removal actions at the Site to abate conditions that presented an imminent and substantial endangerment to the public. The AOC required Himco to excavate in the vicinity of test pit TL-5 to locate the source of the volatile organic compounds (VOCs) that were detected in the leachate during the RI. The AOC also required Himco to perform limited extent of contamination surveys along the southeast central periphery of the Site to assure that additional VOCs were not leaching offsite.

May 1992 - Himco performed an emergency removal action at the Site under EPA oversight, to address the VOCs detected in test pit TL-5. The removal action consisted of locating and removing from the landfill 71 55-gallon chemical drums containing an aqueous solution of 50 percent VOCs including ethylbenzene and toluene. On August 27,

1992, Himco submitted an Immediate Removal Action Summary Report documenting the removal activities.

5.0 Remedial Investigation/Feasibility Study (RI/FS)

EPA conducted a fund-lead RI/FS at the Himco Dump Site from 1990 to 1992. EPA issued a final RI Report and a final FS Report in 1992. The RI Report included a Human Health Risk Assessment (HHRA) and an Ecological Risk Assessment (ERA).

5.1 Remedial Investigation

5.1.1 Phase I and II Field Investigations

EPA conducted the RI in accordance with the 1990 Phase I Himco Dump RI/FS Final Work Plan and the 1991 Phase II Himco Dump RI/FS Final Work Plan. The objectives of the RI were to determine the nature, extent, and sources of contamination at the Himco Dump Site and to conduct a human health risk assessment, ecological assessment, and feasibility study.

The RI was implemented by reviewing available background data and conducting a two phased field investigation. The primary objective of Phase I was to gather sufficient data to:

- Characterize the nature and extent of contamination in site soils, sediment, surface water, and groundwater.
- Determine the potential for contaminant transport via air, groundwater, and sediment/surface water pathways.
- Conduct a baseline public health evaluation and an ecological endangerment assessment.

The Phase I field investigation included waste characterization, geophysical surveys, excavation of test pits, determination of the presence or absence of wetlands, wetland soil sampling and analysis, soil sampling and analysis, waste mass gas survey, residential basement gas screening, groundwater sampling and analysis, and determination of the site geologic and hydrogeologic characteristics.

The purpose of the Phase II investigation was to gather additional information about the groundwater, soil, surface water, and sediment. The Phase II investigation was conducted by evaluating the Phase I data and conducting additional field work to collect additional data needed to complete a baseline risk assessment and to evaluate remedial alternatives. The Phase II investigation included excavating test pits (primarily along the southern end of the Site), sampling and analyzing leachate, soil, surface water and sediment, and groundwater, delineating wetlands and sampling and analyzing wetlands soil, and conducting a private well inventory.

5.1.2 Site Findings

The test pit excavations found mixed waste and leachate in most of the landfill trenches. Leachate was observed to be gray-black in color with "rainbow sheens," except at one location near the southwest corner of the landfill (TL-5) where the leachate was biphasic and red-brown in color. At this location, the organic phase of the leachate contained approximately 48 percent toluene by weight. Seventy-one drums were subsequently excavated from this area for offsite disposal during the 1992 removal action.

Three general layers of material were consistently observed in the landfill, including a silty sand cover up to two feet thick, a calcium sulfate layer which varied from a few inches to nine feet, and an estimated 15 to 20 feet of waste below the calcium sulfate. Wastes under the calcium sulfate included paper, plastic, rubber, wood, glass, metal including an occasional disposal drum, glass, and small amounts of hospital wastes (e.g., syringes, vials). Non-native soil mixed with construction debris was observed in test pits excavated outside the landfill along the south-central and southwest edge of the landfill (the CDA). No calcium sulfate was found in this area.

Soil sampling indicated that in general, the concentrations of inorganic chemicals detected at the landfill were relatively low. However, arsenic was detected across the western half of the Site at concentrations up to an order of magnitude greater than background. The maximum detected concentration of arsenic was 12.5 mg/kg, which was above IDEM's default industrial level for clean closure for arsenic of 5.8 mg/kg. VOCs including benzene, toluene, xylene, trichloroethene, and 1,1-dichloroethane (1,1-DCA) were distributed at low levels in soil across the Site (at concentrations less than 140 µg/kg). SVOCs, primarily polynuclear aromatic hydrocarbons (PAHs), were prevalent in soil samples collected from the CDA.

Borehole drilling indicates that the stratigraphy beneath the Himco Dump Site contains sand and gravel outwash deposits comprised of alternating beds, varying in thickness, of poorly to well-graded sands and gravels, and gravel-sand-silt mixtures, from approximately 200 to 500 feet below ground surface. Based on the information from the groundwater monitoring wells, groundwater occurs between approximately 5 and 20 feet below the ground surface at the Site, at an elevation ranging from 752 to 756 feet above mean sea level (MSL). The elevation of the bottom of the waste mass is estimated to range from 755 to 760 feet MSL.

Groundwater flow is generally to the south-southeast towards the St. Joseph River. The average horizontal flow gradient beneath the Site is approximately 0.0016 ft/ft. Vertical gradients were predominately upward and ranged from 0.00021 ft/ft to 0.0013 ft/ft.

Arsenic, benzene, and vinyl chloride were detected in on-site groundwater, however, two rounds of groundwater sampling indicated that there was limited groundwater contamination outside of the boundaries of the waste. Contaminant concentrations detected in the leachate were typically orders of magnitude higher than the concentrations

detected in groundwater. In addition, some VOCs and SVOCs detected in the leachate were not detected in groundwater.

Surface water and sediment samples indicated there was very limited contamination in the three onsite ponds. Total VOCs detected in waste mass gas samples did not exceed 13 micrograms per liter ($\mu\text{g}/\text{l}$) at any one location. Residential basement air screening at four residences using a hydrogen sulfide and methane gas detector did not detect these compounds at any of the residences.

The RI found that most of the contaminant mass at the Himco Dump Site was located below the existing landfill cover material. The RI determined that the greatest potential for contaminant migration was through groundwater, which is a function of contaminant mobility, persistence, and groundwater flow characteristics. The SVOCs detected at the Himco Dump Site have a low mobility while the VOCs and inorganic compounds detected at the Site have high mobilities. The RI indicated that the potential attenuation of groundwater contaminants within the sand and gravel deposits underlying the Site was low, however, since the groundwater flow velocity at the Site is also relatively low, groundwater contaminants may migrate offsite at a very slow rate.

5.2 Risk Assessment

5.2.1 Human Health Risk Assessment (HHRA)

EPA's HHRA evaluated cancer and noncancer risks posed to current and potential future adult and child receptors exposed to contaminants at and near the Site. Current risks were evaluated for dirt-bike riders and waders in the onsite ponds and quarry pit, and to current adults and children living downwind of the landfill. Potential future risks were evaluated for residents, commercial workers, and agricultural workers living or working on the landfill and to future residents who might live in the flat area of the Site south of the landfill.

Current Risks - The HHRA did not identify any unacceptable cancer or noncancer risks under current exposure scenarios. The current cancer risks were 4×10^{-6} for dirt-bike riders, a maximum cancer risk of 4×10^{-8} for onsite waders, and a maximum cancer risk of 3×10^{-6} for current downwind residents. These risks are within EPA's acceptable risk range of 10^{-4} to 10^{-6} (1 additional case of cancer for every 10,000 to 1 million people similarly exposed). The maximum noncancer hazard index (HI) calculated under current exposure scenarios was 0.2, which is below a HI of 1.0 and indicates that the Site does not pose any current noncancer risks.

Potential Future Risks - The HHRA indicated that the landfill posed unacceptable cancer and noncancer risks to onsite residents and workers under future exposure scenarios. The greatest risks were to future residents living on the landfill, with a maximum cancer risk of 7×10^{-1} and a maximum noncancer HI of 1,000. The onsite area south of the landfill posed a maximum cancer risk of 5×10^{-3} and maximum noncancer HI of 20 to future residents.

Working on or using the landfill for agricultural purposes posed unacceptable cancer risks of 4×10^{-2} to 3×10^{-3} and unacceptable noncancer HIs of 10 to 100. Unacceptable cancer risks for future commercial workers working in the onsite flat area south of the landfill were 1×10^{-3} . The risk assessment indicated that the majority of the unacceptable future risks (80 to 90 percent) were due to the ingestion of onsite groundwater.

5.2.2 Ecological Risk Assessment (ERA)

EPA's ERA concluded that the highest concentrations of contaminants of ecological concern occurred in the south/southeast area of the Site. However, the ERA determined that the soil and vegetation in this area was highly disturbed and unlikely to support any ecologically significant populations of plants or animals.

The ERA found that the levels of contaminants in other areas of the Site were unlikely to pose a significant threat of adverse effects to exposed organisms. The concentrations of contaminants found in the prairie areas at the Site were unlikely to pose any adverse impacts to the prairie species. The onsite ponds contained several toxic chemicals, but only at concentrations slightly higher than those in a background pond. Aquatic life in the onsite ponds was also not significantly reduced relative to the background location. The onsite aquatic and wetland communities were not likely to represent ecological resources of regional importance due to their small size. Also, offsite ecological receptors, including the fish populations in the St. Joseph River, are not exposed to any contaminant releases from the Site that could result in adverse impacts.

5.3 Feasibility Study (FS)

EPA developed four cleanup alternatives to address the unacceptable risks posed by the Site. The cleanup alternatives focused on source control options since treatment of the 58-acre landfill was not practicable. Because the risk from background levels of groundwater contaminants exceeded EPA's target risk level of 10^{-4} for carcinogenic risk and a HI of 1 for noncancer risks and the RI did not conclusively indicate that the landfill was impacting offsite groundwater, the FS did not develop a groundwater remedy. Instead, all cleanup alternatives except the no-action alternative included groundwater monitoring with trigger levels for conducting an additional groundwater investigation if those levels were reached and ICs such as deed restrictions to limit land and groundwater use.

The four cleanup alternatives EPA evaluated in the FS were:

Alternative 1 - No Action

Alternative 2 - Solid Waste Landfill Cap, Active Landfill Gas Collection and Treatment, Groundwater Monitoring, and ICs

Alternative 3 - Solid Waste Landfill Cap, Active Landfill Gas Collection and Treatment, and Leachate Collection, with Groundwater Monitoring and ICs

Alternative 4 - Composite Barrier Landfill Cap with a 40 mil High Density Polyethylene (HDPE) Flexible Membrane (Replaces Leachate Collection System), Active Collection and Treatment of Landfill Gas, Groundwater Monitoring, and ICs.

6.0 Remedy Selection

6.1 1993 Record of Decision (ROD)

In the 1993 ROD, EPA selected Alternative 4 - Composite Barrier Landfill Cap with HDPE Liner, Active Collection and Treatment of Landfill Gas, Groundwater Monitoring, and Institutional Controls as the cleanup remedy for the Site. The major components of the selected remedy included:

- Constructing a Resource Conservation and Recovery Act (RCRA) Subtitle C composite landfill cap over the landfill area,
- Implementing ICs on the landfill property to limit future land and groundwater use,
- Installing an active landfill gas collection system with treatment by vapor phase carbon,
- Installing an enclosed ground flare system if landfill gas characterization studies conducted during the remedial design (RD) indicate that VOC emissions exceed state Applicable or Relevant and Appropriate Requirements (ARARs),
- Monitoring groundwater quality to ensure the effectiveness of the remedial action (RA) and to evaluate the need for a subsequent groundwater remedy, and
- Implementing mitigative measures during remedy construction to minimize adverse impacts to area wetlands.

6.2 1995 Remedial Design and Pre-Design Investigations (PDIs)

EPA began the RD for the Site in 1995. EPA conducted a groundwater PDI and completed a Final Pre-Design Technical Memorandum in 1996. Based on the PDI, EPA conducted additional investigations and sampling at the Site in 1996, 1998, 1999, 2000, and 2001. The investigations are documented in EPA's 2002 Supplemental Site Investigation Report.

The additional information developed during the RD caused EPA to reevaluate the selected remedy. These findings included:

- Groundwater monitoring data from the 1995 PDI indicated that the groundwater releases at the Site were potentially in a state of equilibrium when compared to the 1990 and 1991 RI data. In general, the 1995 sampling results found that contaminant levels were comparable to or lower than the 1990 and 1991 data.
- Initial designs for the composite cap and fence alignments required by the 1993 ROD indicated that all of the residents adjacent to the landfill would lose the use of or access to parts of their properties when the cap and fence were installed over the CDA. This issue had not been addressed in the 1993 ROD.

- EPA reevaluated the HHRA and determined that additional data collection and refinement of the 1992 risk assessment assumptions were warranted because the HHRA did not address exposure to the CDA or to groundwater in the residential area east of the Site. Additional sampling and a risk evaluation confirmed that the CDA required remediation and should be subject to the cleanup requirements for the landfill property in the 1993 ROD.
- The CDA contains seven residential parcels and one commercial parcel. The existing homes on the residential parcels were connected to the municipal water supply in 1991, however, these homes still had operable private groundwater wells.
- The updated risk assessment indicated that the soil and groundwater contaminants in the CDA posed unacceptable cancer and noncancer risks to current and future residents. The maximum cancer risk was 4.5×10^{-4} and the maximum noncancer HI was 50. The majority of the risk was due to the potential use of groundwater for household use, which posed a cancer risk of 3×10^{-4} and a noncancer HI of 46. Two residential properties had estimated Site-related HIs greater than 1 for the child resident soil exposure pathway. The estimated Site-related HI was 2.9 for Parcel S and 4.5 for Parcel F. Lead was also detected above the residential screening level of 400 mg/kg (at an estimated concentration of 695 mg/kg) in a surface soil sample collected from in Parcel F.
- Groundwater and residential well sampling conducted in 2000 indicated that there was an unacceptable degree of uncertainty associated with Site-related groundwater impacts in the residential area east of the landfill. This was not addressed in the 1993 ROD. Low levels of VOCs including vinyl chloride, 1,2-dichloropropane, 1,1-DCA, cis-1,2-dichloroethene (cis-1,2-DCE), benzene, 1,2-dichloroethane, and chloroform were detected in one or more of the 23 residential wells that were sampled. All Target Analyte List (TAL) metals were detected in at least one residential well except for aluminum, antimony, beryllium, cadmium, lead, mercury, selenium, silver, thallium, and vanadium. Bromide and sulfide were detected in all 18 residential wells sampled for these parameters. Well records were not available for most of the residential wells, so it was unknown whether the sampled wells were drawing water from the maximum zone(s) of contamination. Further investigation and evaluation were needed to determine whether additional residential wells east of the landfill were or would be impacted by Site-related groundwater contamination over the long-term.
- Unacceptable risks were calculated for potential exposure to contaminated groundwater downgradient of the Site east of the landfill. The maximum cancer risk was 5.8×10^{-4} and the maximum noncancer HI was 29.
- Two soil gas investigations conducted in 1998 and 1999 found high levels of VOCs in the soil gas, primarily in the southeast corner of the Site and along the southern boundary of the landfill. The distribution of the soil gas contaminants appeared to be independent of the groundwater migration pathway. Low levels of VOCs [less than 10 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) total] were also detected in four soil gas samples collected in the residential area east of John Weaver Parkway and in one soil gas sample collected near the southwest intersection of John Weaver Parkway and County Road 10, southeast of the Site.

6.3 Proposed ROD Amendment

In 2004, EPA proposed to amend the 1993 ROD to modify the Site cleanup based on the pre-design investigations. The ROD Amendment would require residents to be connected to the municipal water supply and provided for a modified landfill cap design.

The basis for modifying the 1993 cap included:

- Since the landfill waste mass was in contact with the water table, the effectiveness of a lower-permeability landfill cap selected in the 1993 ROD was minimized and not cost-effective.
- The 1993 cap did not remove the potential threat to residents. The ROD Amendment required affected residents to be connected to the municipal water supply, therefore the increased cost of the 1993 cap was not warranted.
- The engineering design/structural requirements of the 1993 cap needed to protect the cap's integrity would increase the cost of, or could have, prohibited potential redevelopment of the Site. A Brownfields Grant was awarded to the City of Elkhart in the form of "in-kind" services to evaluate the feasibility of returning the Site property to productive reuse.
- An extensive groundwater monitoring system would be implemented to ensure the protectiveness of all potential receptors and to establish contingencies for further groundwater containment and/or remediation. If the long-term groundwater monitoring indicates that a hazardous constituent exceeds the RAOs for groundwater, additional remedial measures would be developed, evaluated, and implemented. The contingency remedy would be designed to meet the performance standards for the groundwater RAOs and implemented until the concentration of the groundwater contaminant(s) decreased back to below the RAOs.

6.4 2004 ROD Amendment

Based on the additional Site information, on September 14, 2004, EPA issued a final ROD Amendment.

The modified remedy consisted of the following components:

- Contouring, grading, and vegetating the existing landfill cover and installing a gas management system. The landfill gas collection and treatment system shall include as necessary, a vapor phase carbon collection and treatment system and an enclosed ground flare system.
- Removing all construction debris and rubble from the surface of the CDA and excavating and disposing of contaminated materials in the soil to achieve the soil RAOs established for the CDA.
- Providing municipal water to 39 residences located east of the landfill and abandoning their existing drinking water wells. In addition, abandon drinking water wells at residential parcels located within the CDA.

- Establishing a long-term groundwater monitoring program for a minimum of 10 years.
- Prior to implementing the long-term groundwater monitoring program, complete a PDI groundwater study on the south, east, and southeast sides of the Site to determine the concentrations and the rate and extent of migration of all detected contaminants.
- Placing ICs on the landfill, the adjacent parcels, downgradient parcels located east and south of the landfill, and on a property designated as "Parcel F."
- Installing fences around Parcel F, the CDA, and the landfill.

6.5 Remedial Action Objectives (RAOs) and Cleanup Levels

The 2004 ROD Amendment included RAOs for the landfill and CDA, groundwater, and air. Initial numerical RAOs for individual groundwater contaminants were established in the 2011 Groundwater Monitoring Report.

6.5.1 Landfill and CDA

- Prevent exposure to carcinogenic compounds in the landfill and CDA posing a total excess lifetime cancer risk (ELCR) above EPA's target risk range of 10^{-4} to 10^{-6} for all Site-related contaminants through all exposure pathways (i.e., ingestion, inhalation of soil-derived substances, and dermal contact).
- Prevent exposure to landfill and CDA soil containing noncarcinogens presenting a total HI greater than 1.0 for all Site-related contaminants through all exposure pathways (i.e., ingestion, inhalation of soil-derived substances, and dermal contact).
- Prevent direct contact with the landfill and CDA contents that present potential physical hazards.
- Maintain the integrity of the soil cover over the long-term.

6.5.2 Groundwater

- Prevent the use of groundwater containing carcinogenic compounds in excess of Maximum Contaminant Levels (MCLs) or posing a total ELCR above EPA's target risk range for all Site-related contaminants through all groundwater pathways (inhalation of volatilized substances, ingestion, and dermal contact).
- Prevent the use of groundwater containing noncarcinogens above MCLs and/or presenting a total noncarcinogenic HI greater than 1.0 for all Site-related contaminants through all groundwater pathways (inhalation of volatilized substances, ingestion, and dermal contact).
- Prevent the use of groundwater containing Site-related sodium, calcium, and iron concentrations above of upper intake limits or recommended dietary allowances for sensitive populations.
- Establish a groundwater-monitoring program that will ensure compliance with the RAOs for groundwater.

6.5.3 Air

- Prevent inhalation of indoor air containing carcinogens posing a total ELCR above EPA's target risk range for all Site-related contaminants released from the subsurface vapor migration pathway.
- Prevent inhalation of indoor air containing noncarcinogens posing a total HI greater than 1.0 for all Site-related contaminants released from the subsurface vapor migration pathway.
- Prevent the future migration of hydrogen sulfide gas and methane gas beyond the boundary of the landfill.
- Establish a landfill boundary gas monitoring program that ensures compliance the RAOs for air.

6.5.4 Initial RAOs for Individual Groundwater Contaminants

The initial RAOs for individual groundwater contaminants at the Himco Dump Site were established in the EPA-approved 2011 Annual Groundwater Monitoring Report based on additional groundwater investigations conducted during the 2010 RD (see Section 7.1.1, 2008 to 2009 PDI) and 12 rounds of quarterly groundwater monitoring conducted from 2008 to 2011. Based on these results, the contaminant concentrations in groundwater are compared to primary MCLs, EPA Regional Screening Levels (RSLs) for Residential Tapwater equal to the lower of either a cancer risk of 1×10^{-5} or a HI of 1.0, Recommended Dietary Allowance (RDA) values, secondary MCLs, and current background levels.

The current RAOs for individual Site-related contaminants of concern (COCs) in groundwater listed in the most recent, 2020 Annual Groundwater Monitoring Report are listed below:

CURRENT RAOs FOR INDIVIDUAL GROUNDWATER CONTAMINANTS		
COC	Initial RAO (µg/l)	Basis of RAO
Benzene	5	MCL
Vinyl Chloride	2	MCL
1,1-DCA	240	EPA RSL (1×10^{-5})
Cis-1,2-DCE	70	MCL
Carbon Disulfide	10,000	EPA RSL (1×10^{-5})
Bis(2-ethyhexyl) phthalate	6 ⁽¹⁾	MCL
Aluminum	37,000	EPA RSL (HI = 1)
Arsenic	10	MCL
Barium	2,000	MCL
Beryllium	4	MCL
Calcium	250,000	RDA
Iron	26,000	EPA RSL (HI = 1)
Lead	15	MCL
Manganese	880/1,070-1,140	EPA RSL (HI=1) or Calculated Background

CURRENT RAOs FOR INDIVIDUAL GROUNDWATER CONTAMINANTS		
COC	Initial RAO (µg/l)	Basis of RAO (if higher)
Mercury	2	MCL
Sodium	150,000	RDA
Sulfate	250,000	Secondary MCL
Chloride	250,000	Secondary MCL
<i>⁽¹⁾EPA approved the elimination of bis(2-ethylhexyl) phthalate from the monitoring program in letter dated June 29, 2015.</i>		

7.0 Remedy Implementation

The remedial design/remedial action (RD/RA) for the Himco Dump Site was conducted by Bayer Healthcare, L.L.C. (Bayer), a potentially responsible party for the Site, pursuant to a November 2007 consent decree (CD) between Bayer, EPA, and the State of Indiana. The RD/RA was implemented under the oversight of EPA and IDEM, with document review and construction oversight assistance provided by the U.S. Army Corps of Engineers (USACE).

7.1 2008-2009 PDI and 2009 and 2010 RDs

Bayer submitted a RD Work Plan for Residential Well Abandonment and Municipal Water Supply in October 2008. Bayer completed the final RD drawings for the water supply extension in April 2009.

Bayer submitted a RD Work Plan for the landfill cleanup in 2008 and conducted a PDI from 2008 to 2009. Bayer submitted the final Pre-Design Investigation/100% Final Design Report to EPA and IDEM on June 22, 2010, and a revised specification for Soils, Part 2.2.A.2 on July 15, 2010.

Bayer conducted the 2008-2009 PDI to further delineate and understand the extent of Site conditions prior to designing the remedy required by the 2004 ROD Amendment. The PDI included delineating the limits of the landfill and characterizing the existing soil cover (where present) for thickness, nutrients, vegetation, and grain size. Additional landfill gas (LFG)/soil gas and groundwater sampling was conducted to supplement existing information to aid in the development of the remedy and vertical aquifer groundwater sampling was utilized to characterize variations in contaminant distribution with depth in the thick sand aquifers and ensure that subsequent monitoring wells were installed at the appropriate depths.

The 2008-2009 PDI consisted of:

- Topographic surveying,
- Wetland survey,
- Advancing 246 landfill cover soil borings,
- Excavating 17 test trenches and five test pits,

- Completing vertical aquifer groundwater sampling (VAS) at eight locations,
- Installing 29 soil gas probes,
- Collecting 74 soil samples (including quality assurance/quality control [QA/QC] samples),
- Collecting 62 groundwater samples from monitoring wells,
- Collecting 121 samples from VAS boreholes, and
- Collecting 61 soil gas samples (including QA/QC samples) from two rounds of sampling (summer and winter).

The PDI found that the limits of the landfill waste varied from the limits determined during the 1996 RD. In the west, south, and southeast, the limits of the landfill were a greater distance away from the landfill, increasing the landfill area. In the northeast, the landfill limit was a greater distance towards the landfill, decreasing the landfill area.

Soil gas sampling indicated that a passive gas venting system trench would be required along the southeast corner of the landfill (approximately 1,200 feet) to prevent LFG contaminants from moving off-site. Air modeling results based on the soil gas data demonstrated that emissions from the passive gas venting system would be below the criteria in 326 Indiana Administrative Code (IAC) 2-1.1-3, 326 IAC 2-5.1-2, and 326 IAC 2-5.1-3 and would not require air pollution control equipment or a permit for discharge to the atmosphere.

7.2 Remedial Action (RA)

7.2.1 Water Main Extension, Municipal Water Connection, and Well Abandonment

Bayer constructed 4,186 feet of water main (and other ancillary components) between August and December 2009 to extend the Elkhart municipal water supply to residents located on Westwood Drive and Northwood Drive east of the Site (see Figure 3). Bayer connected 37 of the 39 residential wells requiring connection (21 potentially impacted wells and 18 “buffer wells”) to the municipal water supply and abandoned the residential wells at those locations. Two of the residences located on Westwood Drive refused to be connected to municipal water. The tax parcel identification numbers (PINs) for these two properties are 02-31-101-005-026 and 02-31-151-004-026.

The water main extension was accepted by the City of Elkhart on April 6, 2010. The complete details and as-built drawings for the municipal water main extension and water supply connections are provided in Bayer’s October 1, 2012, Construction Completion Report Revision 1.

On July 29, 2021, the Utilities Services Manager for the Elkhart Public Works Department confirmed that the residence located on PIN 02-31-101-005-026 connected to the municipal water supply and started billing on December 23, 2019. However, because of non-cooperation from the owner, it is not clear if the residential well located on this parcel has been abandoned and/or if there is still a well being used in some capacity at this

residence (e.g., for lawn watering, car washing, etc.). The property owner also refused to sign an ERC restricting groundwater use at this property, so this parcel is not included in the proposed partial deletion (see Table 2). However, EPA filed a Notice of Environmental Contamination on this parcel in 2018.

The other property that did not connect to the municipal water supply (PIN 02-31-151-004-026) is currently vacant; there is no house, only a building foundation on this parcel. The property owners agreed to record an ERC restricting groundwater use on this parcel on April 25, 2018, so this parcel is included in the proposed partial deletion (see Figure 1 and Table 1).

The parcels located south of the Site along County Road 10 were connected to the municipal water supply in the 1990s, however, it was unclear whether private water wells remained on those parcels. Bayer inspected the parcels along County Road 10 in June 2012 and identified three remaining water supply wells. Bayer abandoned the three wells in July 2012, however three property owners on County Road 10 would not sign an ERC restricting groundwater use. EPA filed Notices of Environmental Contamination on these parcels in 2018, but because these notices are not enforceable and do not run with the land, these three parcels do not meet the deletion criteria at this time and are not included in the partial deletion (see Table 2).

In 2018, Bayer sampled seven residential wells located further to the east along Westwood Drive and wells at four commercial/industrial properties located along County Road 10 southeast of the Site. The wells were sampled due to detections of arsenic above the MCL in groundwater monitoring wells located downgradient of the landfill. Arsenic was detected above the MCL in a well located at a car washing business on PINs 02-31-153-014-026 and 02-31-301-022-026. Bayer connected the business to the municipal well supply and abandoned the private well on this parcel in May 2019. EPA is currently evaluating whether an ERC is needed for this parcel, therefore, it is not included as part of this proposed partial deletion.

Arsenic was detected at concentrations below the MCL at four of the residential properties sampled in 2018 at concentrations ranging from 0.31 µg/l to 7.8 µg/l. EPA is currently evaluating whether the arsenic detected at some of these properties could be Site-related and whether any additional actions are needed (see Table 3).

7.2.2 Landfill Cleanup

Bayer began Site clearing and Site preparation activities for the RA construction of the landfill remedy on March 7, 2011. Bayer began excavating materials and debris from the CDA and from other areas around the perimeter of the landfill in April 2011 and started construction of the soil cover and the LFG management system. Removal of surface debris and contaminated soil from the CDA was completed by November 2011. Bayer demobilized for the winter in December 2011 and resumed RA construction activities in April 2012. Bayer completed the RA construction in June 2012.

EPA and IDEM conducted a pre-final construction inspection of the remedy on June 14, 2012. Corrective action items requiring additional work noted by EPA and IDEM during the inspection were documented in a June 21, 2012 EPA letter to Bayer. On June 29, 2012, Bayer provided a Pre-Final Construction Report to EPA and IDEM for review describing the 2011 and 2012 Site construction activities. Following EPA and IDEM review of this report, EPA issued a Preliminary Close Out Report for the Site on July 19, 2012.

Bayer submitted a Construction Completion Report on August 14, 2012. EPA approved Bayer's Construction Completion Report with modifications on September 13, 2012. Bayer submitted a Construction Completion Report Revision 1 on October 1, 2012, which was approved by EPA on October 31, 2012.

The RA at the landfill and CDA included:

- Removing materials not suitable for placement under the soil cover for off-site recycling and disposal, including:
 - Three 30-cubic-yard (yd³) roll-off boxes of large appliances (refrigerators, stoves, washers, and dryers),
 - 730 passenger car tires, 47 truck tires and 2 oversize tires,
 - 34.21 tons of non-hazardous construction and demolition debris and municipal trash that could not be compacted, such as furniture cushions and foam rubber,
 - 6,000 cubic yards of wood chips, and
 - 333 yd³ of asbestos-containing material.
- Excavating 79,250 yd³ from the CDA and four other areas around the perimeter of the landfill, reducing the size of the landfill from 65 acres to 50 acres, including:
 - All soil and debris in the CDA to a depth of six feet below ground surface,
 - 3,800 yd³ of waste extending five to eight feet beyond the landfill property into the John Weaver Parkway right-of-way,
 - Landfilled material extending into the Quarry Pond area and into the wetlands north and west of the landfill.
- Confirmation soil sampling at the bottom of the CDA excavation in 100-foot grids.
- Restoring the CDA and John Weaver Parkway excavations with clean fill.
- Re-grading the Site for proper drainage and constructing a soil cover over the landfill consisting of a 12-inch rooting-zone layer and six inches of topsoil.
- Seeding the landfill with a grass-seed mixture including native grasses.
- Constructing an approximately 1,200 feet-long passive gas trench venting system (PVT) along the southeast corner of the landfill. The PVT is three feet wide and was

excavated to two feet below the water table (approximately 10 to 12 feet below ground surface). The trench was backfilled with 1 ½ to 3 ½ inch aggregate material with a 4-inch slotted pipe placed along the length of the trench approximately two feet above the water table. Four-inch diameter vertical pipes are located along the horizontal pipe every 100 feet to vent LFG to the atmosphere. The vertical pipes rise nine feet above the ground surface and are equipped with turbine ventilators.

- Installing 15 permanent soil gas probes located approximately 200 feet apart along the south and east boundaries of the landfill to monitor any LFG moving beyond the gas venting system and onto other adjacent property.

7.2.3 2013 and 2014 Passive Vent Trench Extension

During the Operations and Maintenance Plan (O&M Plan) monitoring event in September 2012, methane was detected at elevated concentrations above the action level (5 percent by volume) in three soil gas probes (SGPs) located along the south boundaries of the Site (SPG-107, SPG-110 and SPG-14). Bayer monitored the SGPs daily and then weekly from September 21, 2012 to October 19, 2012. Based on the data, Bayer developed a Methane Investigation and Monitoring Plan (MIMP) which was approved by EPA on November 6, 2012. The MIMP involved the installation of seven additional SGPs to delineate the source of the methane, weekly monitoring over four weeks, a data evaluation, and the development of additional response actions. Bayer installed the additional SGPs in December 2012 under USACE and IDEM oversight.

Bayer monitored the additional and existing SGPs weekly between December 28, 2012, and January 17, 2013. Bayer used a Dwyer digital manometer to measure soil gas pressure and a GEM 2000 gas meter to measure concentrations of methane, carbon dioxide, oxygen, and balance gas concentrations on a percent-by-volume basis. During the monitoring, methane was detected above the 5 percent action level at least once in seven of the SGPs and hydrogen sulfide was detected in concentrations greater than the action level (4.4 percent) at one of the SGPs during two events.

Based on the monitoring data, Bayer submitted a proposed Methane Remedial Action Plan (MRAP) to EPA on February 15, 2012, and a revised MRAP on June 28, 2013. EPA approved the revised MRAP on August 13, 2013. The MRAP proposed the installation of two additional PVTs with a total length of approximately 850 feet at the Site. One trench was approximately 600 feet long and was located on the south/southeast boundary of the landfill between SPG-106/SPG-107 and SPG1-110/SPG-111. The second trench was approximately 250 feet long and was installed at the southwest corner of the landfill in the vicinity of SGP-114 and SPG-119S/D. The trenches were constructed in the same manner as the trench venting system constructed along the east boundary of the landfill.

Bayer constructed the additional trenches in October and November 2013. During the excavation of the southern PVT, solid waste was encountered between 8-10 feet below ground surface at the western limit of the trench in the proximity of SGP-19S/D. The waste was excavated and tested in accordance with the 2010 Final Design Report. The waste was

determined to be nonhazardous and disposed of at an offsite RCRA Subtitle D landfill. Bayer documented the 2013 PVT extensions in a May 2014 Construction Report – Passive Ventilation Trench Addition.

In 2014, elevated concentrations of methane were detected above the action level of 5 percent by volume during routine monitoring at SGP-100, SGP-106, SPG-107, SPG-109, SPG-110, SPG-114, SPG-117S, and SPG-118. After conducting additional investigations and monitoring, Bayer extended the PVT system along the entirety of the eastern and southern boundaries of the landfill (see Figure 2). This work was completed in December 2014.

8.0 Demonstration of Quality Assurance/Quality Control (QA/QC)

8.1 Construction QA/QC

Bayer constructed the water main extension and municipal water supply connections at the Site in accordance with the 2009 Construction Quality Assurance and Performance Standard Verification Plan. The CDA soil excavation, landfill cover system, and PVT system were constructed in accordance with the Construction Quality Assurance and Performance Standard Verification Plan in Appendix Q of the 2010 Final RD and the Field Sampling Plan in Appendix S of the 2010 Final RD.

Bayer's QA/QC activities consisted of reviewing subcontractors' submittals for consistency with design specifications, conducting routine inspections, and testing construction materials. Samples of the imported common fill, rooting zone material, topsoil, and clay were analyzed for chemical content and grain size in accordance with the QA/QC requirements in the design. Topsoil samples were also analyzed for agronomic parameters. Bayer reviewed the suppliers' specifications for the geotextile material, seed mixture, fertilizer, and mulch for the vegetated cover prior to installation to ensure that the proposed materials met specifications. Bayer collected samples of stone used for the PVT and Site access roads for chemical and grain size analysis. Bayer observed the riprap and PVT installation to ensure compliance with the RD specifications.

Bayer reviewed QA/QC activities with USACE during their periodic Site inspections and addressed any concerns raised by USACE. Bayer discussed QA/QC activities with EPA, IDEM, and USACE during monthly construction progress meetings held throughout the construction period. Bayer maintained daily logs of Site activities and the QA/QC activities that were completed, and submitted copies to EPA, IDEM, and USACE weekly. Bayer also retained a third-party licensed survey to complete the QA/QC of the landfill soil cover thickness throughout RA construction.

8.2 Perimeter Air Monitoring

Bayer conducted perimeter air monitoring and sampling during construction activities in accordance with the Air Monitoring Plan (AMP) in the Health and Safety Plan (Appendix R

of the 2010 RD Report). The AMP was implemented to ensure that dust and vapor concentrations did not migrate offsite at concentrations that could potentially impact offsite receptors.

The perimeter air monitoring was conducted during the active excavation period, which represented the worst-case scenario for the potential offsite migration of VOCs and dust. EPA approved this modification by email on April 21, 2011. The air monitoring and sampling stations were set up at each side of the Site perimeter (i.e. North, South, East, and West).

Real-time air monitoring was conducted for undifferentiated VOCs and particulate matter less than 10 microns in diameter during the first week of each perimeter excavation, landfill regrading activities, placement of the rooting-zone layer and during intrusive waste excavation for the PVT. The action levels were not exceeded during the perimeter air monitoring at any point. Perimeter air samples were also collected for laboratory analysis during the first week of the excavation work at the north, west, CDA and southeast excavations. The samples were analyzed for Target Compound List (TCL) VOCs, TCL SVOCs, and TAL metals. None of the air samples contained analytes at concentrations that exceeded criteria. The monitoring and analytical data are presented in Appendix E of the 2012 Construction Completion Report.

8.3 Soil Verification Sampling

The analytical laboratory and data validation reports for the QA/QC samples collected during the remedial construction are provided in Appendices E and G of the 2012 Construction Completion Report, Revision 1. The QA/QC sample data indicated that two of the soil verification samples collected at the bottom of the CDA excavation (samples CDA-13 and CDA-14) contained VOCs, SVOCs, and inorganic contaminants above IDEM's residential criteria for clean closure. Some of the chemicals detected in the samples also exceeded IDEM's industrial criteria for clean closure.

Samples CDA-13 and CDA-14 were collected from six feet below ground surface in the northeastern corner of parcel PIN 01-36-251-019-005 (see Figure 4). Exposure to these contaminants is prevented by six feet of clean material that was backfilled into the excavation, however, EPA is re-evaluating whether the recorded ERC on this parcel should be updated to include specific restrictions to ensure that any excavated soils from below a depth of six feet at these sampling locations are properly managed. Therefore, this parcel will remain on the NPL (see Table 2).

9.0 Institutional Controls (ICs)

EPA's selected remedy for the Site in the 2004 ROD Amendment includes ICs to control future use of the landfill property and to prevent groundwater use at the parcels located east and south of the landfill that could be affected by Site-related groundwater contaminants. The ROD Amendment requires deed restrictions or other appropriate ICs to:

Landfill Property: (1) Limit land use to industrial, recreational, or commercial uses; (2) prohibit future groundwater use; and (3) prohibit future drilling or digging into the landfill cover. A land use feasibility study must be conducted by the entity responsible for any redevelopment of the property to determine the property's suitability for a particular reuse. Any anticipated building construction on the landfill property will have to be evaluated and approved by EPA, in consultation with IDEM, to determine the soil gas interaction/impact on any structures on the landfill, as well as the displacement of contaminated soils, wastes, etc.

Parcel F (South of Landfill, PIN 01-36-276-003-005): Limit land use to industrial, or commercial only.

Residential Properties (East and South): (1) Prohibit future installation of any private wells for groundwater use and abandon the private water well for each residential property after installation of the municipal water supply, per 312 IAC 13-10-2; (2) prohibit future installation of any private wells for groundwater use either by recording a deed restriction or other appropriate institutional controls; and (3) prohibit the use of private wells in the area located south of Himco Dump located in the City of Elkhart up to the former Bower Street Well Field either by recording a deed restriction or other appropriate institutional controls.

9.1 Status of ICs

ERCs restricting land and/or groundwater use in accordance with the 2004 ROD Amendment have been implemented at all of the landfill property (seven parcels), two of the adjacent soil removal properties (two parcels), and the 45 other adjacent and/or downgradient parcels included in this proposed partial deletion. Copies of the ERCs are provided in the Deletion Docket in Appendix A (see also Table 1 and Figure 1).

A few parcels were connected to municipal water, but the property owner refused to sign an ERC restricting groundwater use. EPA placed deed notices on these parcels advising that the groundwater should not be used as a water supply, however, these parcels are not currently eligible for deletion. EPA is also re-evaluating whether the recorded ERC on one of the adjacent soil removal parcels should be updated to include specific restrictions to protect the integrity of the portion of the PVT located on this parcel and to ensure that any excavated soils located six feet below ground surface at two locations where contaminants were detected above IDEM's residential criteria for clean closure are properly managed; therefore, this parcel will remain on the NPL. The parcels that will remain on the NPL are listed in Table 2.

Additional parcels located downgradient of the landfill will continue to be evaluated as part of the long-term groundwater monitoring program to determine whether any additional actions such as a municipal water connection and/or ERCs are necessary (see Table 3).

10.0 Operation and Maintenance (O&M) and Long-Term Stewardship (LTS) of Institutional Controls

As required by the 2007 CD, Bayer performs O&M in accordance with the June 2012 Final Operation and Maintenance Plan and the requirements of the 2008 RD Work Plan. Modifications to the groundwater and soil gas monitoring plans have been formalized over the years in the Annual Groundwater Monitoring Reports and Annual Soil Gas Monitoring Reports.

O&M includes regular inspection, maintenance, and repair of the landfill cover, fence, PVT system, and soil gas and groundwater monitoring well networks, mowing, and groundwater and soil gas monitoring. Bayer conducts LTS of the implemented ICs in accordance with an Institutional Controls Implementation and Assurance Plan (ICIAP) dated April 30, 2019.

10.1 Groundwater Monitoring

Bayer conducted quarterly groundwater monitoring between 2008 and 2011. The results of the monitoring are documented in reports submitted to EPA and IDEM. In 2011, EPA approved Bayer's Interim Groundwater Monitoring Program Report, which reduced the list of analytical parameters and modified the groundwater monitoring schedule to semiannual sampling with annual reporting every fall.

Based on the monitoring results, EPA approved further reductions to the list of analytical parameters in April 2015 and August 2016. In 2019, EPA approved that the frequency of groundwater monitoring be reduced from semiannual sampling to annual sampling.

Current groundwater monitoring includes annual groundwater elevation monitoring and the collection of groundwater samples for laboratory analysis from 27 groundwater monitoring wells. Three of the 27 groundwater samples are collected from background groundwater monitoring wells located in the upper, intermediate, and lower aquifer approximately 1,200 feet northwest (upgradient) of the Site. The groundwater samples are analyzed for four VOCs, six metals, and two general chemistry parameters listed below:

VOCs	METALS	GENERAL CHEMISTRY
Benzene	Arsenic	Sulfate
1,1-DCA	Calcium	Chloride
cis-1,2-DCE	Iron	
Vinyl Chloride	Lead	
	Manganese	
	Sodium	

The most recent, 2020 Annual Groundwater Monitoring Report indicates that benzene was the only VOC detected in 2020 above the RAO of 5 µg/l in shallow well MW-115A (5.4 µg/l) and adjacent intermediate well MW-115B (21 µg/l). MW-115A and MW-115B are located

in the southeast corner of the Site, just downgradient of the limit of waste. Low levels of the other VOCs were also detected in onsite and offsite groundwater at concentrations less than the RAOs.

Arsenic, calcium, iron, lead, manganese, sodium, and chloride were detected in onsite and/or offsite groundwater in 2020 at concentrations that exceed the RAOs. The maximum concentrations of these chemicals are summarized below and shown in Figure 5.

Chemical	Maximum Concentration Detected in 2020 (µg/l)	RAO (µg/l)
Arsenic	16	10
Calcium	640,000	250,000
Iron	71,000	26,000
Lead	41	15
Manganese	1,500	1,070
Sodium	230,000	150,000
Chloride	340,000*	250,000

*Concentration detected in 2019; same-well data not available for 2020.

Bayer conducted the most recent groundwater sampling in November 2021 however, the 2021 Annual Groundwater Monitoring Report will not be available until March 2022.

10.2 Soil Gas Monitoring

Bayer monitors LFG/soil gas through fixed, permanent, soil gas probes located within the limits of waste/PVT system and outside the limits of waste/beyond the PVT system, which borders the south and east sides of the landfill. Bayer also collects LFG/soil gas samples at sampling points within the PVT system. The LFG/soil gas is monitored using a RKI Eagle Gas Monitor field instrument to ensure that methane and hydrogen sulfide are not migrating offsite at concentrations greater than the action levels of 5 percent methane by volume and 4.4 percent hydrogen sulfide by volume.

Bayer conducted quarterly LFG/soil gas monitoring from 2012 to 2014. In 2014, the LFG/soil gas monitoring was adjusted to daily and then weekly monitoring when methane was detected in several gas monitoring probes above the action limit. The final PVT system expansion was completed in 2014 and LFG/soil gas monitoring continued monthly until June 2015. LFG/soil gas was then conducted quarterly from 2015 to 2018, and semiannually from 2018 to 2019.

Bayer currently measures methane and hydrogen sulfide at 28 soil gas probes and at 36 locations inside the PVT system annually. Soil gas probes SGP-114, SGP-115, SGP-116, and SPG-118 located within or near the limits of waste routinely contain methane at concentrations greater than 5 percent by volume (the lower explosive level for methane). However, methane concentrations within the PVT and in the SGPs located beyond the PVT, away from the landfill, are zero. This indicates that the PVT is intercepting the LFG/soil gas

and venting it to the atmosphere at very low levels that are not detected by the monitoring equipment before the gas can migrate offsite. Hydrogen sulfide is occasionally detected in SPGs located within or near the limits of waste but not within the PVT system or in the SGPs located beyond the PVT.

The most recent, 2020 Soil Gas Monitoring Report is available in the Deletion Docket in Appendix A. The last soil gas monitoring event was conducted in November 2021 however, the 2021 Annual Soil Gas Report will not be available until March 2022.

10.3 LTS of ICs

Bayer conducts LTS in accordance with the LTS Plan included in the EPA-approved ICIAP dated April 30, 2019. The LTS Plan contains procedures to implement, maintain and enforce the ICs at the Site over the long-term through:

1. Annual Report: Bayer will submit an Annual IC Monitoring, Compliance Assurance, and Certification Report that will include a certification statement and the results of IC reviews to EPA. The report will demonstrate that the landfill property was inspected to ensure that no inconsistent uses have occurred, that ICs remain in place and are effective, and discuss any necessary contingency actions that have been executed.
2. Quarterly Progress Reports: Bayer will declare compliance with the ERCs for the landfill property in quarterly progress reports.
3. Well Verification: Bayer will verify, with the City of Elkhart, the absence of new groundwater drinking wells and changes in land use once during each FYR cycle for properties that require ICs. Compliance will be documented in the Annual Report.
4. Land Restriction Verification: Bayer will verify, with the County of Elkhart Recorder's Office once during each FYR cycle, that the property ownership and zoning are unchanged for properties that require ICs. If new owners are identified, Bayer will contact them to verify receipt of the ERC and ensure the associated compliance requirements are maintained. Reporting will be provided in the Annual Report.

Bayer submitted the first Annual IC Report on December 21, 2020. The 2020 report certified that:

- The Site property was inspected during all sampling events,
- All ICs remain in place and effective at the Site,
- No inconsistent uses have occurred,
- No land use proposals were made, and no drilling or excavation occurred that was not in conformance with the Consent Decree, and
- No contingency actions were necessary.

The 2020 Annual IC Report also documented that the Elkhart Utilities Department, Public Works Office, and County Recorder's office were contacted to validate property ownership,

drinking water well status, and property zoning. All parcels with implemented ICs were confirmed to have no change in zoning and no groundwater drinking water wells were installed on the parcels. The report also provided an updated Property Ownership & Institutional Controls table to document this information and any property changes that were noted during the IC research.

The 2021 Annual IC Report is due in January 2022.

11.0 Five Year Reviews (FYRs)

EPA conducts FYRs at sites to determine whether a cleanup remains protective of human health and the environment over the long-term or whether additional investigations or cleanup actions may be warranted. The review methods, findings, and conclusions are documented in FYR reports. EPA identifies any site issues found during the review in the FYR report with recommendations to address the issues.

EPA and IDEM have conducted two FYRs of the remedial actions implemented at the Site. These reviews are statutory reviews and are required because hazardous substances, pollutants or contaminants remain at the Site above levels that allow for unlimited use/unrestricted exposure (UU/UE). EPA completed the most recent, second FYR for the Site on September 13, 2021.

The only issue identified in the 2021 FYR was that woody tree/shrub growth on the landfill needed to be cut to prevent the roots from compromising the integrity of the landfill cover. Bayer completed this work in July 2021 but did not report it to EPA until after the 2021 FYR was signed. EPA verified that the woody tree/shrub growth was removed from the landfill cover during an October 2021 Site inspection.

The 2021 FYR determined that the remedy at the Himco Dump Site currently protects human health and the environment because it is functioning as intended in accordance with the decision documents. Municipal water has been provided to all impacted residences, the soil cover over the landfill and the PVT system are operating and functioning as designed, and the potentially responsible party (PRP) is implementing the long-term monitoring program. ICs in the form of ERCs and deed notices have been recorded on the landfill property and on impacted parcels to the east and south of the Landfill. The FYR also noted that the PRP is implementing the O&M Plan and the LTS Plan, including procedures for monitoring and tracking compliance with ICs, communicating with EPA, and providing an annual certification to EPA that the ICs remain in place and are effective.

The next FYR for the Site is due in September 2026.

12.0 Community Involvement

EPA and OEPA conducted public participation activities throughout all response actions for the Himco Dump Site, satisfying the provisions of CERCLA Sections 113(k) and 117, 42 U.S.C. §§ 9613(k) and 9617, and the NCP, 40 C.F.R. §§ 300.415(n), 300.430(f), 300.815, and 300.820.

12.1 Community Involvement Plan

EPA developed a Community Relations Plan for the Site in 1990 at the start of the RI/FS. In 2008, EPA issued an updated Community Involvement Plan to address the community involvement activities to be conducted during the RD/RA. The plans provided background information about the Site, a history of community involvement, a summary of key issues and community concerns, developed objectives and activities for engaging with the community, and outlined the timing of specific community involvement activities at points throughout the investigation and cleanup.

EPA established a local information repository for the Site where reports and other Site documents can be viewed at the Elkhart Public Library Reference Department, 300 South Second Street, Elkhart, Indiana 46516. Site reports were also made available at the Pierre Moran Branch Library, 2400 Benham Avenue, Elkhart, Indiana 46517. Online copies of Site documents are available on EPA's webpages for the Site at <http://www.epa.gov/superfund/himco-dump>.

12.2 RI/FS, 1992 Removal Action, and 1993 ROD

EPA mailed out fact sheets about the Site to the local community in July 1990 at the start of the RI. EPA also hosted a public meeting on July 12, 1990, to provide background information about the Site, explain the Superfund process, and provide details about the upcoming investigation. EPA issued a second fact sheet in May 1992 to notify residents about the high levels of VOCs found in TL-5 and the planned emergency removal action.

EPA released the RI/FS reports and EPA's proposed cleanup plan for the Site to the public in September 1992. EPA held a public meeting on October 6, 1992, to discuss the FS and the proposed cleanup plan and to answer questions about the Site and the cleanup alternatives that were being considered. Oral comments on EPA's proposed cleanup plan were documented by a court reporter and written comments were also accepted at the meeting. A transcript of the public meeting was placed in the information repositories and the administrative record. The meeting was attended by approximately 70 persons, including residents and PRPs.

The FS and EPA's proposed cleanup plan were available for public comment from September 30, 1992, through November 30, 1992. Comments received during the public comment period and the EPA's responses to those comments were included in a Responsiveness Summary which was attached to the 1993 ROD. EPA published

advertisements announcing the availability of the proposed cleanup plan, the start of the comment period, and the extension of the comment period in The Elkhart Truth newspaper.

12.3 2004 ROD Amendment

EPA issued its revised cleanup plan to the public in April 2003 prior to the issuance of the 2004 ROD Amendment. EPA updated the Site's administrative record and the information repositories to include the revised cleanup proposal and the other documents EPA relied upon to develop the proposed ROD Amendment. EPA placed advertisements in the local newspaper announcing the proposed ROD Amendment, a 30-day public comment period, and the time and location of a public meeting to discuss the proposal. EPA received and granted two requests to extend the public comment period. The final comment period ran for 90 days, from April 11, 2003, to July 12, 2003.

EPA held the public meeting at the Elkhart City Council Chambers on April 23, 2003. EPA presented its revised proposal to the community at the meeting and accepted written and verbal comments on the proposal. A transcript of the public meeting was taken and made available to the public in the administrative record and at the information repositories. EPA responded to oral and written comments submitted during the public comment period in a Responsiveness Summary that is attached to the 2004 ROD Amendment.

EPA held a follow-up meeting with residents at the City Council Chambers on July 8, 2003, to provide additional information about the municipal water supply connection and eligibility.

12.4 FYR Notices

EPA initiated activities to involve the community in the 2016 FYR process for the Site by publishing a notice in a local newspaper, The Elkhart Truth, on March 15, 2015. The notice informed readers that EPA was reviewing the Site cleanup to ensure that the remedy continues to be protective and was providing residents and other interested parties with an opportunity to contact EPA with any questions or concerns about the Site. EPA also updated the Site's webpage to include this information and reviewed and updated the 2008 Community Involvement Plan and Site mailing list. EPA did not receive any questions or concerns from the public during the FYR.

EPA notified the community about the 2021 FYR by updating the Site's webpage in April 2020. The updated webpage informed the public that EPA would be conducting a FYR and invited the public to submit any comments or concerns to EPA. EPA did not receive any responses from the public during the 2021 FYR.

Copies of the 2016 and 2021 FYRs are available on the Site's webpage at <http://www.epa.gov/superfund/himco-dump> under "Site Documents & Data" and in the Deletion Docket in Appendix A of this report.

13.0 Determination that the Site Meets Criteria for Partial Deletion

The land/soil portion of the Himco Dump Site and the parcels shown in Figure 1 and listed in Table 1 meets all of the site completion requirements specified in the Office of Solid Waste and Emergency Response (OSWER) Directive 9320.2-22, Close Out Procedures for National Priorities List Sites. All cleanup actions and RAOs for the land/soil portion of the landfill property, the two identified soil removal parcels, and the 45 additional parcels located adjacent to and/or downgradient of the landfill set forth in the 1993 ROD, as amended in the 2004 ROD Amendment, have been implemented for all pathways of exposure at these portions of the Site.

The land/soil portion of the parcels included in this partial deletion are shown in Figure 1 and listed in Table 1 and include:

- The landfill property. This portion of the Site includes the former waste disposal operations areas, soil cover, fence, and all but one segment of the PVT LFG control system (seven parcels).
- Two of the five adjacent soil removal properties (two parcels).
- Forty-five adjacent and/or downgradient parcels where the municipal water connection, well abandonment, and/or IC components of the remedy have been fully implemented (45 parcels).

The RAOs, selected remedial actions, and cleanup levels for the land/soil portion of the Site on these parcels are consistent with EPA policy and guidance. No further response action is needed for these portions of the Site other than continued O&M of the soil cover, PVT LFG control system, fence, and the other remedial components located on the landfill property; and LTS of implemented ICs and FYRs of the cleanup actions implemented at the landfill property, the two adjacent soil removal parcels, and these 45 adjacent and/or downgradient parcels. The response actions taken for the land/soil portions of the parcels shown in Figure 1 and listed in Table 1 are protective of human health and the environment. Therefore, the taking of additional remedial measures for these portions of the Site is not appropriate.

Groundwater (including the groundwater below the parcels proposed for deletion) is undergoing a long term monitored natural attenuation (MNA) cleanup and will remain on the NPL. Some of the adjacent soil excavation parcels and the parcels located downgradient of the landfill will also remain on the NPL because these parcels do not have enforceable ICs that run with the land and, therefore, do not meet the criteria for NPL deletion. Another parcel will remain on the NPL because the IC restricting land and groundwater use at this parcel requires additional evaluation. These parcels are listed in Table 2.

Section 300.425(e) of the NCP, 40 C.F.R. § 300.425(e), states that a Superfund site or a portion of a site may be deleted from the NPL when no further response action is appropriate. EPA, in consultation with the State of Indiana, has determined that all

required response actions have been implemented for the land/soil portion of the Himco Dump Site landfill property. two of the adjacent soil removal parcels, and the 45 other adjacent or downgradient parcels shown in Figure 1 and listed in Table 1. No further action other than O&M, LTS of ICs, and FYRs is appropriate for these portions of the Site. IDEM sent EPA a letter concurring with EPA's proposed deletion of these portions of the Site on January 26, 2022.

14.0 Approval

Approved by:

2/7/2022

X 

Douglas Ballotti, Director
Superfund & Emergency Management Division
Signed by: DOUGLAS BALLOTTI

U.S. EPA, Region 5

Figure 2: Himco Dump Landfill Property

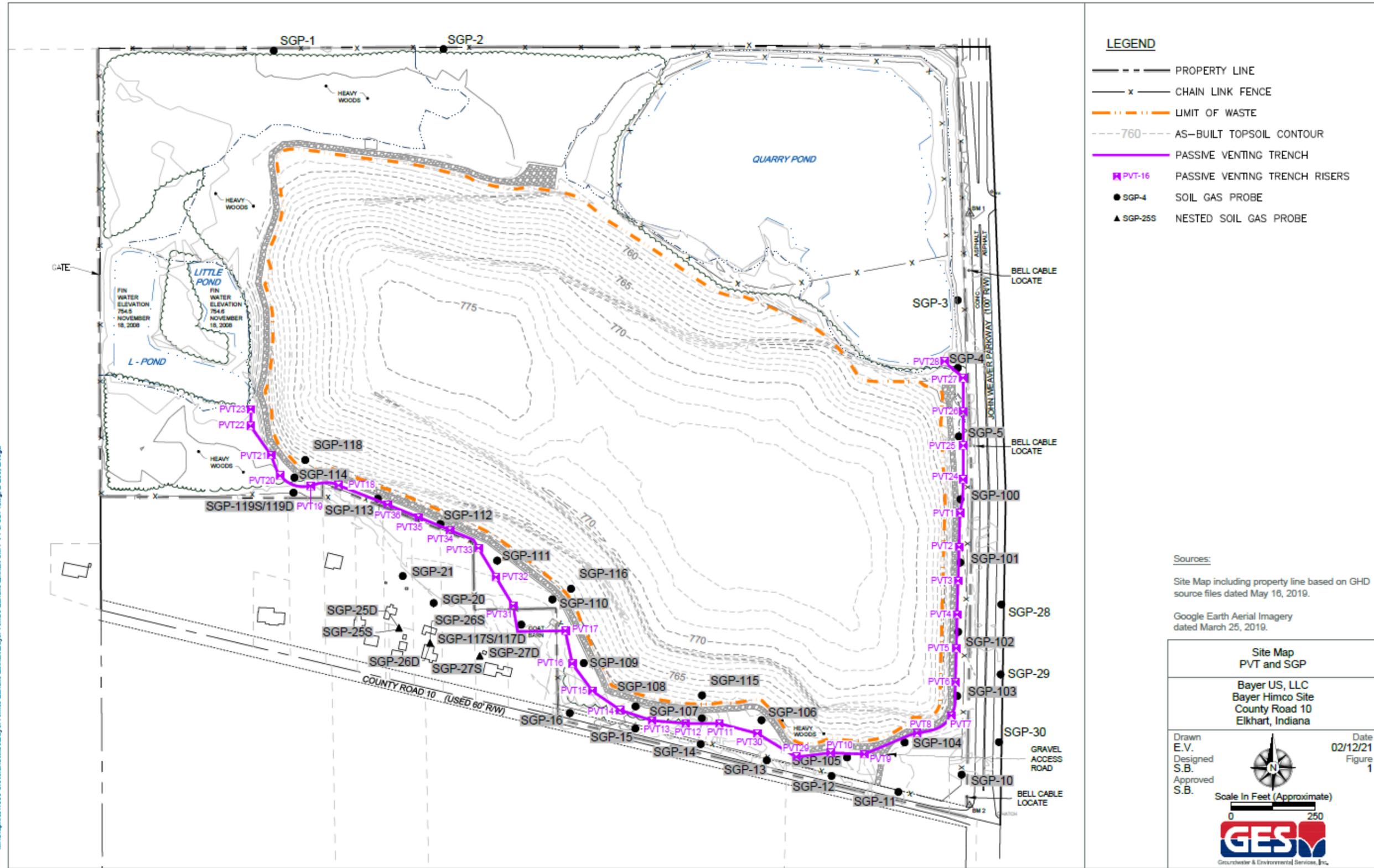
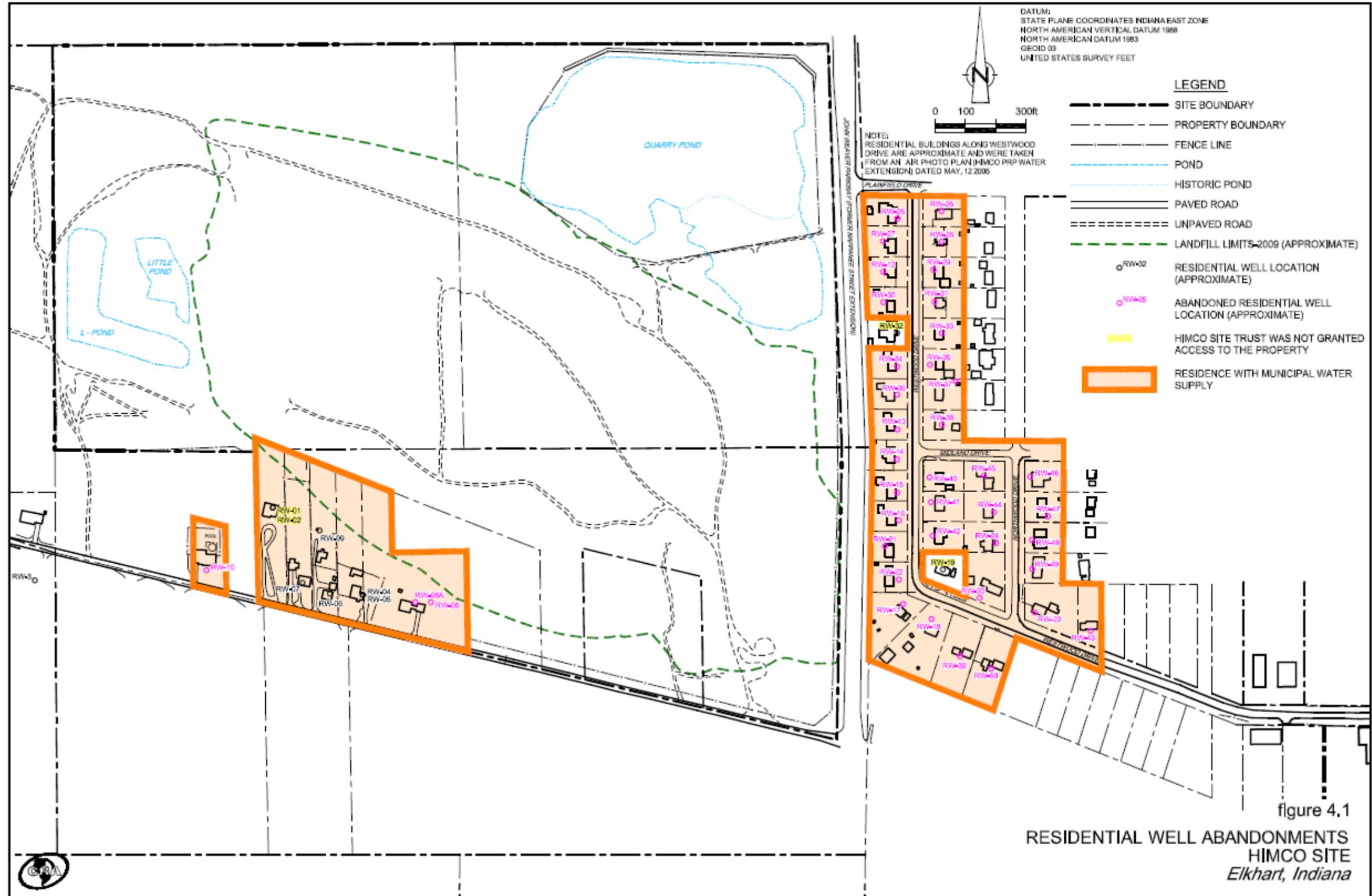
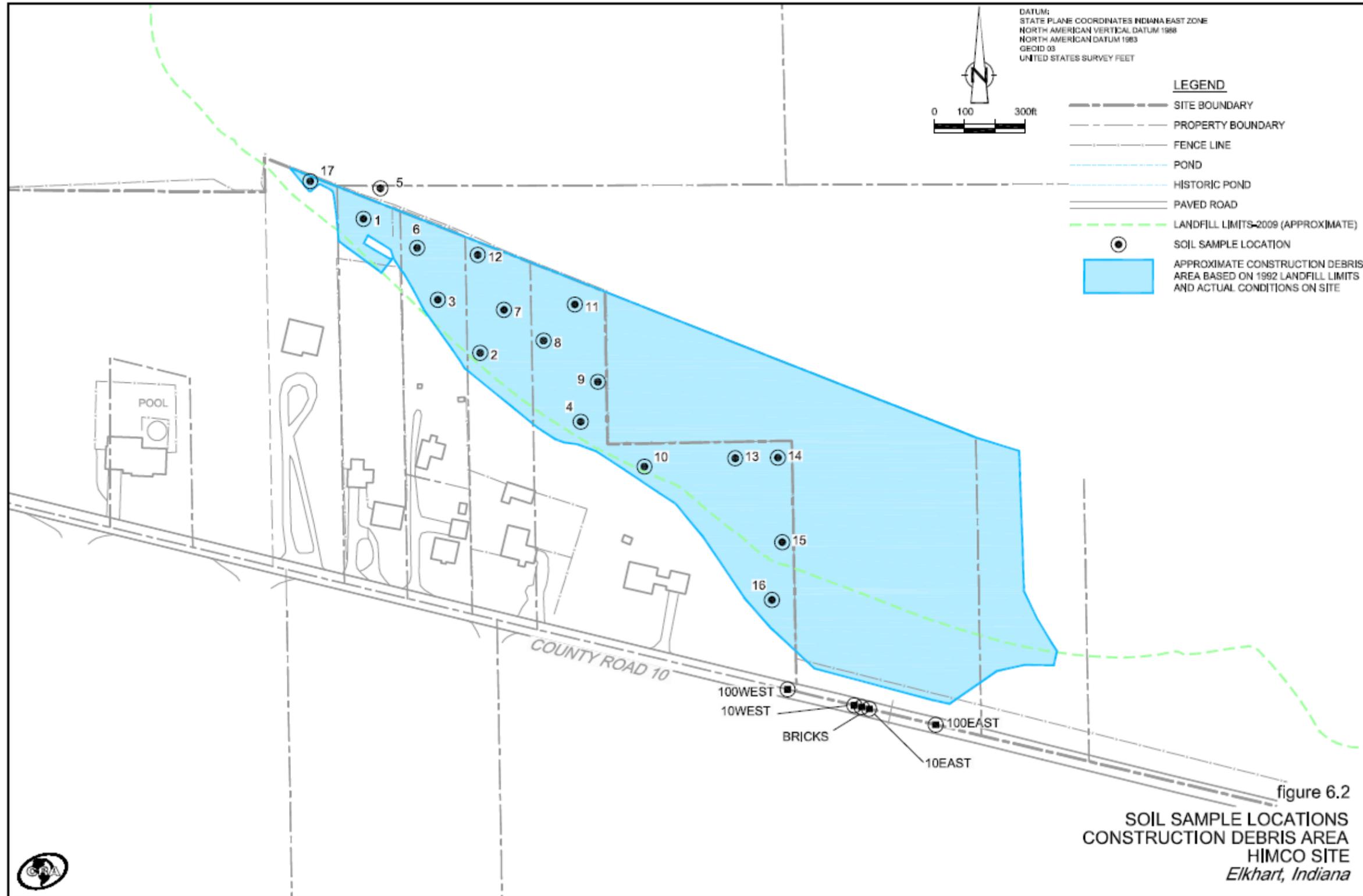


Figure 3: Municipal Water Supply Connection



39611-00(033)GN-WA003 JUL 27/2012

Figure 4: Soil Excavation Verification Soil Sampling Locations



39611-00(033)GN-BU002 AUG 2/2012

Figure 5: Metals Concentrations Detected in Groundwater Monitoring Samples - 2020

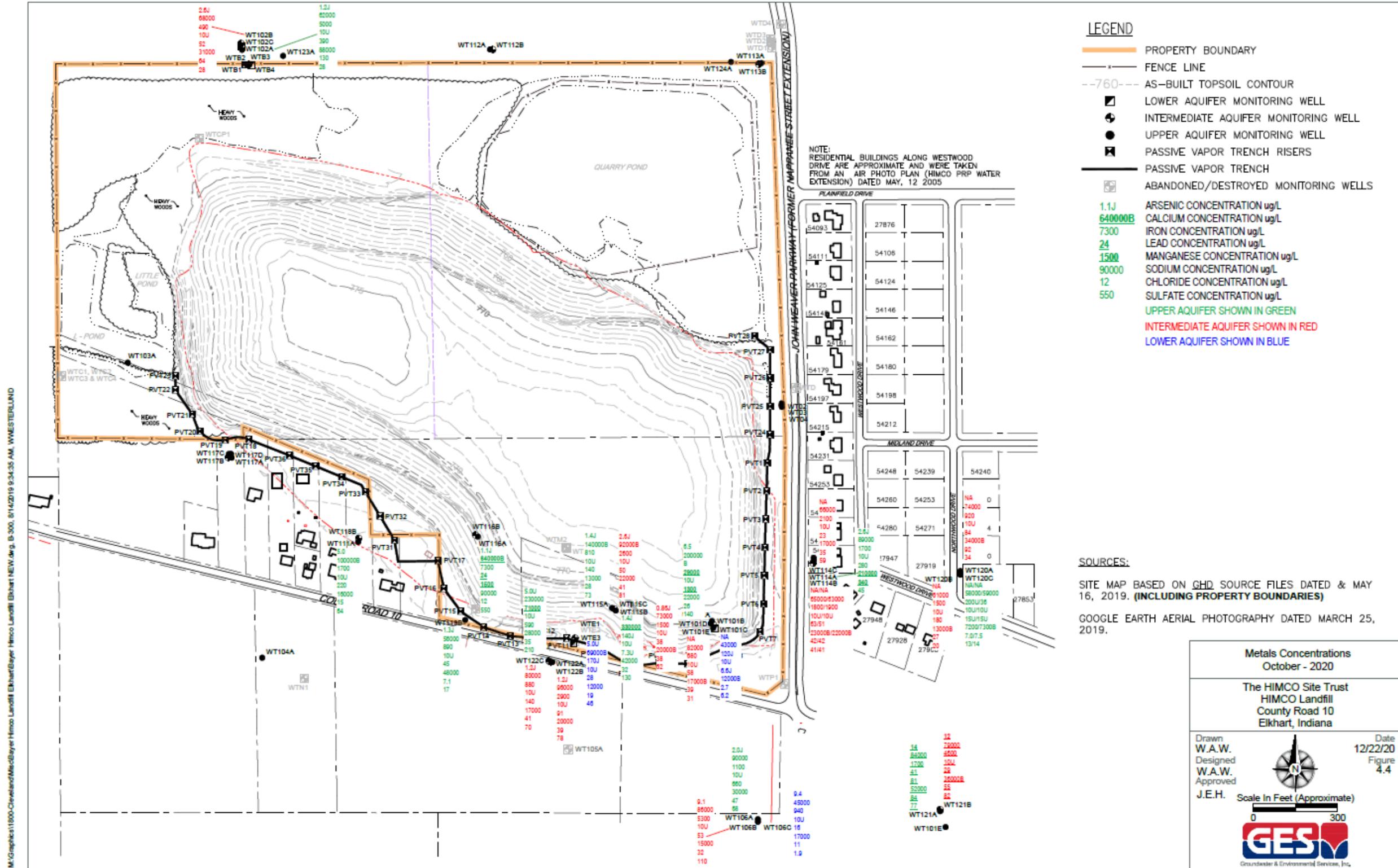


Table 1: Properties Included in 2022 NPL Partial Deletion and Applicable Environmental Restrictive Covenants

Tax Property Identification Number (PIN)	Site Location	Environmental Restrictive Covenant (ERC) SEMS⁽¹⁾ Document ID No.
01-36-251-015-005 01-36-276-003-005 01-36-251-013-005 01-36-276-001-006	Landfill Property	478466 Pages 23-35
01-36-226-001-006	Landfill Property	478466 Pages 36-45
01-36-276-004-006	Landfill Property	478466 Pages 224-234
01-36-201-001-005 ⁽²⁾	Landfill Property	952490 2004032
01-36-251-008-005	Adjacent Soil Excavation Area/Southside Property	478466 Pages 202-212
01-36-251-006-005	Adjacent Soil Excavation Area/Southside Property	478466 Pages 309-319
01-36-252-003-006 ⁽³⁾	Southside Property	478466 Pages 136-146
01-36-251-007-005	Southside Property	478466 Pages 68-78
01-36-251-017-005	Southside Property	941253
01-36-251-021-005 01-36-251-022-001 ⁽⁴⁾ 01-36-126-001-005	Southside Property/ Property West of Landfill	2004001
02-31-151-005-026	Eastside Property	478466 Pages 1-11
02-31-101-008-026	Eastside Property	478466 Pages 12-22
02-31-101-003-026	Eastside Property	478466 Pages 46-56
02-31-177-002-026	Eastside Property	478466 Pages 57-67
02-31-151-003-026	Eastside Property	478466 Pages 79-89
02-31-102-002-026	Eastside Property	478466 Pages 90-100
02-31-101-011-026	Eastside Property	478466 Pages 101-111
02-31-152-002-026	Eastside Property	478466 Pages 112-124
02-31-101-014-026	Eastside Property	478466 Pages 125-135
02-31-101-007-026	Eastside Property	478466 Pages 147-157
02-31-152-017-026 02-31-152-018-026	Eastside Property	478466 Pages 158-168
02-31-151-002-026	Eastside Property	478466 Pages 169-179
02-31-102-005-026	Eastside Property	478466 Pages 180-190
02-31-152-019-026	Eastside Property	478466 Pages 191-201
02-31-102-007-026	Eastside Property	478466 Pages 213-223
02-31-152-003-026	Eastside Property	478466 Pages 235-245
02-31-152-001-026	Eastside Property	478466 Pages 246-264
02-31-152-004-026	Eastside Property	478466 Pages 265-275

Table 1 (continued): Properties Included in 2022 NPL Partial Deletion and Applicable Environmental Restrictive Covenants

Tax Property Identification Number (PIN)	Site Location	Environmental Restrictive Covenant SEMS Document ID No.
02-31-101-010-026	Eastside Property	478466 Pages 276-286
02-31-101-004-026	Eastside Property	478466 Pages 287-297
02-31-102-003-026	Eastside Property	478466 Pages 298-308
02-31-102-006-026	Eastside Property	478466 Pages 320-330
02-31-101-009-026	Eastside Property	478466 Pages 331-341
02-31-151-007-026	Eastside Property	478466 Pages 342-352
02-31-151-001-026	Eastside Property	478466 Pages 353-363
02-31-102-008-026	Eastside Property	478466 Pages 364-374
02-31-102-004-026	Eastside Property	478466 Pages 375-385
02-31-151-008-026	Eastside Property	478466 Pages 386-397
02-31-101-006-026	Eastside Property	478466 Pages 398-408
02-31-177-003-026	Eastside Property	478466 Pages 409-419
02-31-101-012-026	Eastside Property	478466 Pages 432-442
02-31-151-006-026	Eastside Property	478466 Pages 443-453
02-31-101-001-026	Eastside Property	478466 Pages 454-464
02-31-102-001-026	Eastside Property	478466 Pages 465-475
02-31-177-001-026	Eastside Property	478466 Pages 476-486
02-31-101-002-026	Eastside Property	478466 Pages 487-497
02-31-101-013-026	Eastside Property	478466 Pages 498-509
02-31-151-004-026	Eastside Property	941254
(1)	SEMS – EPA’s Superfund Enterprise Management System for Electronic Records.	
(2)	PIN 01-36-201-002-005 incorporated into 01-36-201-001-005 but has separate ERC (SEMS Document ID No. 2004032).	
(3)	PIN is listed as 01-36-252-003-005 on ERC but property is shown as 01-36-252-003-006 on County’s GIS map. PIN 01-36-252-003-005 cannot be located and was either renumbered or listed incorrectly in the ERC.	
(4)	PINs 01-36-251-022-001 and 01-36-251-021-005 were redrawn from PINs 01-36-251-001-005 and PIN 01-36-251-021-005 and PIN 01-36-251-001-005 was eliminated.	

Table 2: Properties NOT Included in the 2022 NPL Partial Deletion

Tax Property Identification Number (PIN)	Site Location	Notes
01-36-251-019-005	Adjacent Soil Excavation Area/Southside Property	The soil excavation was completed during RA, but the 2008 ERC (SEMS Document ID No. 478466 Pages 420-431) may need to be updated to identify the location of the approximately 150-foot segment of the PVT LFG control system located on this parcel and the remaining soil contamination detected at the bottom of the CDA excavation above IDEM’s residential criteria for clean closure in samples CDA-13 and CDA-14. The soil samples were collected from six feet below ground surface and the excavation was backfilled with six feet of clean material, but the ERC may need to be updated to identify this area and require that any excavated soils at this depth and location are properly managed.
01-36-251-005-005	Adjacent Soil Excavation Area/Southside Property	The soil excavation was completed during the RA, but the property owner will not sign an ERC restricting groundwater use. EPA filed an unenforceable Notice of Environmental Contamination on the property in 2018 (SEMS Document ID No. 941257)
01-36-251-004-005	Adjacent Soil Excavation Area/Southside Property	The soil excavation was completed during the RA, but the property owner will not sign an ERC restricting groundwater use. EPA filed an unenforceable Notice of Environmental Contamination on the property in 2018 (SEMS Document ID No. 941258).
01-36-251-020-005	Southside Property	Property owner will not sign an ERC restricting groundwater use. EPA filed an unenforceable Notice of Environmental Contamination on the property in 2018 (SEMS Document ID No. 941256).

Table 2 (continued): Properties NOT Included in the 2022 NPL Partial Deletion

Tax Property Identification Number (PIN)	Site Location	Notes
02-31-101-005-026	Eastside Resident	Owner connected to the municipal water supply and started billing in 2019 but would not sign an ERC restricting groundwater use. EPA filed unenforceable Notice of Environmental Contamination on property in 2018 (SEMS Document ID No. 941255).
<p>NOTES:</p> <p>CDA – Construction Debris Area ERC – Environmental Restrictive Covenant LFG – Landfill Gas PVT – Passive Vent Trench RA – Remedial Action SEMS - EPA’s Superfund Enterprise Management System for Electronic Records</p>		

Table 3: Properties that Require Additional Evaluation

Tax Property Identification Number (PIN)	Site Location	Notes
02-31-177-010-026	Eastside Resident	Arsenic was detected in the residential well at this property at a concentration of 7.5 µg/l. This concentration is below the MCL drinking water standard of 10 µg/l but above EPA’s RSLs corresponding to a 1 x 10 ⁻⁴ ELCR (5.2 µg/l) and a child noncancer HI of 1.0 (6 µg/l), so additional evaluation is needed to determine whether the arsenic is Site-related and/or and whether additional monitoring or other action is required.
02-31-177-009-026	Eastside Resident	Arsenic was detected in the residential well at this property at a concentration of 7.8 µg/l. This concentration is below the MCL drinking water standard of 10 µg/l but above EPA’s RSL corresponding to a 1 x 10 ⁻⁴ ELCR (5.2 µg/l) and a child noncancer HI of 1.0 (6 µg/l), so additional evaluation is needed to determine whether the arsenic is Site-related and/or and whether additional monitoring or other action is required.
02-31-177-004-026	Eastside Resident	Arsenic was detected in the residential well at this property at a concentration of 5.3 µg/l. This concentration is below the MCL drinking water standard of 10 µg/l but above EPA’s RSL corresponding to a 1 x 10 ⁻⁴ ELCR (5.2 µg/L) and a child noncancer HI of 1.0 (6 µg/l), so additional evaluation is needed to determine whether the arsenic is Site-related and/or and whether additional monitoring or other action is required.
01-36-277-002-006	Vacant Southside Property	Arsenic was detected above the MCL in groundwater monitoring well MW-106C located on PIN 01-36-426-002-006 immediately downgradient of this property in 2019. The concentration of arsenic was 12 µg/l and the MCL is 10 µg/l. Arsenic was also detected at a concentration of 8.4 µg/ in MW-106B in 2019. In 2020, arsenic was detected in both wells at concentrations of 9.1 to 9.4 µg/l. These values are above EPA’s RSL corresponding to an ELCR of 1 x 10 ⁻⁴ (5.2 µg/l) and a child noncancer HI of 1.0 (6 µg/l). The wells also contained low levels of VOCs. The wells are included in the long-term groundwater monitoring program, but additional evaluation is needed to determine whether the arsenic is Site-related, whether an ERC should be required, and/or whether the property should be included in the ICIAP/LTS Plan.

Table 3 (continued): Properties that Require Additional Evaluation

Tax Property Identification Number (PIN)	Site Location	Notes
01-36-426-002-006	Developed Southside Commercial/Industrial Property	Arsenic was detected above the MCL in groundwater monitoring well MW-106C located on this property in 2019. The concentration of arsenic was 12 µg/l and the MCL is 10 µg/l. Arsenic was also detected in MW-106B at a concentration of 8.4 µg/l in 2019. In 2020, arsenic was detected in both wells at concentrations of 9.1 to 9.4 µg/l. These values are above EPA's RSLs corresponding to an ELCR of 1×10^{-4} (5.2 µg/L) and a child noncancer HI of 1.0 (6 µg/l). The wells also contained low levels of VOCs. These wells are included in the long-term groundwater monitoring program, but additional evaluation is needed to determine whether this property is connected to the municipal water supply, whether there is a private well on the property that should be sampled, whether the chemicals are Site-related and/or whether an ERC or other action(s) should be required. This property is not included in the ICIAP/LTS Plan.
<p>NOTES:</p> <p>ELCR – Excess Lifetime Cancer Risk ERC – Environmental Restrictive Covenant HI – Hazard Index ICIAP – Institutional Controls Implementation and Assurance Plan ICs – Institutional Control LTS – Long-Term Stewardship µg/l – microgram per liter or parts per billion MCL – Maximum Contaminant Level MW – Groundwater Monitoring Well SEMS - EPA's Superfund Enterprise Management System for Electronic Records</p>		

APPENDIX A: NPL PARTIAL DELETION DOCKET REPORTS INDEX

**NPL Partial Deletion Docket Reports Index
Himco Dump Superfund Site, Indiana
EPA-HQ- OLEM-1990-0010
EPA SEMS Collection ID No. 05-40089**

EPA Document Region	Document ID	Document Date	Document Title	Pages	SEMS-Public Document URL
05	2004061	01/26/2022	IDEM LETTER RE: PARTIAL DELETION OF THE LAND/SOIL PORTION OF THE LANDFILL PROPERTY AND 47 ADJACENT/DOWNGRADIENT PARCELS AT HIMCO DUMP SUPERFUND SITE, ELKHART IN	1	https://semspub.epa.gov/src/document/05/2004061
05	968520	09/16/2021	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP SITE - REMEDIAL ACTION - UPDATE 11	1	https://semspub.epa.gov/src/document/05/968520
05	968999	09/13/2021	SECOND FIVE-YEAR REVIEW REPORT (SIGNED) - HIMCO DUMP SUPERFUND SITE	153	https://semspub.epa.gov/src/document/05/968999
05	968519	04/28/2021	[REDACTED] GROUNDWATER & ENVIRONMENTAL SERVICES INC. - ADDENDUM TO COMPLETION OF REMEDIAL ACTION REPORT	218	https://semspub.epa.gov/src/document/05/968519
05	2003810	03/01/2021	GES - SOIL GAS MONITORING RESULTS - OCTOBER 2020	70	https://semspub.epa.gov/src/document/05/2003810
05	2003808	02/08/2021	GES - 2020 ANNUAL GROUNDWATER MONITORING REPORT	368	https://semspub.epa.gov/src/document/05/2003808

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EPA Document Region	Document ID	Document Date	Document Title	Pages	SEMS-Public Document URL
05	972906	12/21/2020	[REDACTED] GES - ANNUAL IC MONITORING, COMPLIANCE ASSURANCE, AND CERTIFICATION REPORT, HIMCO DUMP, ELHART INDIANA	4	https://semspub.epa.gov/src/document/05/972906
05	952491	01/10/2020	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP SITE - REMEDIAL ACTION - UPDATE 10	1	https://semspub.epa.gov/src/document/05/952491
05	952490	12/23/2019	AFFIDAVIT FOR AN ENVIRONMENTAL RESTRICTIVE COVENANT (GADA HOLDINGS LLC)	12	https://semspub.epa.gov/src/document/05/952490
05	577089	10/01/2019	GROUNDWATER & ENVIRONMENTAL SERVICES INC - 2019 ANNUAL GROUNDWATER MONITORING REPORT	502	https://semspub.epa.gov/src/document/05/577089
05	2004064	06/03/2019	GES - QUARTERLY PROGRESS REPORT - JUNE 2019 REMEDIAL DESIGN/REMEDIAL ACTION (RD/RA) HIMCO DUMP SITE, ELKHART IN	6	https://semspub.epa.gov/src/document/05/2004064
05	2003809	05/31/2019	GES - SOIL GAS MONITORING RESULTS - APRIL 2019	69	https://semspub.epa.gov/src/document/05/2003809
05	969356	04/30/2019	GHD - INSTITUTIONAL CONTROLS IMPLEMENTATION AND ASSURANCE PLAN	19	https://semspub.epa.gov/src/document/05/969356

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Himco Dump Superfund Site, Indiana
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05	2003807	11/12/2018	GHD - 2018 ANNUAL GROUNDWATER MONITORING REPORT	384	https://semspub.epa.gov/src/document/05/2003807
05	2003803	10/31/2018	GHD - 4Q18 SOIL GAS MONITORING RESULTS	45	https://semspub.epa.gov/src/document/05/2003803
05	2004057	10/01/2018	GHD - PRIVATE WELL SAMPLING REPORT	12	https://semspub.epa.gov/src/document/05/2004057
05	972904	10/01/2018	[REDACTED] GHD - PRIVATE WELL SAMPLING REPORT	12	https://semspub.epa.gov/src/document/05/972904
05	2003802	06/19/2018	GHD - 2Q18 SOIL GAS MONITORING RESULTS	47	https://semspub.epa.gov/src/document/05/2003802
05	941255	05/11/2018	NOTICE OF ENVIRONMENTAL CONTAMINATION - ██████ WESTWOOD DR	8	https://semspub.epa.gov/src/document/05/941255
05	941256	05/11/2018	NOTICE OF ENVIRONMENTAL CONTAMINATION - ADJ E O ██████ COUNTY ROAD 10	8	https://semspub.epa.gov/src/document/05/941256
05	941257	05/11/2018	NOTICE OF ENVIRONMENTAL CONTAMINATION - ██████ COUNTY ROAD 10	8	https://semspub.epa.gov/src/document/05/941257
05	941258	05/11/2018	NOTICE OF ENVIRONMENTAL CONTAMINATION - ██████ COUNTY ROAD 10	8	https://semspub.epa.gov/src/document/05/941258
05	941259	05/11/2018	NOTICE OF ENVIRONMENTAL CONTAMINATION - O COUNTY ROAD 10	8	https://semspub.epa.gov/src/document/05/941259

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05	941254	04/25/2018	AFFIDAVIT FOR RECORDING OF AN ENVIRONMENTAL RESTRICTIVE COVENANT - [REDACTED] WESTWOOD DR	11	https://semspub.epa.gov/src/document/05/941254
05	2004059	04/25/2018	GHD LETTER RE: PRIVATE WELL SAMPLING WORK PLAN	13	https://semspub.epa.gov/src/document/05/2004059
05	972903	04/25/2018	[REDACTED] GHD LETTER RE: PRIVATE WELL SAMPLING WORK PLAN	13	https://semspub.epa.gov/src/document/05/972903
05	2003801	03/29/2018	GHD - 1Q18 SOIL GAS MONITORING RESULTS	47	https://semspub.epa.gov/src/document/05/2003801
05	2004001	03/26/2018	AFFIDAVIT OF RECORDING OF AN ENVIRONMENTAL RESTRICTIVE COVENANT, PINS 01-36-251-001-005 (NOW 01-36-251-022-005), 01-36-251-021-005, AND 01-36-126-001-005	14	https://semspub.epa.gov/src/document/05/2004001
05	2004032	03/26/2018	AFFIDAVIT FOR RECORDING OF AN ENVIRONMENTAL RESTRICTIVE COVENANT, PIN 01-36-201-002-005, RAILROAD RIGHT OF WAY (PARCEL "FF", NOW INCORPORATED INTO PIN 01-36-201-001-005)	13	https://semspub.epa.gov/src/document/05/2004032

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05	2003806	11/30/2017	GHD - 2017 ANNUAL GROUNDWATER MONITORING REPORT	408	https://semspub.epa.gov/src/document/05/2003806
05	577091	11/29/2016	GHD - 2016 ANNUAL GROUNDWATER MONITORING REPORT	582	https://semspub.epa.gov/src/document/05/577091
05	925597	05/02/2016	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP SITE - REMEDIAL ACTION - UPDATE 9 (REDACTED)	1	https://semspub.epa.gov/src/document/05/925597
05	941253	04/12/2016	AFFIDAVIT FOR RECORDING OF AN ENVIRONMENTAL RESTRICTIVE COVENANT - ██████ COUNTY ROAD 10	11	https://semspub.epa.gov/src/document/05/941253
05	925596	03/01/2016	[REDACTED] FIRST FIVE-YEAR REVIEW REPORT (SIGNED) - HIMCO DUMP SUPERFUND SITE	136	https://semspub.epa.gov/src/document/05/925596
05	577090	11/24/2015	GROUNDWATER & ENVIRONMENTAL SERVICES INC - 2015 ANNUAL GROUNDWATER MONITORING REPORT	383	https://semspub.epa.gov/src/document/05/577090
05	972902	11/02/2015	[REDACTED] GHD LETTER RE: DOOR TO DOOR WELL SURVEY RESULTS	5	https://semspub.epa.gov/src/document/05/972902

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05	577099	04/24/2015	CONESTOGA ROVERS & ASSOCIATES LETTER - RESPONSE TO USEPA'S REQUEST FOR INFORMATION TO SUPPORT FIVE YEAR REVIEW	53	https://semspub.epa.gov/src/document/05/577099
05	577100	11/27/2014	CONESTOGA ROVERS & ASSOCIATES LETTER - 2014 ANNUAL GROUNDWATER MONITORING REPORT	158	https://semspub.epa.gov/src/document/05/577100
05	577095	10/06/2014	CONESTOGA ROVERS & ASSOCIATES LETTER - METHANE REMEDIAL ACTION PLAN - 2014	33	https://semspub.epa.gov/src/document/05/577095
05	577093	09/19/2014	CONESTOGA ROVERS & ASSOCIATES LETTER - METHANE REMEDIAL ACTION PLAN - 2014	29	https://semspub.epa.gov/src/document/05/577093
05	577094	08/01/2014	CONESTOGA ROVERS & ASSOCIATES LETTER - SOIL GAS PROBE 117S INVESTIGATION AND RESPONSE TO USEPA LETTER OF JULY 1 2014	62	https://semspub.epa.gov/src/document/05/577094
05	577096	06/13/2014	CONESTOGA ROVERS & ASSOCIATES LETTER - METHANE REMEDIAL ACTION PLAN - SGP-117S	15	https://semspub.epa.gov/src/document/05/577096

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05	478366	05/01/2014	CRA - CONSTRUCTION REPORT - PASSIVE VENTILATION TRENCH ADDITION (REPORT NO. 36)	153	https://semspub.epa.gov/src/document/05/478366
05	478365	01/01/2014	CRA - CONSTRUCTION REPORT - PASSIVE VENTILATION TRENCH ADDITION (REPORT NO. 36)	162	https://semspub.epa.gov/src/document/05/478365
05	478373	11/01/2013	CRA - 2013 ANNUAL GROUNDWATER MONITORING REPORT (REPORT NO. 35)	636	https://semspub.epa.gov/src/document/05/478373
05	478395	06/28/2013	CRA LETTER RE: REVISED METHANE REMEDIAL ACTION PLAN	13	https://semspub.epa.gov/src/document/05/478395
05	478369	06/01/2013	CRA - 2012 ANNUAL GROUNDWATER MONITORING REPORT (REPORT NO. 34, REVISION 1)	200	https://semspub.epa.gov/src/document/05/478369
05	478378	02/15/2013	CRA LETTER RE: METHANE INVESTIGATION & MONITORING PLAN RESULTS	25	https://semspub.epa.gov/src/document/05/478378
05	478454	10/31/2012	EPA EMAIL RE: CONSTRUCTION COMPLETION REPORT/COMPLETION OF RA REPORT	1	https://semspub.epa.gov/src/document/05/478454

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05	972907	10/31/2012	[REDACTED] CRA - CONSTRUCTION COMPLETION REPORT/COMPLETION OF REMEIAL ACTION REPORT REVISION 1 - FINAL REPORT W/APPENDICES	4411	https://semspub.epa.gov/src/document/05/972907
05	478393	09/13/2012	EPA LETTER RE: APPROVAL WITH MODIFICATIONS OF CONSTRUCTION COMPLETION REPORT/COMPLETION OF REMEDIAL ACTION	8	https://semspub.epa.gov/src/document/05/478393
05	955122	08/14/2012	[REDACTED] CRA - CONSTRUCTION COMPLETION REPORT / COMPLETION OF REMEDIAL ACTION REPORT	98	https://semspub.epa.gov/src/document/05/955122
05	442005	08/14/2012	FINAL CONSTRUCTION COMPLETION REPORT/COMPLETION OF REMEDIAL ACTION REPORT W/ ATTACHED LETTER	66	https://semspub.epa.gov/src/document/05/442005
05	410963	07/19/2012	SUPERFUND PRELIMINARY SITE CLOSEOUT REPORT FOR FINAL REMEDIAL ACTION	9	https://semspub.epa.gov/src/document/05/410963
05	2003805	06/30/2012	CRA - FINAL OPERATION AND MAINTENANCE PLAN	51	https://semspub.epa.gov/src/document/05/2003805

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05	478461	06/01/2012	CRA - PHASE III GROUNDWATER INVESTIGATION REPORT (REV. 1)	13	https://semspub.epa.gov/src/document/05/478461
05	913699	11/01/2011	CRA - 2011 ANNUAL GROUNDWATER MONITORING REPORT	2730	https://semspub.epa.gov/src/document/05/913699
05	423940	08/01/2011	CRA - INTERIM GROUNDWATER MONITORING PROGRAM REPORT	14	https://semspub.epa.gov/src/document/05/423940
05	400845	05/01/2011	CRA - INTERIM GROUNDWATER MONITORING PROGRAM REPORT	149	https://semspub.epa.gov/src/document/05/400845
05	913697	11/01/2010	CRA - HIMCO REMEDIAL ACTION WORK PLAN (REVISION 1)	35	https://semspub.epa.gov/src/document/05/913697
05	423941	10/01/2010	CRA - PHASE II GROUNDWATER INVESTIGATION REPORT	272	https://semspub.epa.gov/src/document/05/423941
05	478363	07/19/2010	CRA LETTER RE: REVISED SPECIFICATION - 100% FINAL DESIGN REPORT	141	https://semspub.epa.gov/src/document/05/478363
05	423942	07/01/2010	CRA - HIMCO ANNUAL GROUNDWATER MONITORING REPORT	249	https://semspub.epa.gov/src/document/05/423942
05	478358	06/01/2010	CRA - PRE-DESIGN INVESTIGATION / 100% FINAL DESIGN REPORT	1288	https://semspub.epa.gov/src/document/05/478358
05	954919	04/23/2009	CRA - CONSTRUCTION DRAWINGS, WATER MAIN EXTENSION	13	https://semspub.epa.gov/src/document/05/954919
05	361634	04/01/2009	CRA - CONSTRUCTION QUALITY ASSURANCE & PERFORMANCE STANDARD VERIFICATION PLAN	29	https://semspub.epa.gov/src/document/05/361634

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05	361628	10/01/2008	CRA - REMEDIAL DESIGN WORK PLAN	69	https://semspub.epa.gov/src/document/05/361628
05	361629	10/01/2008	CRA - REMEDIAL DESIGN WORK PLAN - APPENDIX A FIELD SAMPLING PLAN	109	https://semspub.epa.gov/src/document/05/361629
05	361630	10/01/2008	CRA - REMEDIAL DESIGN WORK PLAN - APPENDIX C - HEALTH & SAFETY PLAN	133	https://semspub.epa.gov/src/document/05/361630
05	361633	10/01/2008	CRA - REMEDIAL DESIGN WORK PLAN - RESIDENTIAL WELL ABANDONMENT & MUNICIPAL WATER SUPPLY	25	https://semspub.epa.gov/src/document/05/361633
05	361635	10/01/2008	CRA - REMEDIAL DESIGN WORK PLAN - APPENDIX B QUALITY ASSURANCE PROJECT PLAN (QAPP)	848	https://semspub.epa.gov/src/document/05/361635
05	2004067	05/31/2008	FACT SHEET: EPA ADDRESSES QUESTIONS RAISED AT FEBRUARY PUBLIC MEETING	0	https://semspub.epa.gov/src/document/05/2004067
05	478439	05/01/2008	EPA FACT SHEET - EPA ADDRESSES QUESTIONS RAISED AT FEBRUARY PUBLIC MEETING	2	https://semspub.epa.gov/src/document/05/478439
05	286151	02/12/2008	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP - UPDATE #8	1	https://semspub.epa.gov/src/document/05/286151
05	286120	01/01/2008	US EPA - COMMUNITY INVOLVEMENT PLAN	22	https://semspub.epa.gov/src/document/05/286120

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05	286121	11/28/2007	CONSENT DECREE (SIGNED) CIVIL ACTION NO.: 2:07-CV-304-TS	58	https://semspub.epa.gov/src/document/05/286121
05	286122	11/28/2007	OPINION & ORDER (SIGNED) CIVIL ACTION NO.: 2:07-CV-304-TS	10	https://semspub.epa.gov/src/document/05/286122
05	478413	11/27/2007	IDEM LETTER RE: ENVIRONMENTAL RESTRICTIVE COVENANT APPROVAL	14	https://semspub.epa.gov/src/document/05/478413
05	270070	12/20/2006	CONSENT DECREE (SIGNED)	391	https://semspub.epa.gov/src/document/05/270070
05	223307	09/20/2004	ADMINISTRATIVE RECORD SITE INDEX - REMEDIAL ACTION - HIMCO DUMP - UPDATE #7	1	https://semspub.epa.gov/src/document/05/223307
05	223308	09/20/2004	IDEM LETTER RE: IDEM'S CONCURRENCE WITH EPA'S ROD AMENDMENT FOR HIMCO SITE	2	https://semspub.epa.gov/src/document/05/223308
05	925595	09/15/2004	REDACTED AMENDED RECORD OF DECISION (ROD) FOR THE HIMCO DUMP SITE	253	https://semspub.epa.gov/src/document/05/925595
05	222377	09/15/2004	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP - REMEDIAL AR - UPDATE #6	6	https://semspub.epa.gov/src/document/05/222377

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05	633191	09/01/2004	PLANNING FOR THE FUTURE: A REUSE PLANNING REPORT FOR THE HIMCO DUMP SUPERFUND SITE REPORT	61	https://semspub.epa.gov/src/document/05/633191
05	216841	08/11/2004	IDEM LETTER RE: IDEM'S FINAL LIST OF ARARS FOR THE 2004 ROD AMENDMENT FOR THE HIMCO DUMP SITE	2	https://semspub.epa.gov/src/document/05/216841
05	200104	08/19/2003	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP - REMEDIAL UPDATE #5	1	https://semspub.epa.gov/src/document/05/200104
05	963196	05/30/2003	[REDACTED] TRANSCRIPT OF PROCEEDINGS FOR 4/23/03 PUBLIC HEARING	242	https://semspub.epa.gov/src/document/05/963196
05	963199	05/30/2003	[REDACTED] TRANSCRIPT OF PROCEEDINGS OF APRIL 23, 2003 PUBLIC HEARING FOR HIMCO DUMP SITE	243	https://semspub.epa.gov/src/document/05/963199
05	963198	05/12/2003	[REDACTED] RESIDENT'S COMMENTS ON PROPOSED PLAN FOR HIMCO DUMP SITE	6	https://semspub.epa.gov/src/document/05/963198
05	222409	04/21/2003	CITY OF ELKHART LETTER RE: APRIL 23, 2003 PUBLIC HEARING ON THE HIMCO DUMP SITE	2	https://semspub.epa.gov/src/document/05/222409

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05	222408	04/16/2003	THE TRUTH NEWSPAPER: US EPA ANNOUNCES PUBLIC MEETING FOR THE HIMCO DUMP SUPERFUND SITE FOR APRIL 23, 2003	1	https://semspub.epa.gov/src/document/05/222408
05	200137	04/01/2003	EPA FACT SHEET - HIMCO DUMP CLEANUP PLAN, REVISED	12	https://semspub.epa.gov/src/document/05/200137
05	222406	04/01/2003	EPA FACT SHEET: EPA PROPOSES REVISED CLEANUP PLAN FOR HIMCO DUMP SITE	6	https://semspub.epa.gov/src/document/05/222406
05	449793	04/01/2003	EPA NEWSLETTER: HIMCO DUMP CLEANUP PLAN REVISED	12	https://semspub.epa.gov/src/document/05/449793
05	200107	12/01/2002	SUPPLEMENTAL SITE INVESTIGATIONS/SITE CHARACTERIZATION REPORT VOLUME 3 OF 4 APPENDIX I	1517	https://semspub.epa.gov/src/document/05/200107
05	200108	12/01/2002	SUPPLEMENTAL SITE INVESTIGATIONS/SITE CHARACTERIZATION REPORT VOLUME 4 OF 4 APPENDIX J-M	388	https://semspub.epa.gov/src/document/05/200108
05	925589	12/01/2002	REDACTED SUPPLEMENTAL SITE INVESTIGATIONS/SITE CHARACTERIZATION REPORT VOLUME 1 OF 4	344	https://semspub.epa.gov/src/document/05/925589

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05	222394	08/01/2002	ELKHART REDEVELOPMENT COMMISSION - ECONOMIC BUSINESS PLAN FOR ELKHART AEROPLEX BUSINESS PARK	7	https://semspub.epa.gov/src/document/05/222394
05	222391	05/14/2001	US DEPT OF HEALTH & HUMAN SERVICES/ATSDR - HEALTH CONSULTATION: REVIEW OF RESIDENTIAL WELL WATER SAMPLING DATA	20	https://semspub.epa.gov/src/document/05/222391
05	281267	09/01/2000	USACE - REVISION TO HIMCO DUMP/CONSTRUCTION DEBRIS AREA SUPPLEMENTAL HUMAN HEALTH RISK ASSESSMENT	76	https://semspub.epa.gov/src/document/05/281267
05	222385	04/04/2000	EPA MEMO RE: RESIDENTIAL GROUNDWATER SAMPLING REPORT	2	https://semspub.epa.gov/src/document/05/222385
05	222386	04/04/2000	EPA/CRL - -ICP FINAL RESULTS REPORT FOR HIMCO DUMP SITE	14	https://semspub.epa.gov/src/document/05/222386
05	222384	03/30/2000	EPA MEMO RE: PRELIMINARY GEOPHYSICAL LOGGINH RESULTS FOR HIMCO DUMP W/ATTACHMENTS	4	https://semspub.epa.gov/src/document/05/222384

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05	200013	01/01/2000	PHOTOGRAPHS RANGING VARIOUS DATES	16	https://semspub.epa.gov/src/document/05/200013
05	943338	09/08/1999	EPA ACTION MEMORANDUM: AUTHORIZATION TO EXTEND PERIOD OF PERFORMANCE FOR REMEDIAL DESIGN & REQUEST IAG AMENDMENT TO FUND REMAINDER OF SUPPLEMENTAL SITE INVESTIGATION & RISK ASSESSMENT - INTERAGENCY AGREEMENT # DW96947722-01-5	4	https://semspub.epa.gov/src/document/05/943338
05	478438	05/01/1999	ELKHART COUNTY - GROUND WATER PROTECTION ORDINANCE	93	https://semspub.epa.gov/src/document/05/478438
05	222381	04/14/1999	IN STATE DEPT OF HEALTH / ATSDR - PUBLIC HEALTH ASSESSMENT FOR HIMCO DUMP	16	https://semspub.epa.gov/src/document/05/222381
05	478435	12/23/1998	US DEPT OF HEALTH & HUMAN SERVICES - PUBLIC HEALTH ASSESSMENT (INITIAL RELEASE)	20	https://semspub.epa.gov/src/document/05/478435
05	200156	05/12/1998	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP - REMEDIAL UPDATE #4	1	https://semspub.epa.gov/src/document/05/200156
05	200132	04/01/1998	100% DESIGN POST-CLOSURE OPERATIONS MAINTENANCE & MONITORING PLAN	168	https://semspub.epa.gov/src/document/05/200132

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05	200136	04/01/1998	100% DESIGN CONSTRUCTION QUALITY ASSURANCE PLAN	74	https://semspub.epa.gov/src/document/05/200136
05	200131	04/01/1998	100% SPECIFICATIONS FOR HIMCO DUMP SITE FINAL LANDFILL CLOSURE	453	https://semspub.epa.gov/src/document/05/200131
05	200164	08/21/1996	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP - REMEDIAL UPDATE #3	1	https://semspub.epa.gov/src/document/05/200164
05	222380	06/26/1996	ENVIRON - ASSESSMENT OF GROUNDWATER QUALITY NEAR HIMCO DUMP SITE	61	https://semspub.epa.gov/src/document/05/222380
05	200157	04/29/1996	REPORT: PRELIMINARY ESTIMATE-MODIFICATION TO ROD	22	https://semspub.epa.gov/src/document/05/200157
05	200158	04/10/1996	CONVERSATION RECORD WITH M. MACHLAN (CITY OF ELKHART) RE: CITY ORDINANCES REQUIRING WATER MAIN CONNECTION	1	https://semspub.epa.gov/src/document/05/200158
05	925591	03/01/1996	REDACTED FINAL PRE-DESIGN TECHNICAL MEMORANDUM	307	https://semspub.epa.gov/src/document/05/925591
05	925592	01/01/1996	REDACTED REPORT: CONSTRUCTION DEBRIS AREA-IMPACT TO ADJACENT PROPERTIES	37	https://semspub.epa.gov/src/document/05/925592

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05	200162	11/08/1995	LETTER RE: US EPA'S REQUEST FOR MEETING WITH RESIDENTS AFFECTED BY SELECTED REMEDY (REDACTED)	2	https://semspub.epa.gov/src/document/05/200162
05	200163	08/31/1995	REPORT: PASSIVE SOIL GAS SURVEY APPENDIX C	56	https://semspub.epa.gov/src/document/05/200163
05	478562	07/01/1995	USACE - FINAL WORK PLAN FOR PREDESIGN FIELD ACTIVITIES (APPROVED 08/04/95)	203	https://semspub.epa.gov/src/document/05/478562
05	200155	09/30/1993	RECORD OF DECISION (ROD)(SIGNED) - HIMCO DUMP	84	https://semspub.epa.gov/src/document/05/200155
05	200139	09/30/1993	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP - REMEDIAL UPDATE #2	2	https://semspub.epa.gov/src/document/05/200139
05	222379	09/30/1993	RECORD OF DECISION (ROD) (SIGNED) - HIMCO DUMP	75	https://semspub.epa.gov/src/document/05/222379
05	480982	12/02/1992	EPA LETTER RE: ADMINISTRATIVE RECORD FILE FOR PLACEMENT IN ELKHART PUBLIC LIBRARY	3	https://semspub.epa.gov/src/document/05/480982

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05	200012	11/30/1992	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP - REMOVAL UPDATE #5 (PHASE 2)	2	https://semspub.epa.gov/src/document/05/200012
05	200141	10/29/1992	TRANSCRIPT OF 10/6/92 PUBLIC MEETING RE: PROPOSED RECORD OF DECISION (ROD)	97	https://semspub.epa.gov/src/document/05/200141
05	963197	10/01/1992	[REDACTED] VARIOUS CITIZENS & CITIZEN GROUP'S PUBLIC COMMENTS ON PROPOSED PLAN	11	https://semspub.epa.gov/src/document/05/963197
05	200074	09/29/1992	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP - REMEDIAL UPDATE #1	4	https://semspub.epa.gov/src/document/05/200074
05	481098	09/28/1992	EPA LETTER RE: TRANSMITTAL OF ADMINISTRATIVE RECORD FILE FOR UPDATE #1	6	https://semspub.epa.gov/src/document/05/481098
05	925583	09/01/1992	REDACTED VOLUME 1 FEASIBILITY STUDY REPORT	178	https://semspub.epa.gov/src/document/05/925583
05	200056	09/01/1992	VOLUME 2 FINAL FEASIBILITY STUDY REPORT APPENDICES A, B	183	https://semspub.epa.gov/src/document/05/200056
05	200053	09/01/1992	PROPOSED PLAN	32	https://semspub.epa.gov/src/document/05/200053
05	200008	08/27/1992	IMMEDIATE REMOVAL ACTION SUMMARY REPORT	85	https://semspub.epa.gov/src/document/05/200008
05	200059	08/27/1992	COVER LETTER & IMMEDIATE REMOVAL ACTION SUMMARY REPORT	95	https://semspub.epa.gov/src/document/05/200059

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05	925584	08/01/1992	REDACTED REMEDIAL INVESTIGATION REPORT VOLUME 3 APPENDICES B (PHASE II) & C	250	https://semspub.epa.gov/src/document/05/925584
05	925585	08/01/1992	REDACTED REMEDIAL INVESTIGATION REPORT VOLUME 2 APPENDICES A & B	386	https://semspub.epa.gov/src/document/05/925585
05	925586	08/01/1992	REDACTED FINAL REMEDIAL INVESTIGATION REPORT: VOL. 1	200	https://semspub.epa.gov/src/document/05/925586
05	200055	08/01/1992	VOLUME 5 FINAL REMEDIAL INVESTIGATION REPORT APPENDICES E1, E2, F	151	https://semspub.epa.gov/src/document/05/200055
05	200058	08/01/1992	ADDENDUM TO APPENDIX D (REMEDIAL INVESTIGATION REPORT) ANALYTICAL CHEMISTRY DATA TALBES FOR RESIDENTIAL WELLS	10	https://semspub.epa.gov/src/document/05/200058
05	200060	08/01/1992	REMEDIAL INVESTIGATION REPORT VOLUME 4 APPENDIX D	387	https://semspub.epa.gov/src/document/05/200060
05	925582	08/01/1992	REDACTED VOLUME 5 FINAL REMEDIAL INVESTIGATION REPORT APPENDICES E1, E2, F	457	https://semspub.epa.gov/src/document/05/925582
05	478557	07/29/1992	LIFE SYSTEMS INC - BASELINE RISK HEALTH ASSESSMENT - HUMAN HEALTH EVALUATION	449	https://semspub.epa.gov/src/document/05/478557

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05	200014	07/21/1992	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP - REMOVAL UPDATE #4 (PHASE 2)	2	https://semspub.epa.gov/src/document/05/200014
05	925578	06/17/1992	REDACTED SITE ASSESSMENT REPORT	38	https://semspub.epa.gov/src/document/05/925578
05	200010	06/08/1992	FINAL POLLUTION REPORT (POLREP)	3	https://semspub.epa.gov/src/document/05/200010
05	481018	05/26/1992	POLLUTION REPORT (POLREP) - #1	3	https://semspub.epa.gov/src/document/05/481018
05	200021	05/15/1992	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP - REMOVAL UPDATE #2 (PHASE 2)	2	https://semspub.epa.gov/src/document/05/200021
05	200066	05/01/1992	IMMEDIATE REMOVAL ACTION WORK PLAN	17	https://semspub.epa.gov/src/document/05/200066
05	200067	05/01/1992	FACT SHEET	2	https://semspub.epa.gov/src/document/05/200067
05	200018	03/27/1992	TL5 LEACHATE REPORT	20	https://semspub.epa.gov/src/document/05/200018
05	200007	03/26/1992	MEMO - TL5 LEACHATE ANALYTICAL RESULTS	2	https://semspub.epa.gov/src/document/05/200007
05	200019	03/26/1992	MEMORANDUM - NPL SITE REMOVAL ASSESSMENT	1	https://semspub.epa.gov/src/document/05/200019
05	481136	03/02/1992	EPA LETTER RE: TRANSMITTAL OF ADMINISTRATIVE RECORD FILE	5	https://semspub.epa.gov/src/document/05/481136
05	200006	10/01/1991	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP - REMEDIAL ORIGINAL	2	https://semspub.epa.gov/src/document/05/200006

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05	200078	07/30/1991	MEMO - APPROVAL OF FIRST REVISION QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM	4	https://semspub.epa.gov/src/document/05/200078
05	200033	07/01/1991	DONOHUE & ASSOCIATES - ADDENDUM 2 FIELD SAMPLING PLAN, VOLUME 2 - RI/FS	51	https://semspub.epa.gov/src/document/05/200033
05	200083	07/01/1991	DONOHUE - ADDENDUM TO FINAL QUALITY ASSURANCE PROJECT PLAN (QAPP), VOLUME 3	157	https://semspub.epa.gov/src/document/05/200083
05	925581	07/01/1991	REDACTED ADDENDUM I PHASE II WORK PLAN	61	https://semspub.epa.gov/src/document/05/925581
05	200022	11/06/1990	EPA MEMO RE: REQUEST FOR REMOVAL ACTION AT RESIDENCES ADJACENT TO HIMCO DUMP (REDACTED)	9	https://semspub.epa.gov/src/document/05/200022
05	481144	10/17/1990	EPA LETTER RE: TRANSMITTAL OF ADMINISTRATIVE RECORD FILE	1	https://semspub.epa.gov/src/document/05/481144
05	200016	09/06/1990	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP - REMOVAL UPDATE #3 (PHASE 2)	2	https://semspub.epa.gov/src/document/05/200016
05	200023	09/06/1990	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP - REMOVAL UPDATE #1	2	https://semspub.epa.gov/src/document/05/200023
05	200028	09/06/1990	ADMINISTRATIVE RECORD SITE INDEX - HIMCO DUMP - REMOVAL ORIGINAL	2	https://semspub.epa.gov/src/document/05/200028

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11	963194	06/01/1990	[REDACTED] FINAL COMMUNITY RELATIONS PLAN	33	https://semspub.epa.gov/src/document/05/963194
05	189635	02/21/1990	NPL FEDERAL REGISTER NOTICE	21	https://semspub.epa.gov/src/document/11/189635
05	200085	03/01/1989	PRELIMINARY HEALTH ASSESSMENT	9	https://semspub.epa.gov/src/document/05/200085
05	943336	Undated	EPA ACTION MEMORANDUM: AUTHORIZATION TO EXTEND PERIOD OF PERFORMANCE FOR REMEDIAL DESIGN & REQUEST IAG AMENDMENT TO FUND REMAINDER OF SUPPLEMENTAL SITE INVESTIGATION & RISK ASSESSMENT - INTERAGENCY AGREEMENT # DW96947722-01-4	3	https://semspub.epa.gov/src/document/05/943336
05	943343	Undated	EPA ACTION MEMORANDUM: AUTHORIZATION TO EXTEND PERIOD OF PERFORMANCE FOR COMPLETION OF SUPPLEMENTAL GROUNDWATER INVESTIGATION FOR RESIDENTS LIVING EAST & SOUTHEAST OF HIMCO DUMP SUPERFUND SITE - INTERAGENCY AGREEMENT # DW96947722-01-7	3	https://semspub.epa.gov/src/document/05/943343

APPENDIX B: IDEM STATE LETTER OF CONCURRENCE



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

January 26, 2022

Ms. Debra Shore
Regional Administrator
US EPA Region V
77 West Jackson St.
Mail Code: R-19J
Chicago, IL 60604

Dear Ms. Shore:

Re: Partial Deletion of the Land/Soil Portion of the
Landfill Property and 47
Adjacent/Downgradient Parcels at
Himco Dump Superfund Site,
Elkhart, IN

Indiana Department of Environmental Management (IDEM) staff have reviewed the draft Site-Specific Justification for Partial Deletion from the National Priorities List for the Land/Soil Portion of the Landfill Property and 47 Adjacent/Downgradient Parcels documents transmitted electronically on January 18, 2022. IDEM staff agree that the remedial action objectives outlined in the 1993 Record of Decision (ROD) and 2004 ROD Amendment have been met and the parcels outlined in the document qualify for deletion from the National Priorities List.

If my staff or I can provide any further assistance in this matter, please let me know.

Sincerely,

Peggy Dorsey,
Assistant Commissioner,
Office of Land Quality

JHF:jhf

cc: Rex Osborn, IDEM
Karen Cibulskis, U.S. EPA
Jessica Fliss, IDEM
William Murray, U.S. EPA