SIXTH FIVE-YEAR REVIEW REPORT FOR MIDCO I SUPERFUND SITE LAKE COUNTY, INDIANA

Prepared By

U.S. Environmental Protection Agency
Region 5
Chicago, Illinois

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X Douglas Ballotti

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

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LIST OF ABBREVIATIONS & ACRONYMS

1,4D	1,4-Dioxane
ARAR	Applicable or Relevant and Appropriate Requirement
BETX	benzene, ethylbenzene, toluene, and xylene
bgs	below ground surface
CALs	cleanup action levels
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIC	Community Involvement Coordinator
COCs	contaminants of concern
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
FYR	Five-Year Review
GWCALs	groundwater cleanup action levels
GWETS	groundwater extraction and treatment system
ICs	Institutional Controls
ICIAP	Institutional Controls Implementation and Assurance Plan
IDEM	Indiana Department of Environmental Management
INDOT	Indiana Department of Transportation
MACs	maximum allowable concentrations
MCLs	Maximum Contaminant Levels
MIDCO II	MIDCO II Superfund Site
MNA	monitored natural attenuation
MRC	MIDCO Remedial Corporation
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OU	operable unit
PAHs	polynuclear (polycyclic) aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PCP	pentachlorophenol
PRP	Potentially Responsible Party
PFAS	Per- and polyfluoroalkyl substances
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctanesulfonic acid
RAOs	Remedial Action Objectives
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
S/S	Solidification/stabilization
Site	MIDCO I Superfund Site

SOW	Statement of Work
SVE	soil vapor extraction
mg/L	milligrams per liter
µg/L	micrograms per liter
UU/UE	Unlimited Use and Unrestricted Exposure
VOCs	volatile organic compounds

I. INTRODUCTION

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

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

This is the sixth FYR for the MIDCO I Superfund Site ("Site"). The triggering action for this **statutory** review is the completion date of the previous FYR, September 12, 2019. The FYR has been prepared due to the fact that hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of three operable units (OUs), all of which are addressed in this FYR. OU1 addresses the groundwater remedy, OU2 addresses the soil and sediment remedy, and OU3 addresses the final cover for the Site.

The MIDCO I Superfund Site FYR was led by Jeffrey A. Dewey, EPA Remedial Project Manager (RPM). Participants included Karen Chen, EPA Community Involvement Coordinator; Amy Gahala, United States Geological Survey Hydrologist (technical adviser to EPA); Matthew LeFauve, EPA Ecological Risk Assessor; and Stephanie Andrews, the Indiana Department of Environmental Management (IDEM) Project Manager. The MIDCO Remedial Corporation (MRC) was notified of the initiation of the FYR. The review began on 9/8/2023.

Site Background

The Site's source property occupies approximately four acres located at 7400 West 15th Avenue in Gary, Lake County, Indiana (see Figure 1 in Appendix B), but the waste management area and perimeter fence has been extended to enclose approximately seven acres that include the groundwater treatment plant and contaminated sediment areas. The Site is in an area of mixed use for commerce and light industry. It is within 1,500 and 3,000 feet of residential neighborhoods in Hammond and Gary, Indiana, respectively.

The Site is bordered on the west by an Indiana Department of Transportation (INDOT) salt storage facility, on the north by the 9th Avenue Dump Superfund Site, on the east by Gary Material Supply Company, and on the south by commercial buildings. The Site is approximately 3.7 miles south of Lake Michigan and lies halfway between the Grand Calumet River and the Little Calumet River. The Calumet aquifer is approximately 30 feet thick at the Site and is underlain by 110 feet of silty clay and silt loam. Use of the Calumet aquifer is minimal because the predominant source of residential and industrial use water in the area is Lake Michigan.

In the 1970s, the Site was used for industrial waste storage, recycling, and disposal. In 1976 a large fire

destroyed an estimated 14,000 drums containing chemical wastes, with an estimated additional 14,000 drums brought to the Site from 1977 to 1979. The operations at the Site resulted in soil, sediment, and groundwater contamination. EPA placed the Site on the National Priorities List (NPL) in 1983.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: MIDCO I		
EPA ID: IND980615421		
Region: 5	**State:** IN	**City/County:** Gary/Lake County
SITE STATUS		
NPL Status: Final		
Multiple OUs? Yes	**Has the site achieved construction completion?** Yes	
REVIEW STATUS		
Lead agency: EPA ***[If "Other Federal Agency", enter Agency name]*:**		
Author name (Federal or State Project Manager): Jeffrey A. Dewey		
Author affiliation: EPA Region 5		
Review period: 9/8/2023 – 3/22/2024		
Date of site inspection: 11/9/2023		
Type of review: Statutory		
Review number: 6		
Triggering action date: 9/12/2019		
Due date *(five years after triggering action date)*: 9/12/2024		

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

The following contaminants of concern (COCs) have been identified at the Site: volatile organic compounds (VOCs); semivolatile organic compounds, such as polynuclear (polycyclic) aromatic hydrocarbons (PAHs); pesticides; polychlorinated biphenyls (PCBs); and inorganic constituents, including lead and cyanide. The full list of COCs requiring remediation in soil, sediment, surface water, and groundwater for the Site is found in Table 1 below.

The December 1987 Remedial Investigation (RI) for the Site included the evaluation of the Site hydrogeology, as well as extensive sampling of groundwater, source area subsurface soils, and surface sediments in the surrounding Site wetlands (1987 Geosciences Inc & ERM Inc). The RI demonstrated that the source area soils and nearby groundwater were highly contaminated and presented significant human health risks via ingestion of groundwater or soils for to nearby property owners (as of 1987) and future residential use of the Site if the Site risks were not addressed. In addition, the ecological risk assessment demonstrated risks to biota including fish, crayfish, snapping turtles, small mammals, and earthworms in the vicinity of the Site. It was determined that continued migration of contamination in groundwater could eventually reach down-gradient residential wells, and therefore needed to be addressed with response actions.

As presented in the 1987 RI, due to the presence of the nearby INDOT salt storage facility which bounds the West side of the Site and is hydrologically upgradient of the Site, a limited portion of the Calumet aquifer in the immediate vicinity of the Site is highly saline as a result of sodium chloride discharges. As such, the aquifer surrounding the Site is being treated as a Class 2b potential drinking water aquifer due to its salinity. Chloride is detected as high as 15,000 milligrams per liter (mg/L) in groundwater below the Site (1987 RI by Geosciences, Figure 5.24 PDF page 309). Ocean water contains approximately 20,000 mg/L chloride.

Response Actions

In 1981, EPA installed a fence around the initial source area of the Site. In 1982, EPA conducted a three-phase time-critical removal action to remove and send off-site for disposal all surficial wastes (including thousands of drums and a number of tanks) and the top 6 to 12 inches of soil. EPA installed an interim clay cover over the Site.

EPA selected a remedial action for the Site in a 1989 Record of Decision (ROD) (1989 EPA) and made fundamental changes to the selected remedy in a 1992 ROD Amendment (1992 EPA). EPA issued four subsequent Explanations of Significant Differences (ESDs) in 1996, 1999, 2004, and 2015 to document significant changes to the remedy. Most recently, EPA issued a 2022 ROD Amendment to fundamentally change the selected groundwater remedy at both this Site and the MIDCO II Superfund Site (MIDCO II) (2022 EPA).

The remedial action objectives (RAOs) for the selected remedial action in the 1992 ROD Amendment are as follows:

a. Eliminate direct contact threat from contaminated source area soil and sediments;
b. Treat the principal threat in soil to substantially reduce the threat of groundwater contamination and the direct contact threat;
c. Prevent off-site migration of contamination in groundwater;
d. Assure that contaminants do not adversely affect biota; and
e. Clean up groundwater to achieve groundwater cleanup action levels (GWCALs).

The 2022 ROD Amendment altered the RAOs for OU1, the groundwater cleanup remedy, for both this Site and MIDCO II as follows:

a. Protect human health by eliminating exposure via ingestion of COCs in groundwater above levels that pose an unacceptable risk; and

b. Restore groundwater to its anticipated beneficial use as a drinking water aquifer in a reasonable timeframe.

It is important to note that the original Site decision documents (1989 ROD, 1992 ROD Amendment, and subsequent ESDs) did not specify different Site OUs. Instead, OU designations (described in the *Status of Implementation* section below) were developed during the remedial design/remedial action phase to manage implementation of the remedy at the Site. The 2022 ROD Amendment is the first decision document to explicitly designate OUs.

The selected remedy for this Site in the 1989 ROD, as revised by the 1992 ROD Amendment and the four subsequent ESDs, includes the remedy components described below.

a. Excavation of contaminated sediments and soils in defined wetland areas to achieve cumulative risk-based (i.e. >1 x 10^{-6} cancer risk, >1.0 hazard index chronic noncancer risk, or >1.0 subchronic risk index) soil/sediment cleanup action levels (CALs) for sampling areas with contaminants identified above background, and consolidation on the Site property;
b. Construction, operation and maintenance (O&M), and monitoring of a groundwater pump-and-treat system to contain contaminated groundwater and achieve risk-based GWCALs;
c. Construction, O&M, and monitoring of a deep underground injection well at the Site property for disposal of the contaminated groundwater following treatment;
d. Construction of a groundwater barrier wall around the Site source area and pumping groundwater within the barrier wall to lower the water table;
e. Treatment of contaminated soil within the groundwater barrier wall by soil vapor extraction (SVE) to achieve at least a 97% reduction in VOCs;
f. Excavation or solidification/stabilization (S/S) of the soil most highly contaminated by metals and cyanide (risk index >50);
g. Construction of a final cover over soil and sediments left on-Site;
h. Implementation of access restrictions and deed restrictions; and
i. Long-term monitoring of the final cover, groundwater remedy, vertical barrier wall, and institutional and engineering controls (e.g. deed restrictions and perimeter fencing).

The 2022 ROD Amendment includes the following fundamental change to the remedy for OU1, groundwater remedy.

j. The selection of monitored natural attenuation (MNA) to replace pump-and-treat to address the remaining groundwater contamination.

The 2022 ROD Amendment also includes the following significant change to the remedy for OU1.

k. The selection of new cleanup standards for the groundwater COCs, changing from sample-specific GWCALs to parameter-specific cleanup levels (CLs) (see Table 1 below).

Table 1. Selected Groundwater Cleanup Levels (CLs) Record of Decision Amendment, September 2022 MIDCO I and MIDCO II Superfund Sites, Gary, Indiana			
Contaminant of Concern (COC)	**Selected Groundwater CL[1] (ug/L)**	**Source[1,2]**	**Notes**
Volatile Organic Compounds (VOCs)			
Acetone	18,000	Table A-6	
Benzene	5	MCL	Offsite source identified at MIDCO II to the northwest
2-Butanone (AKA methyl ethyl ketone)	5600	Table A-6	
Carbon tetrachloride	5	MCL	
Chlorobenzene	100	MCL	
Chloroform	80	Table A-6	
1,2-Dibromo-3-chloropropane	0.2	Table A-6	
1,2-Dibromoethane	0.05	Table A-6	
1,2-Dichlorobenzene (AKA o-dichlorobenzene)	600	MCL	
1,4-Dichlorobenzene (AKA p-dichlorobenzene)	75	MCL	
1,1-Dichloroethane	28	Table A-6	
1,2-Dichloroethane	5	MCL	
1,1-Dichloroethene	7	MCL	
cis-1,2-Dichloroethene	70	MCL	
trans-1,2-Dichloroethene	100	MCL	
1,2-Dichloropropane	5	MCL	
Ethyl benzene	700	MCL	Offsite source identified at MIDCO II to the northwest
Methylene chloride	5	Table A-6	
4-Methyl-2-pentanone (AKA methyl isobutyl ketone)	6,300	Table A-6	
Styrene	100	MCL	
1,1,2,2-Tetrachloroethane	0.76	Table A-6	
Tetrachloroethene	5	MCL	
Toluene	1,000	MCL	Offsite source identified at MIDCO II to the northwest
1,2,4-Trichlorobenzene	70	MCL	
1,1,1-Trichloroethane	200	MCL	
1,1,2-Trichloroethane	5	MCL	
Trichloroethene	5	MCL	

Vinyl chloride	2	MCL	
Xylenes, total	10,000	MCL	Offsite source identified at MIDCO II to the northwest
1,4 Dioxane (1,4D)	4.6	Table A-6	
Semi-Volatile Organic Compounds (SVOCs)			
Benzo(a)anthracene (AKA benz[a]anthracene, CAS 56-55-3)	0.3	Table A-6	
Benzo(b)fluoranthene	2.5	Table A-6	
Benzoic Acid	75,000	Table A-6	
Benzo(a)pyrene	0.2	MCL	
bis(2-Ethylhexyl)phthalate	6	MCL	
Butylbenzylphthalate (AKA butyl benzyl phthalate, CAS 85-68-7)	160	Table A-6	
4-Chloroaniline (AKA p-Chloroaniline)	3.7	Table A-6	
Chrysene	250	Table A-6	
Di-n-butylphthalate (AKA dibutyl phthalate, CAS 84-74-2)	900	Table A-6	
Dibenz(a,h)anthracene	0.25	Table A-6	
2,4-Dichlorophenol	46	Table A-6	
2,4-Dimethylphenol	360	Table A-6	
Hexachlorobenzene	1	MCL	
Hexachlorocyclopentadiene	50	MCL	
Indeno(1,2,3-cd)pyrene	2.5	Table A-6	
Isophorone	780	Table A-6	
2-Methylphenol (AKA o-cresol, CAS 95-48-7)	930	Table A-6	
4-Methylphenol (AKA p-cresol, CAS 106-44-5)	370	Table A-6	
Naphthalene	1.2	Table A-6	
Nitrobenzene	1.4	Table A-6	
N-Nitrosodiphenylamine (CAS 86-30-6)	120	Table A-6	
Pentachlorophenol	1	MCL	Offsite source (likely a utility pole) identified at MIDCO I to the west
Phenol	5,800	Table A-6	
MIDCO I Inorganics			
Beryllium	4	MCL	
Chromium, total	100	MCL	
Chromium (VI)[2]	8	Bkgd	
Copper	1,300	MCL	
fluoride	4,000	MCL	
Selenium	50	MCL	

Thallium	2	MCL	
MIDCO II Inorganics			
Antimony	6	MCL	
Beryllium	4	MCL	
Copper	1,300	MCL	
Cyanide	200	MCL	
Lead	15	MCL	
Nickel	390	Table A-6	
Selenium	50	MCL	
Silver	94	Table A-6	
Zinc	6,000	Table A-6	
Pesticides, Herbicides, PCBs			
Aldrin	0.0092	Table A-6	
g-BHC (AKA Lindane)	0.2	MCL	
a-Chlordane	2.0	MCL	
g-Chlordane	2.0	MCL	
2,4-D (CAS 94-75-7)	70	MCL	
4,4'-DDT	2.3	Table A-6	
Dieldrin	0.018	Table A-6	
Dinoseb	7	MCL	
Endrin	2	MCL	
Heptachlor	0.4	MCL	
Heptachlor epoxide	0.2	MCL	
Methoxychlor	40	MCL	
Toxaphene	3	MCL	
2,4,5-TP (AKA Silvex)	50	MCL	
PCBs	0.5	MCL	

Notes
1 - The selected groundwater cleanup levels (CLs) are the maximum contaminant level (MCL) per the federal Primary Drinking Water Standards. If no MCL has been established, then the Indiana Remedial Cleanup Guide for the Groundwater Residential Tap pathway limit per the March 2022 Table A-6 is used, and noted as 'Table A-6' in the Source column.
2 - If a background value from the 1992 Consent Decree and associated Scope of Work is greater than the MCL or the Table A-6 value, then that background value is used as the CL and noted as 'Bkgd' in the Source column. Note that the only such value is for Chromium (VI) at MIDCO I.
AKA - 'Also know as', which provides an alternate common name for select contaminants for clarity.
CAS - Chemical Abstracts Service unique identification number, which has been provided for select contaminants for clarity.

This table has been prepared by EPA Region 5 Superfund & Emergency Management Division for Record of Decision Amendment, MIDCO I and MIDCO II Superfund Sites, September 2022.

An updated list of Site-specific background constituents was finalized in a statistical analysis completed in 2012 (Arcadis, 2012). The purpose of this analysis was to identify background-related inorganic

constituents detected in Site groundwater during five annual monitoring events (2005 to 2011). Based on this document and the 2015 ESD, the following constituents were excluded from well-by-well cumulative risk calculations at the MIDCO I Site: arsenic, barium, cadmium, chromium, manganese, mercury, thallium, vanadium, and iron. The 2015 ESD also added 1,4-Dioxane (1,4D) as a COC at the Site.

Status of Implementation

EPA, the State of Indiana, and a number of Settling Defendants entered into a 1992 Consent Decree (CD) for the design and implementation of the selected remedy at the Site. The CD included a Statement of Work (SOW) that described the work to be completed. The Settling Defendants formed the MIDCO Remedial Corporation (MRC) to complete the required remedial actions.

The remedial action work as decided in the 1989 ROD, 1992 ROD Amendment, four following ESDs at the Site are complete as summarized in the *Remedial Action Report, Revision 1* (AECOM, 2017). A brief chronology summarizing implementation of the various remedy components is below, followed by a more detailed description of remedy implementation organized by OU.

- Wetland mitigation settlements in 1993;
- interim sediment removal operations in 1993;
- construction of the groundwater extraction and treatment system (GWETS) from 1992-1996, with startup of the system in 1997;
- installation of a groundwater barrier wall (bentonite slurry wall) surrounding the source area in late 2003;
- construction of the SVE system in 2005-2006, with startup and operation of the SVE system in 2006 and completion in 2010 after achieving 97% reduction in baseline organic vapors;
- continued operation of the SVE system from 2010 to 2013 – this was performed on a voluntary basis by the MRC to further reduce organic vapors within the barrier wall prior to final remedial construction activities;
- shutdown of the GWETS in 2010 to allow for an evaluation of MNA;
- from 2014 to 2016, installation of groundwater collection piping within the barrier wall, soil stabilization treatment in place of soil excavation, sediment cap construction and final cover construction; and
- from 2022 until present day, MNA to achieve groundwater CLs.

The remedial action work included within each OU at the Site is described below.

OU1 - Groundwater Extraction, Treatment and Deep Well Injection

The groundwater extraction, treatment, and deep underground well injection system was constructed during 1992-1996, in accordance with the *Final Design Package, Ground Water Remediation System, Final Design Report* (ERM, 1994) and began operation in 1997. In 2001, MRC constructed an expansion to the pump-and-treat system to improve groundwater capture at the Site. After the Site groundwater was treated via combined hydrogen peroxide and ultraviolet radiation followed by air stripping to meet the maximum allowable concentrations (MACs) for deep-well injection, it was combined with the treated groundwater from MIDCO II (which arrived at this Site via an underground pipeline), and

pumped to the deep injection well located on property adjacent to this Site. Continuous operation of the GWETS occurred from 1997 to 2010 when it was temporarily shut down to allow MRC to conduct an MNA evaluation for groundwater. MRC submitted a report, titled *Monitored Natural Attenuation Groundwater Remedy Demonstration, MIDCO I and II, Gary, Indiana* (AECOM, 2018), for EPA review that described the lines of evidence and other Site characteristics that indicated MNA is a feasible remedy at the Site. In 2022, EPA issued a ROD Amendment to select MNA as the final remedy to treat groundwater contamination at the Site. Currently, EPA and MRC are negotiating modifications to the SOW in the 1992 CD, which will finalize the framework by which MNA will be conducted and completed.

OU2 - Soil and Sediment Treatment and Excavation

During 2002-2003, MRC designed the vertical groundwater barrier wall around the source area soils to a depth of approximately 33 feet and with a hydraulic conductivity of $1x10^{-7}$ centimeters per second (cm/s). In late 2003, MRC constructed the barrier wall and started dewatering within the barrier wall to improve barrier wall and future SVE function. During 2003-2005, MRC designed the SVE system. MRC constructed the SVE system during 2005-2006, and the system began operation in March 2006. Although SVE achieved performance standards (>97% reduction in baseline organic vapors) in 2010, MRC continued to operate the system voluntarily until its shutdown in May 2013. Vapors collected by the SVE system were destroyed by a thermal oxidation system.

In addition to construction activities that addressed soil, interim sediment excavation activities were completed in 1993. The excavated sediments were placed under the interim cover of the Site source area. Residual sediment risk assessments were completed in 2011 and updated in 2014 to determine whether any additional actions were necessary in the excavated sediment areas. EPA subsequently determined that the excavated sediment areas required a soil cover. The required soil cover was implemented as part of OU3 (see below).

Following SVE treatment, the 2004 ESD and Section V.C.2 of the 1992 ROD Amendment selected a soil S/S remedy to replace the excavation and off-site disposal of source area soils contaminated with metals and cyanide (EPA, 2004). The revised soil remedy addressed areas where the groundwater risk factor criterion for metals and cyanide was greater than 50, as defined in the 2004 ESD. In September 2014, pre-treatment of specific soil grids was completed using in-situ chemical oxidation to treat and substantially reduce leachate concentrations for cyanide prior to soil S/S treatments. AECOM completed the final in-situ soil S/S treatment using Portland cement in November 2014. Following completion of the soil S/S activities, leachate concentrations for metals and cyanide were significantly below the 2004 ESD groundwater risk factor criterion of 50, indicating the soil S/S treatment activities were successful. The Remedial Action Report for OU2 was submitted by AECOM and approved by EPA in 2017.

OU3 - Final Site Cover

The Site final cover was installed over the portion of the Site identified in the SOW and the *MIDCO I Site Closure Plan* (ARCADIS, 2011). The final cover extends slightly beyond the barrier wall to the limits of the former MIDCO I facility fence line, which encompasses an area of 3.9 acres. The final cover

minimizes the infiltration of precipitation through the soil and serves as a direct contact barrier to human and animal exposure pathways. In January 2016, AECOM completed construction of the soil cover over contaminated sediment areas as part of the final Site cover, in accordance with the final design plans and Construction Quality Assurance Plan. The final vegetation was successfully established based on an assessment conducted in early November 2016. The final site cover construction was completed as documented in the 2017 remedial action report (AECOM, 2017). The final cover consists of the following layers, from top to bottom:

- Minimum 24" soil protective layer comprised of topsoil to promote vegetative growth and a minimum 18" compacted clay protective layer;
- Double-sided geocomposite drainage layer; and
- 40-mil high-density polyethylene geomembrane.

Institutional Controls

Table 2 below summarizes institutional controls (ICs) that are either planned or already in place for the Site.

Table 2: Summary of Planned and/or Implemented ICs

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
On-Site Soils	Yes	Yes	MIDCO I (see Figure 2)	Prevent trespassing by installing a fence around the perimeter of the Site. Prohibit interference with the constructed remedy components.	IC instruments implemented include: Deed Restrictions, Consent for Access to Property agreements, and Deed Notices. For additional details regarding the IC instruments please see the MIDCO I ICIAP (AECOM 2017) and Tables 1-3 of the MIDCO I 2022 IC Report (AECOM, 2023) included as Appendix E.
On-Site Sediments	Yes	Yes	MIDCO I (see Figure 2)	Prevent trespassing by installing a fence around the perimeter of the Site. Prohibit excavation in sediment areas to protect final soil cover.	
On-Site Groundwater	Yes	Yes	MIDCO I (see Figure 2)	Prohibit consumptive use of groundwater within the plume areas until performance standards are achieved. Prohibit installation of wells.	

Off-Site Groundwater	Yes	Yes	MIDCO I (see Figure 2)	Prohibit drilling of new wells to be used as a source of potable water, require existing potable well users to connect to the City water system or if that is not possible potable water must be drawn from the deeper confined aquifer and not from a shallow unconsolidated aquifer.	City of Gary Ordinance (July 3, 2006)

A map of the area in which the ICs apply is shown in Figure 2 in Appendix B.

Status of Access Restrictions and ICs:
Along with the Site fencing to restrict access as described above, deed restrictions were implemented in 1993 for properties within the final cover area per the 1989 ROD and the 1992 ROD Amendment.

The 1992 and 1993 deed restrictions include one or more of the following elements:

- No consumptive or other use of the groundwater underlying the Property that could cause exposure of humans or animals to the contaminated groundwater underlying the Property.
- No residential, commercial, or agricultural use of the Property, including but not limited to, the construction, installation or use of any structures or buildings for residential, commercial, or agricultural purposes.
- No installation, removal, construction, or use of any buildings, wells, pipes, roads, ditches or any other structures at the Property, except as approved by EPA.
- No tampering with, or removal of, any containment or monitoring systems or remedial action work on the Property.
- No interference with the performance of work and remedial action, or with the maintenance of remedial measures approved by EPA and/or the United States District Court for the Northern District of Indiana.
- After the final approval by EPA of the completion of all remedial action work and achievement of all cleanup and performance standards at the MIDCO I Facility, all uses of the Property shall be consistent with the final remedial action implemented at the MIDCO I Facility.

Access agreements were obtained for the initially planned Site remedy in 1993. The completed final cover required access agreements for additional properties (see below for explanation). Deed restrictions were pursued for these parcels with the owners. In general, the access restrictions included the following provisions:

- The Authorized Persons shall have an irrevocable right of access upon the Property for the purpose of performing or monitoring performance of response actions until such time as cleanup and monitoring and maintenance activities have been completed at the Property.
- The Authorized Persons shall have the right to enter upon the Property to implement the remedial action selected by USEPA and take such response action as USEPA deems necessary.

- The Authorized Persons shall have the right to enter upon the Property to take samples from the soil, groundwater, and surface water as needed in furtherance of the remedial action.
- All tools, equipment, buildings, improvements and other property taken upon or placed upon the Property by or at the direction of the Authorized Persons shall remain the property of the Authorized Persons.
- The Authorized Persons shall have the right to patrol and police the Property during the period in which this irrevocable right of access is in effect.
- The parties hereto agree that this irrevocable right of access does not constitute a release of any claims.

Deed restrictions and access agreements were recorded with Lake County, Indiana in 1992 and 1993, and are included in Appendix A of the approved Institutional Controls Implementation and Assurance Plan (ICIAP) for the Site (AECOM 2017).

The original Site remedy described in the 1989 ROD did not require deed restrictions for parcels occupied by the contaminated sediment area, as full excavation was considered feasible at that time. EPA issued the March 2015 ESD to significantly change the sediment remedy to a sediment cover with ICs in the north and east portions of the Site. Deed restrictions, access agreements, and/or deed notices were recorded for all parcels with sediment covers in 2020 as described in Appendix E. The majority of these deed restrictions and access agreements were recorded with Lake County, Indiana in 2020 in a form acceptable to EPA and IDEM and in compliance with the CD. Deed notices were recorded in 2020 for all properties with remedy components where deed restrictions and access agreements could not be placed due to lack of property owner identification or agreement to the proposed terms. It should be noted that parcels at MIDCO I with remedy components and only deed notices are not recommended to be part of NPL deletions until deed restrictions and access agreements are recorded. The best efforts of the MRC and Settling Defendants to implement and secure future deed restrictions will be documented in the ICIAP annual report.

Finally, the City of Gary Ordinance No. 7930 was enacted in 2006, which restricts groundwater usage within the municipality. The ordinance was signed into law on July 3, 2006 to limit exposure to and consumption of potentially contaminated groundwater from the shallow unconsolidated groundwater within the municipality. The ordinance prohibited drilling of new potable water supply wells in the unconsolidated aquifer within the municipality. The ordinance also required all existing potable well users to connect to the municipal water (derived from Lake Michigan) within one year of the ordinance. If connection to the municipal water supply was not possible, feasible or impracticable, users must draw water from the deeper confined aquifer. No potable water wells are located at the Site and EPA is not aware of any non-compliance of the City of Gary Ordinance prohibiting potable water use from the unconfined aquifer surrounding the Site and throughout the municipality.

Current Compliance:

The final Site remedy engineering controls include: the final cover and barrier wall, sediment cap, and perimeter fencing. Site remedy inspections performed by AECOM at the Site on June 20, 2022, and December 14, 2022, confirmed that the integrity of the final cover and sediment cover areas, groundwater monitoring wells, perimeter fencing, and stormwater management facilities remain intact

and undamaged (AECOM, 2023). The FYR Site inspection performed by EPA on November 9, 2023, also confirmed these engineering controls remain intact, undamaged, and effective. The Site remains undeveloped except for the remedial features described herein. Thus, there are no known IC compliance issues at the Site.

IC Follow up Actions Needed:
Although most parcels at MIDCO I have deed restrictions and access agreements, there are several parcels that only have CERCLA 120(h) deed notices that inform the owner of the Site's history and contamination, but do not restrict activities that would interfere with the remedy's performance. The reason deed restrictions are not in place is due to an inability to identify or contact the current property owner. A list of parcels that only have CERCLA 120(h) deed notices can be found in Table 1 of the Annual Institutional Control Report (AECOM 2023 and Appendix E). The deed notices and other site-wide ICs (i.e. Gary Ordinance and perimeter fencing) are sufficient to ensure the remedy's protectiveness, unless new information changes that determination.

New monitoring wells are necessary to conduct MNA. ICs such as access agreements and deed restrictions may be needed if these new monitoring wells are installed on properties lacking access agreements and deed restrictions.

The 1,4D plume area may be migrating or increasing in size beyond previously understood limits given the recent 1,4D detection above the cleanup level on the eastern, sidegradient edge of the groundwater plume as presented further below. Pending the collection of additional groundwater data to evaluate such possible expansion, the ICIAP should be updated to include procedures for periodic reviews of governmental controls to confirm compliance of nearby properties with the municipal groundwater ordinance and to ensure that there are not any new exposure routes to affected areas of the unconsolidated aquifer.

Long Term Stewardship:
Long-term stewardship procedures are in place as part of the Site ICIAP (AECOM, 2017) and require annual evaluation of the ICs, based on semi-annual and annual inspection findings. The IC evaluation is to assess: (i) whether Site remedy engineering controls remain intact and undamaged, (ii) whether the use of the Site has conformed to recorded deed restrictions, and (iii) whether potential IC deficiencies exist. In addition, the evaluation is to assess whether recorded land use restrictions no longer apply and may be terminated, if feasible. Any changes to ICs will be documented.

Current parcel ownership, owner contact information, and title commitments will be verified by Chicago Title Insurance Company or an equivalent agency. American Land Trust Association title commitment documentation will be obtained every five years prior to EPA's FYR for the Site. In the event of transfer of ownership, deed restrictions recorded at the Registry of Deeds will be identified during the title search conducted by new owners prior to the transfer of the property. In the event of a property rental, it is the owner's responsibility to ensure that the tenant is informed of the recorded ICs.

During 2022, AECOM confirmed the ICs at the MIDCO I parcels were in conformance with recorded deed restrictions, absent of IC deficiencies, and absent of a need for IC modification or termination.

MIDCO I property ownership was reviewed in 2022; no parcels changed ownership between 2021 and 2022. The ten parcels have deed restrictions recorded with Lake County, Indiana. American Land Trust Association title commitment documentation was acquired for the Site's parcels to confirm any Site-related deed restrictions remain connected to their respective parcels.

Systems Operations/Operation & Maintenance

O&M activities continue to take place at the Site. O&M of the Site fence and final soil cover is performed on a yearly basis, and the records are available at the office of the MRC's current contractor, Ramboll. The groundwater pump-and-treat, SVE, and thermal oxidation systems have all been shut down, so active O&M of these remedy components is currently not required. O&M is required for Site components (wells, piezometers, etc.) necessary to implement MNA and required changes will be described in detail and added to the Site's O&M records following CD negotiations between MRC and EPA. No other changes related to O&M since the last FYR have occurred at the Site.

III. PROGRESS SINCE THE LAST REVIEW

This section includes the protectiveness determinations and statements from the last FYR as well as the recommendations from the last FYR and the status of those recommendations.

Table 3: Protectiveness Determinations/Statements from the 2019 FYR

OU #	Protectiveness Determination	Protectiveness Statement
1	Short-term Protective	The remedy at OU #1 currently protects human health and the environment because the groundwater pump-and-treat system operated until it reached its maximum effectiveness, and deed restrictions on some properties and a City of Gary ordinance prohibit residential usage of groundwater and serve to prevent exposure to the remaining groundwater contamination at the Site. In order for the remedy to be protective in the long term, the following actions need to be taken to ensure protectiveness: GWCAL waiver or modification of non MIDCO I site related constituents for iron, manganese, and pentachlorophenol; evaluate monitored natural attenuation to address low-level residual constituents in groundwater. Currently, there is a city ordinance in place preventing groundwater use.
2	Short-term Protective	The remedy at OU #2 currently protects human health and the environment because the remedial activities completed have adequately addressed all exposure pathways that could result in unacceptable risks to soil and sediment. These remedial activities included operation of the SVE system which was successful in achieving a 97% reduction of VOCs in the subsurface soil within the barrier wall, excavation of contaminated sediments and placement under a cap, excavation and/or in-situ treatment of contaminated soils, and

		placed a soil cover over previously excavated areas containing residual sediment concentrations. However, in order for the remedy to be protective in the long term, the following actions need to be taken to ensure protectiveness: additional ICs are being pursued for areas with constructed remedy components that were not contemplated or identified in the 1989 ROD, 1992 ROD Amendment, and subsequent ESDs but were added later.
3	Short-term Protective	The remedy at OU #3 currently protects human health and the environment because the remedial activities completed have adequately addressed all exposure pathways that could result in unacceptable risks to the areas of the Site covered by the final soil cap. These remedial activities included fencing, deed restrictions, and completion of the final multilayer soil cap to prevent contact with contaminated soils and sediment, including placing a soil cover over previously excavated areas containing residual sediment concentrations. However, in order for the remedy to be protective in the long term, the following actions need to be taken to ensure protectiveness: additional ICs are being pursued for areas with constructed remedy components that were not contemplated or identified in the 1989 ROD, 1992 ROD Amendment, and subsequent ESDs but were added later.
Sitewide	Short-term Protective	The remedy at the MIDCO I Site currently protects human health and the environment because the remedial activities completed at the Site have adequately addressed all exposure pathways that could result in unacceptable risks. These remedial activities included the following: operation of the groundwater pump-and-treat system until it reached its maximum effectiveness; operation of the SVE system to achieve a 97% reduction in VOCs in the subsurface; excavation of contaminated sediments and placement under a cap; excavation and/or in-situ treatment of contaminated soils; completion of a final multi-layer soil cap to prevent contact with contaminated soils and sediment, including placing a soil cover over previously excavated areas containing residual sediment concentrations; fencing to restrict access to the Site; and implementation of ICs including deed restrictions and a City of Gary ordinance. However, in order for the remedy to be protective in the long term, the following actions need to be taken to ensure protectiveness: GWCAL waiver or modification of non MIDCO I Site related constituents for iron, manganese, and pentachlorophenol; evaluate monitored natural

		attenuation to address low-level residual constituents in groundwater; additional ICs are being pursued for areas with constructed remedy components that were not contemplated or identified in the 1989 ROD, 1992 ROD Amendment, and subsequent ESDs but were added later.

Table 4: Status of Recommendations from the 2019 FYR

OU #	Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date (if applicable)
1	Unable to achieve all GWCALs due to off-site source of contamination.	GWCAL waiver or modification of non-MIDCO I related constituents for iron, manganese, and PCP.	Addressed in Next FYR	Iron, manganese, and several other contaminants identified as non-MIDCO I related were removed as groundwater COCs in the 2022 ROD Amendment. However, PCP has not yet been determined as an off-site source of contamination. This FYR includes an issue and recommendation addressing PCP.	9/16/2022
1	Groundwater pump-and-treat system has reached its maximum effectiveness at the MIDCO I Site.	Evaluate monitored natural attenuation to address low-level residual constituents in groundwater.	Completed	EPA Issued a ROD Amendment in 2022 to cease groundwater pump-and-treat and initiate monitored natural attenuation as the groundwater remedy.	9/16/2022
2 and 3	ICs needed for portions of the Site that now contain remedy components which were not contemplated in the original decision documents (1989 ROD and 1992 ROD Amendment).	Implement ICs, such as deed restrictions in a form acceptable to EPA and IDEM and in compliance with the CD and Site decision documents.	Completed	ICs in the form of access agreements, deed restrictions, and deed notices have been issued for all properties with remedy components.	9/28/2020

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

A public notice was made available by a newspaper posting in the Post-Tribune of northwest Indiana on 12/27/2023 and online at https://www.epa.gov/in/epa-begins-sixth-five-year-review-midco-i-superfund-site on 8/31/2023, stating that there was a FYR and inviting the public to submit any comments to EPA by 4/1/2024. No comments were received. The results of the review and the report

will be made available at the Site information repository located at the Site's online webpage https://www.epa.gov/superfund/midco-i and U.S. EPA Region 5 Library, 16th Floor, 77 W. Jackson Blvd., Chicago, IL 60604, open Monday - Friday, 8:30 a.m. to 3:00 p.m.

During the FYR process, interviews were conducted to document any perceived problems or successes with the remedy that has been implemented to date**.** The results of these interviews are summarized below.

EPA interviewed the AECOM project manager for the Site to discuss their concerns, community engagement, and recommendations at the Site. One concern they raised is flooding and area-wide stormwater drainage and routing issues due to 20-40 foot piles of debris at the eastward neighboring property where Gary Material Supply conducts operations. In 2020, representatives from Gary Material Supply, EPA, and IDEM convened to develop a solution to the flooding and drainage issues and review planning documents. To AECOM's knowledge, however, Gary Material Supply has taken no actions to resolve the flooding and drainage issues. Thus, the AECOM project manager recommended EPA reconnect with Gary Material Supply and/or the appropriate IDEM representative to discuss progress on the drainage issue. Flooding and poor drainage at the Site have prevented sampling of wells that would help delineate Site groundwater contaminants and assess whether MNA is meeting RAOs. EPA agrees that the flooding and drainage issue identified by the AECOM project manager poses a long-term threat to the Site remedy's protectiveness for OU1. Thus, EPA recommends Gary Material Supply, or the relevant IDEM staff member, is contacted to finalize plans that resolve the flooding and drainage issues at the Site and surrounding area.

EPA sent a brief Site summary to City of Gary, Indiana and proposed a virtual interview to discuss the current Site status and possible successes, problems, or unusual situations at the Site. However, EPA did not receive a reply to this communication.

Data Review

EPA's OU1 data review draws from several recent reports provided by AECOM/Ramboll and approved by EPA including, but not limited to, the *2022 Annual Groundwater Monitoring Report* (Ramboll Environ, 2023), the *2023 Annual Groundwater Monitoring Report* (Ramboll Environ, 2023), and the *2018 MNA Demonstration* (AECOM, 2018). All groundwater contamination and monitoring wells are in the unconsolidated upper aquifer, the Calumet Aquifer, of Gary, Indiana.

Groundwater Results Within the Containment Barrier Wall

It was demonstrated as part of the 2013 Groundwater Remedy Pre-Final Report that any potential leakage through the barrier wall under conservative hydraulic conditions would be insignificant (AECOM, 2013). The mean hydraulic head (601.32 ft) on the upgradient side (MW-4S) of the barrier wall was observed to be 0.49 feet higher than the mean groundwater elevation within the barrier wall from 2019 to 2022. The mean hydraulic head of shallow wells within the barrier wall (600.83 ft) was 1.06 ft higher than the mean hydraulic head (599.78 ft) immediately downgradient of the barrier wall from 2019-2022. The average distance between the barrier wall and the nearest downgradient monitoring wells is about 119 ft, giving a mean hydraulic gradient of 0.009 ft/ft. In a conservative case where transient water levels within the barrier wall are up to two feet higher than downgradient groundwater level outside the wall (creating a localized outward gradient), groundwater passing

through the barrier wall would contribute only 0.3% to the total volume of groundwater flowing around the wall and downgradient. Currently, groundwater levels within the barrier wall indicate that the barrier wall is performing within expectations.

According to the 2022 and 2023 Annual Monitoring Reports by Ramboll, wells within the containment barrier wall exhibited groundwater CL exceedances for at least one of the following COCs: vinyl chloride, 1,2-dichloroethane, benzene, ethyl benzene, toluene, xylenes, and 1,4D. This is similar to exceedances in the 2017 Annual Monitoring Report, which was used to assess Site protectiveness in the 2019 FYR (Ramboll Environ, 2018).

The concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) within the barrier wall have increased in wells MW-5S and MW-6S since pump and treat shutdown in 2010. Specifically, the concentration of total BTEX increased from 3.2 µg/L to 118 µg/L in MW-5S and from 47 µg/L to 103.5 µg/L in MW-6S between 2012 and 2022. In one deep well, MW-5D, vinyl chloride and cis-1,2-dichloroethene were previously undetectable in 2012 but have since increased to 3.4 and 11 µg/L respectively. The same wells within the barrier wall with steady increases in COC concentrations also have increasing 1,4D concentrations. For example, 1,4D concentrations in well MW-6S increased from 87 µg/L to 310 µg/L and in well MW-6D increased from 32 µg/L to 95 µg/L between 2012 and 2022. The 2023 groundwater monitoring results from within the barrier wall agree with these observed trends.

These steady increases in multiple wells within the barrier are unlikely to be caused by sporadic contaminant movement but may be caused by back diffusion from low permeability clay and silt geologic formations, such as the silty clay floor of the unconsolidated Calumet aquifer. The increasing concentrations of COCs do not pose a threat to human health or the environment because they are within the barrier wall and the barrier wall remains effective, but they indicate that MNA within the containment barrier wall may take longer than the 25 years estimated in the 2022 ROD Amendment. For this reason, groundwater contaminant dispersion and trend modeling should be conducted to generate an updated estimated time to achieve groundwater CLs within the barrier wall.

Groundwater Results Outside of the Containment Barrier Wall

The only COCs with CL exceedances outside the barrier wall are 1,4D and PCP. In general, the 1,4D concentrations at wells with CL exceedances outside of the containment barrier have remained stable or decreased over time.

Previously, the highest concentration of 1,4D outside the barrier wall has been consistently observed in deep well H-30 (83 µg/L in 2022 and 70 µg/L in 2023), which is located approximately 400 feet northeast of the barrier wall. Downgradient wells northeast of H-30 have historically remained below CLs indicating limited contaminant migration northeast of the barrier wall.

As recently identified in sampling performed in 2023, deep well O-30 located approximately 250 feet east of the containment barrier wall and sidegradient of the center of the 1-4D groundwater plume, contained the highest 1,4D concentration (120 µg/L) outside the barrier wall during the 2023 sampling event. Well O-30 had been inaccessible in recent years due to flooding. Other wells nearby or downgradient of O-30, including, N-10 and N-30, have remained flooded and were not able to be

sampled in 2023 to determine the eastern extent of 1-4D above CLs in this area. For the estimated area where 1,4D exceeds CLs in the shallow and deep portions of the unconsolidated aquifer see Figures 3 and 4, respectively. For a table with 1,4D concentrations over time see Table 5-6 in the 2023 Annual Monitoring Report (Ramboll Environ, 2024).

While further data collection is necessary to confirm the current 1,4D plume size per the recent 1,4D exceedance at sidegradient well O-30, no known exposures exist to the unconsolidated aquifer. The City of Gary Ordinance No. 7930 prohibits use of the contaminated, unconsolidated aquifer within the municipal limits. Potable water is either obtained from for the municipality (derived from Lake Michigan) or is to be obtained from a deeper, confined aquifer. The unconsolidated aquifer is not used at the Site and EPA is not aware of non-compliance of the ordinance at nearby downgradient properties or elsewhere within the municipality. Moreover, EPA reviewed historical documents for the Site and notes that as of 1989 there was only one private well downgradient of the current 1,4-dioxane plume and this well was over 1 mile away from the Site. Finally, given the location of well O-30 nearly four miles from the closest downgradient municipal boundary and the concentration of 1,4D detected in the monitoring well network, there is no expectation that 1,4D from the Site would be present above CLs in areas beyond where the municipal ordinance is in effect. As such, the remedy remains protective.

Further investigation is needed on the east portion of the 1-4D plume at and surrounding well O-30 to evaluate the eastern extent of the 1-4D plume. The cause of the flooding in this area should be addressed to allow for sampling the currently inaccessible wells in the vicinity of well O-30, otherwise new monitoring wells will need to be installed to obtain the required data. Updates to the ICIAP are also recommended to confirm continued compliance of nearby properties with the municipal ordinance prohibiting the use of the unconsolidated aquifer for potable use.

The other COC above CLs outside of the containment barrier wall is PCP at MW-4S located immediately west of the barrier wall along the western property line. This well is generally upgradient of the Site. This pesticide was historically observed in well MW-4S from 2010-2012 at concentrations ranging from 810 to 1,900 µg/L. In 2013 the pesticide was measured at 12 µg/L and remained at low concentrations until 2021 when it was again observed at an elevated concentration (720 µg/L) before dropping again in 2023 (12 µg/L). Wooden utility poles, particularly those produced in the mid to late 20th century, were commonly treated with PCP to prevent damage from fungus and insects. This sporadic release could be caused by one of two wooden utility poles that are located nearby well MW-4S. Further investigation is warranted to confirm the source of the detections at MW-4S. If an off-site source is confirmed, the COCs requiring further monitoring should be updated accordingly.

Site Inspection

The inspection of the Site was conducted on 11/9/2023. In attendance were Jeffrey Dewey of EPA, Stephanie Andrews of IDEM, Matthew Lefauve of EPA, Amy Gahala of the United States Geological Survey, Karen Chen of EPA, and Tat Ebihara of AECOM. The purpose of the inspection was to assess the protectiveness of the remedy.

The inspection found that OU2 and OU3 remedies, including but not limited to implemented ICs, the fencing and the soil cap, are well maintained and operating as intended by the site decision

documents. Furthermore, Site conditions have not changed since the 2019 FYR that would indicate these remedies are not protecting human health or the environment.

For OU1, the inspection found the current physical components of the groundwater remedy (i.e. monitoring wells and piezometers) are, for the most part, well maintained and operating as intended by the site decision documents. However, some issues were noted at the Site that may impact the Site's future protectiveness. One issue during the inspection was inaccessibility of wells O-10/O-30, G-10/G-30, and N-10/N-30 due to phragmites overgrowth, flooding, and unsafe conditions respectively. Following the inspection, AECOM and Ramboll attempted to access these wells and were able to reach O-10/O-30, but not the others. G-10/G-30 and N-10/N-30 are important for delineating the northeastern and eastern extent of 1,4D in deep groundwater and confirming the Site's groundwater flow direction. These wells need to be accessed and repaired or replaced to accurately assess the performance and protectiveness of the groundwater remedy by or before September 2025.

Another observed issue that could impact the ability of the current Site remedy to achieve CL for PCP was locating two utility poles near well MW-4S that may be an off-site source of PCP. Specifically, EPA's ecological risk assessor, Matthew Lefauve, examined each pole and noticed a dark coating on one that may be PCP. If one or both utility poles are the offsite source of PCP at the Site, then modification to COC listing for PCP should be considered.

Several other minor issues were identified with OU1 during the inspection, but these do not impact the Site's current or future protectiveness. These included two wells, MW-3S and B-10, that have loose internal PVC piping that indicates the well's seal may be compromised. These two wells should be assessed for repair or abandonment, if determined not needed, following discussions between EPA, State, and MRC. Another issue was the inconvenient accessibility of monitoring wells due to locks with multiple lock and key systems. One well's lock had evidence that a bolt cutter was used to try and gain access to the well. The Ramboll team did not encounter issues that prevented them from acquiring a groundwater sample at any well during the 2023 annual groundwater sampling event (report pending). Thus, addressing this issue with a single new locking system does not impact the Site's current or future protectiveness, but could improve the Site remedy's efficiency.

V. TECHNICAL ASSESSMENT

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

Question A Summary:

Yes. The majority of remedy components are functioning as intended by the decision documents. However, additional data and analysis is required to ensure the MNA groundwater remedy is functioning as intended by the decision documents. A summary of which Site components are and may not be functioning as intended is presented below.

Groundwater pump-and-treat system and deep well injection system (OU1): The pump-and-treat system was shut down in September 2010 because it had reached its maximum effectiveness. The pump-and-treat and deep well injection systems operated in compliance with all air emission and underground injection well requirements and achieved adequate groundwater capture while in

operation. The data indicated that VOCs and other contaminants in groundwater outside of the barrier wall were being remediated. The new groundwater remedy was decided to be MNA in the 2022 ROD Amendment.

Groundwater monitored natural attenuation (OU1): MNA was piloted starting in 2010 and was selected as the final remedy to address groundwater contamination by a 2022 ROD Amendment. However, MNA may not be performing as expected with contaminant concentrations increasing significantly in several monitoring wells within the barrier wall, and contaminant concentrations decreasing at a slower rate than initially calculated (see the Data Review subsection). Furthermore, 1,4D was detected at the eastern-most monitoring well at the Site (O-30). These unexpected results indicate additional monitoring wells towards the eastern portion of the Site are required to delineate the 1,4D plume. The results also may indicate MNA will take a significantly longer time to achieve cleanup goals than anticipated. EPA has provided a recommendation (i.e. – groundwater sampling, monitoring well installation, updated data analyses, groundwater modeling, and estimated cleanup timeframe) to address these concerns and ensure the Site remains protective in the future and achieves RAOs.

Soil and sediment excavation (OU2): There have been no changes in the soil and sediment excavation remedy or Site conditions since the previous FYR. Access controls, the Site fence, remain well maintained and effective. Thus, the remedy continues to function as intended by the decision documents.

Final soil cap (OU3): The final cover continues to minimize the infiltration of precipitation through the soil and acts as a direct contact barrier to prevent human exposure and/or animal exposure. The routine cap inspections and EPA's FYR Site inspection confirmed there were no changes in the remedy or Site conditions since the last FYR that would indicate the final soil cap is not effective. Thus, the final soil cap continues to function as intended by Site decision documents.

Access controls (OUs 1, 2, and 3): The Site fence currently protects public health exposure to contaminated soil and sediments and protects constructed remedy components. Routine inspections and EPA's FYR inspection confirmed there have been no changes in the implemented remedy or Site conditions since the previous FYR that indicate access controls are not effective. Thus, the access controls continue to function as intended by Site decision documents.

Institutional Controls: ICs in the form of deed restrictions, access agreements, and deed notices are in place and effective as required by the decision documents. ICs are identified and documented in the ICIAP for the Site. Specifically, deed restrictions were recorded with Lake County, Indiana in 1992, 1993, and 2020, and access agreements and deed notices were completed in 2020. Additional deed restrictions are recommended for the several properties that have CERCLA 120(h) deed notices. Long-term stewardship procedures are in place as part of the ICIAP, and require annual evaluation of the ICs, based on semi-annual and annual inspection findings. With that said, to ensure there are no future exposure routes to groundwater contamination of the unconsolidated aquifer, the ICIAP requires an update to include procedures for periodic reviews of governmental controls to confirm compliance of nearby properties with the municipal groundwater ordinance. Finally, additional monitoring wells will be added to implement MNA and so future ICs should be considered if wells are placed on properties lacking sufficient ICs.

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

Question B Summary:

No. The toxicity data and cleanup levels are not still valid, and there have been changes in the physical conditions at the Site that would affect the protectiveness of the remedy. This is due to a new rule, recently finalized by EPA, that acknowledges new toxicity data and changes standards in a way that may affect the Site remedy.

Changes in Exposure Pathways

PFAS may represent a newly identified contaminant that may pose a risk to human health or the environment via Site groundwater. These contaminants are commonly found in numerous hazardous and non-hazardous wastes since the 1950s including chemical manufacturing wastes and aqueous film forming foam (AFFF). There may be PFOA and PFOS contamination at the Site given hazardous chemical wastes were stored and released and a large chemical fire took place at the Site, which may have been extinguished using AFFF. Sampling for PFAS is required to determine if it is present and site-related and to ensure the Site remedy remains protective of human health and the environment. However, the Site's past remedy, groundwater extraction and treatment system, along with groundwater containment measures (i.e. barrier wall) likely mitigate/mitigated the risk posed by PFAS if discovered at the Site. Moreover, there is no known exposure pathway to drinking water due to the Gary City Ordinance from 2006 that required all private well users to connect to Gary City water within one year of the Ordinance or, if technically infeasible, draw water from the deeper confined aquifer, further preventing the potential human health exposure scenarios posed by contaminated groundwater released from the Site.

Expected Progress Towards Meeting RAOs

The Site is on track to eventually meet RAOs. However, the timeframe to meet RAOs may be longer than the 25-year estimate provided in the 2022 ROD Amendment. Data regarding eastward 1,4D plume delineation, adsorbed 1,4D mass in the upper aquifer clay bed, and analysis of potential PFOA and PFOS concentrations in groundwater are required to accurately recalculate this timeframe.

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

No. No other information has come to light that could call into question the current protectiveness of the remedy. However, the Site has not been evaluated for possible impacts of climate change and natural disasters. The midwestern area of the United States is expected to see increases in rainfall due to climate change. This may result in increased flooding at the Site that theoretically could in turn impact Site remedy components such as monitoring wells.

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations

OU(s) without Issues/Recommendations Identified in the Five-Year Review:
OU2 and OU3

Issues and Recommendations Identified in the Five-Year Review:				
OU(s): 1	**Issue Category: Monitoring**			
	Issue: PFAS may be present given the Site's history of chemical storage/releases and a large chemical fire that may have been extinguished using AFFF.			
	Recommendation: Sample groundwater for PFAS at the Site with an approved Uniform Federal Policy-QAPP and work plan to determine if it is present and site-related.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	9/30/2025

OU(s): 1	**Issue Category: Institutional Controls**			
	Issue: Recent groundwater sampling identified 1,4-D above CLs off-site along the eastern edge of the groundwater plume in an area not previously known to be affected by Site releases.			
	Recommendation: Pending additional data collection to evaluate possible expansion in the 1,4D plume (noted in the monitoring recommendation below), update the ICIAP to include procedures for periodic reviews of governmental controls to confirm compliance of nearby properties with the municipal groundwater ordinance and to ensure there are no future exposure routes to affected areas of the unconsolidated aquifer. Furthermore, additional deed restrictions and access agreements are required if the new monitoring wells are added to properties lacking sufficient restrictions to ensure long-term protectiveness.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	9/30/2025

OU(s): 1	**Issue Category: Monitoring**
	Issue: Multiple wells in the monitoring well network, including wells northeast and east of 1,4D detections above CLs, have not been sampled for prolonged

	periods due to lack of access and/or flooding despite being necessary to determine the groundwater plume boundary.			
	Recommendation: Resolve cause of access and flooding conditions in the short-term to allow continued sampling of the monitoring well network. Repair, modify, or replace these wells as necessary, or provide work plan to install new wells in order to monitor and determine the groundwater COC plume's east northeastward extent.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	9/30/2025

OU(s): 1	**Issue Category: Monitoring**			
	Issue: Wells G-10 and G-30 have not been sampled due to flooding and poor drainage likely caused by operations at neighboring Gary Material Supply.			
	Recommendation: Coordinate with Gary Material Supply and IDEM to carry out plans that diminish Site flooding and improve drainage, so that these site monitoring wells can continue to be sampled for assessing remedy performance.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	State	EPA	8/29/2027

OU(s): 1	**Issue Category: Monitoring**			
	Issue: PCP detected above the CL in well MW-4S upgradient of wastes contained within the containment barrier wall.			
	Recommendation: Provide work plan to investigate source of the PCP exceedances at MW-4S, and if supported by data, petition for changes to PCP monitoring if PCP is due to an off-site source.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	9/30/2025

OU(s): 1	**Issue Category: Remedy Performance**

	Issue: The MNA timeline may not be reasonable given recently gathered data. If the timeline is significantly longer (>100 years) then contaminants may travel farther than anticipated and impact human health or the environment.			
	Recommendation: Update the MNA evaluation. Specifically, gather all necessary groundwater data and clay bed soil samples, and perform fate and transport groundwater modeling to generate an updated estimated timeline to achieve groundwater RAOs.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	5/30/2025

OU(s): 1	**Issue Category: Other**			
	Issue: Climate change may increase flooding at the Site in a way that affects remedy protectiveness.			
	Recommendation: Perform a climate vulnerability assessment.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA	9/30/2025

OTHER FINDINGS

In addition, the following are recommendations that were identified during the FYR that may improve performance of the remedy, reduce costs, or accelerate Site close out, but do not affect current nor future protectiveness:

Several parcels at the Site have deed notices, but do not have deed restrictions despite containing waste that prevents UU/UE and/or remedy components. Thus, it is recommended that deed restrictions are acquired for all properties where waste remains above UU/UE or remedy components are present that currently have only deed notices.

The lock and key system for monitoring wells at the Site is inefficient and should be replaced with a single lock and key system for all wells and remedy components as appropriate.

Two wells, MW-3S and B-10, that have loose internal PVC piping that indicates the well's seal may be compromised. These two wells should be assessed for repair or abandonment, if determined not needed, following discussions between EPA, State, and MRC.

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)	
Operable Unit: OU1	*Protectiveness Determination:* Short-term Protective

Protectiveness Statement: The remedy at OU1 currently protects human health and the environment because the groundwater pump-and-treat system operated until it reached its maximum effectiveness, and effective ICs have been implemented that prohibit potable usage of groundwater and serve to prevent exposure to the remaining groundwater contamination at the Site. However, in order for the remedy to be protective in the long-term, the following actions need to be taken to ensure protectiveness:

Sample groundwater for PFAS at the Site with an approved Uniform Federal Policy-QAPP and work plan to determine if it is present and site-related.

Pending additional data collection to evaluate possible expansion in the 1,4D plume (noted in the monitoring recommendation below), update the ICIAP to include procedures for periodic reviews of governmental controls to confirm compliance of nearby properties with the municipal groundwater ordinance and to ensure there are no future exposure routes to affected areas of the unconsolidated aquifer. Furthermore, additional deed restrictions and access agreements are required if the new monitoring wells are added to properties lacking sufficient restrictions to ensure long-term protectiveness.

Resolve cause of access and flooding conditions in the short-term to allow continued sampling of the monitoring well network. Repair, modify, or replace these wells as necessary, or provide work plan to install new wells in order to monitor and determine the groundwater COC plume's east northeastward extent.

Coordinate with Gary Material Supply and IDEM to carry out plans that diminish Site flooding and improve drainage, so that these site monitoring wells can continue to be sampled for assessing remedy performance.

Provide work plan to investigate source of the PCP exceedances at MW-4S, and if supported by data, petition for changes to PCP monitoring if PCP is due to an off-site source.

Update the MNA evaluation. Specifically, gather all necessary groundwater data and clay bed soil samples, and perform fate and transport groundwater modeling to generate an updated estimated timeline to achieve groundwater RAOs.

Perform a climate vulnerability assessment.

Protectiveness Statement(s)	
Operable Unit: OU2	*Protectiveness Determination:* Protective

Protectiveness Statement: The remedy at OU2 is protective of human health and the environment because the remedial activities completed have adequately addressed all exposure pathways that could result in unacceptable risks to site soil and sediment. These remedial activities included operation

of the SVE system which was successful in achieving a 97% reduction of VOCs in the subsurface soil within the barrier wall, excavation of contaminated sediments and placement under a cap, excavation and/or in-situ treatment of contaminated soils, and placed a soil cover over previously excavated areas containing residual sediment concentrations to prevent direct contact.

Protectiveness Statement(s)	
Operable Unit: OU3	*Protectiveness Determination:* Protective
Protectiveness Statement: The remedy at OU3 is protective of human health and the environment because the remedial activities completed have adequately addressed all exposure pathways that could result in unacceptable risks to the areas of the Site covered by the final soil cap. These remedial activities included fencing, deed restrictions, and completion of the final multilayer soil cap to prevent contact with contaminated soils and sediment, including placing a soil cover over previously excavated areas containing residual sediment concentrations.	

Sitewide Protectiveness Statement
Protectiveness Determination: Short-term Protective
Protectiveness Statement: The remedy sitewide currently protects human health and the environment because the groundwater pump-and-treat system operated until it reached its maximum effectiveness, and effective ICs have been implemented that prohibit potable usage of groundwater and serve to prevent exposure to the remaining groundwater contamination at the Site. However, in order for the remedy to be protective in the long-term, the following actions need to be taken to ensure protectiveness: Sample groundwater for PFAS at the Site with an approved Uniform Federal Policy-QAPP and work plan to determine if it is present and site-related. Pending additional data collection to evaluate possible expansion in the 1,4D plume (noted in the monitoring recommendation below), update the ICIAP to include procedures for periodic reviews of governmental controls to confirm compliance of nearby properties with the municipal groundwater ordinance and to ensure there are no future exposure routes to affected areas of the unconsolidated aquifer. Furthermore, additional deed restrictions and access agreements are required if the new monitoring wells are added to properties lacking sufficient restrictions to ensure long-term protectiveness. Resolve cause of access and flooding conditions in the short-term to allow continued sampling of the monitoring well network. Repair, modify, or replace these wells as necessary, or provide work plan to install new wells in order to monitor and determine the groundwater COC plume's east northeastward extent.

Coordinate with Gary Material Supply and IDEM to carry out plans that diminish Site flooding and improve drainage, so that these site monitoring wells can continue to be sampled for assessing remedy performance.

Provide work plan to investigate source of the PCP exceedances at MW-4S, and if supported by data, petition for changes to PCP monitoring if PCP is due to an off-site source.

Update the MNA evaluation. Specifically, gather all necessary groundwater data and clay bed soil samples, and perform fate and transport groundwater modeling to generate an updated estimated timeline to achieve groundwater RAOs.

Perform a climate vulnerability assessment.

VIII. NEXT REVIEW

The next FYR report for the MIDCO I Superfund Site is required five years from the completion date of this review.

APPENDIX A – REFERENCE LIST

The Site's Administrative Record can be found at the following link: https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.ars&id=0501761&doc=Y&colid=1735&region=05&type=AR

References are listed by order of appearance within this FYR document and in the following format: Author listed in SEMS, **Document date in SEMS**; *Document Title in SEMS*; (Document ID# in SEMS)

Geosciences Inc & ERM Inc, **12/1/1987**; *Remedial investigation (RI) Report – Midwest Solvent Recovery – Public Comment Draft*; (IDs 84320, 84300, and 84322)

EPA, **4/13/1992**; *Record of Decision (ROD) Amendment (Signed) – MIDCO I*; (ID 86096)

EPA, **9/16/2022**; *Amendment to the Record of Decision (ROD) (Signed) – MIDCO I & MIDCO II*; (ID 977808)

Arcadis, **4/25/2012**; *Background Groundwater Statistical Analysis Report for Inorganic Constituents Exceeding Carcinogenic and Non-Carcinogenic Risk Screening Criteria, MIDCO I & MIDCO II, 2005-2011*; (ID 478730)

AECOM, **9/1/2017**; *Remedial Action Report, Revision 1*; (IDs 557154, 557149, and 557150)

ERM Inc, **8/1/1994**; *Final Design Report – Sections 1 through 6 – Vol 1 of 3*; (ID 283059)

AECOM, **11/26/2018**; *Monitored Natural Attenuation Groundwater Remedy Demonstration – Rev 1*; (ID 952367)

EPA, **9/30/2004**; *Explanation of Significant Differences (ESD) #3*; (ID 216867)

Arcadis, **10/17/2011**; *Site Closure Plan (Revision 2)*; (ID 478725)

AECOM, **9/05/2017**; *Institutional Control Implementation and Assurance Plan (ICIAP)*; (ID 2002573)

AECOM, **5/19/2023**; *MIDCO I Institutional Control (IC) 2022 Annual Report*; (ID 982829)

EPA, **10/2/2020**; *Superfund Property Reuse Evaluation Checklist for Reporting the Sitewide Ready for Anticipated Use (SWRAU) – GPRA Measure*; (ID 2003114 and 962428)

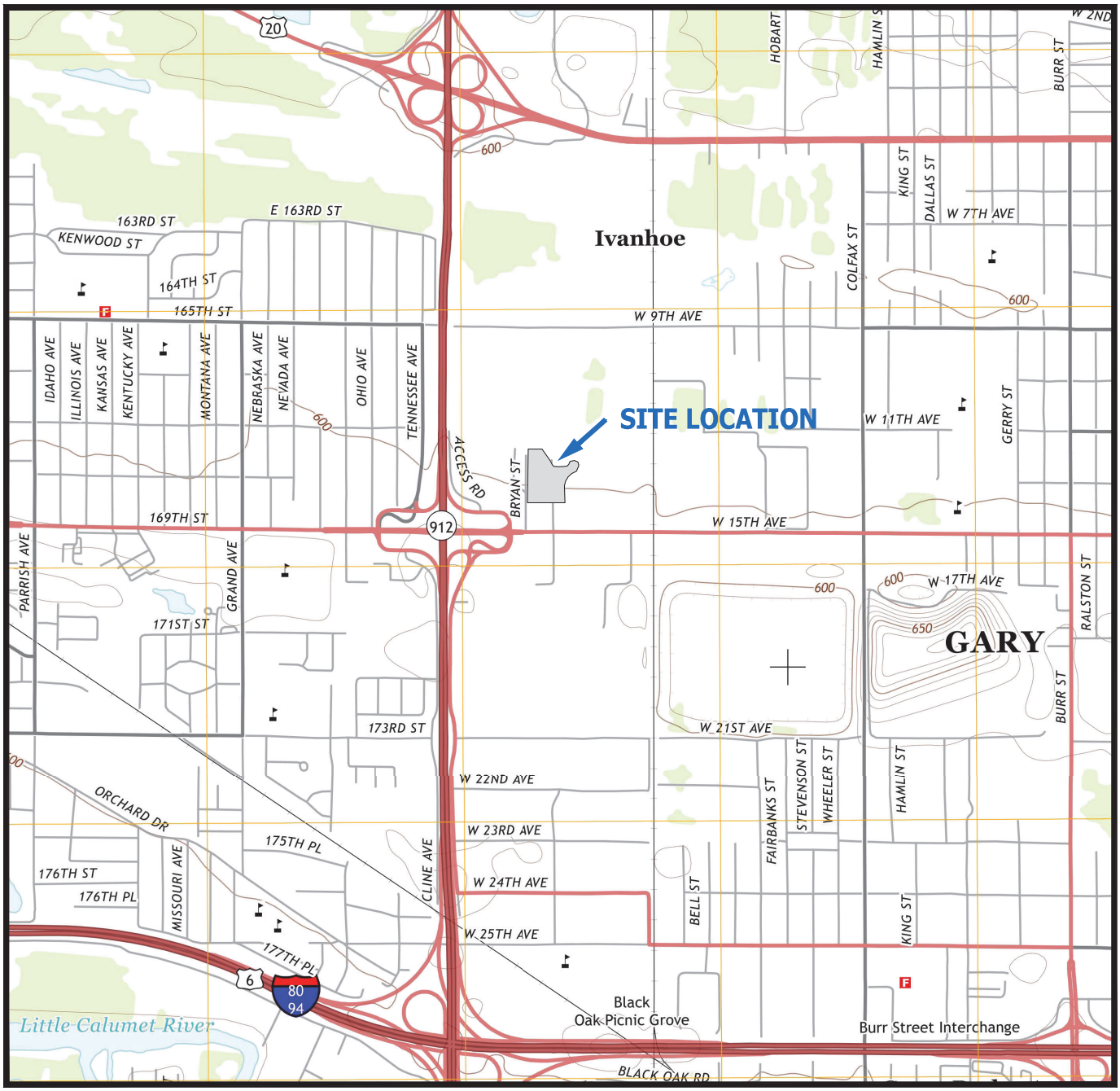
Ramboll Environ, **5/31/2023**; *2022 Annual Ground Water Monitoring Report*; (ID 982955)

Ramboll Environ, **6/7/2024**; *2023 Annual Ground Water Monitoring Report*; (ID 2006097)

AECOM, **5/1/2013**; *Groundwater Remedy Prefinal Design*; (ID 490540)

Ramboll Environ, **2/23/2018**; *2017 Annual Ground Water Monitoring Report*; (ID 557136)

APPENDIX B – FIGURES



SCALE: 1:24 000

1 1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

NORTH

MAP REFERENCE:

PORTION OF U.S.G.S. QUADRANGLE MAP
7 ½ MINUTE SERIES (TOPOGRAPHIC)
HIGHLAND, IN 2013

QUADRANGLE LOCATION

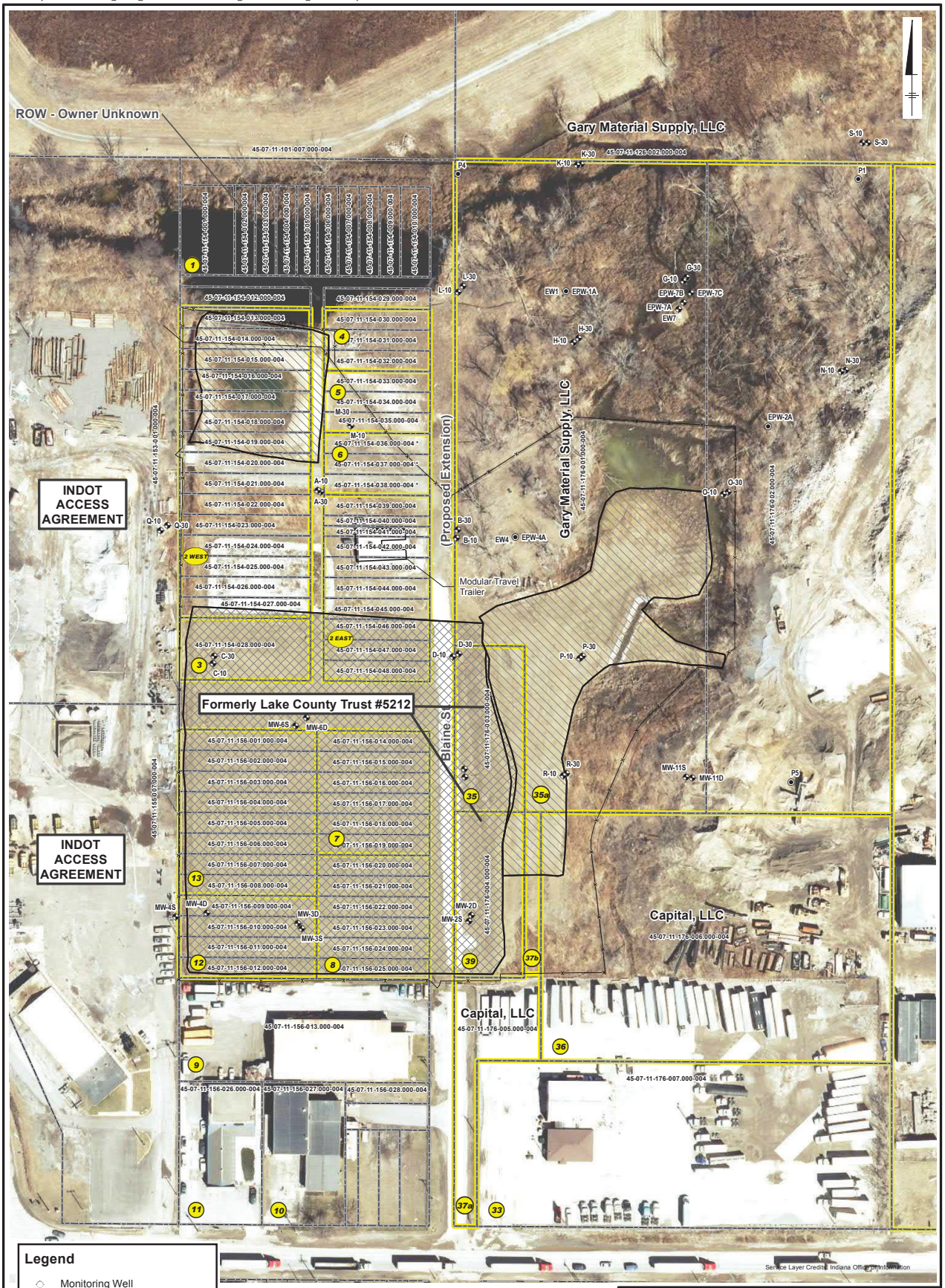
MIDCO REMEDIAL CORPORATION
7400 WEST 15TH AVENUE
GARY, IN 46406

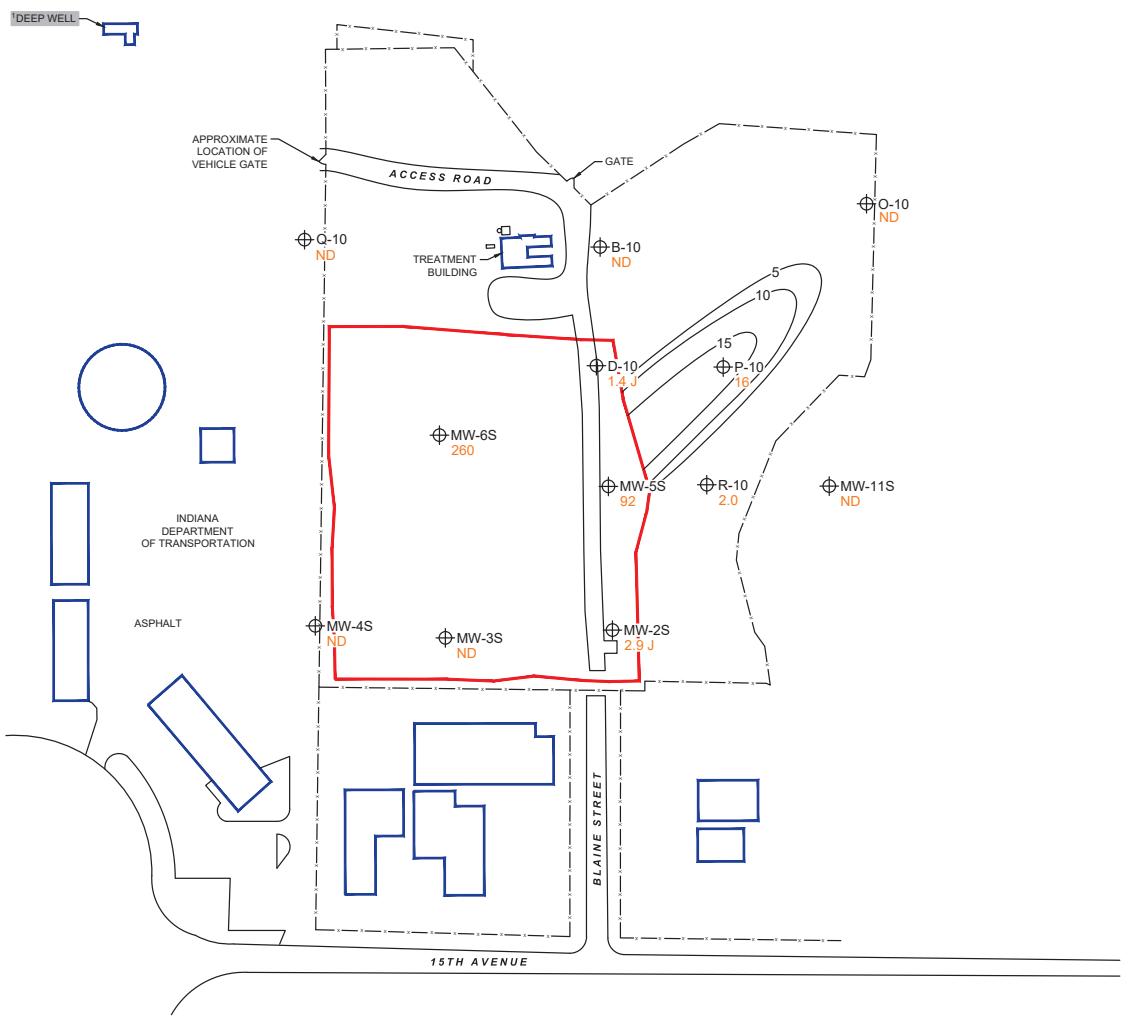
FIGURE 1
SITE LOCATION MAP

DATE:	Aug 11, 2017
JOB NO.:	60547512
DRAWN BY:	BKR
CHK'D BY:	SF
SCALE:	AS SHOWN

AECOM
100 SOUTH WACKER DRIVE, SUITE 500
CHICAGO, ILLINOIS 60606
PHONE: (312) 939-1000
FAX: (312) 939-4198

V:\DCS\Projects\ENV\60333067_Midco_CAD-GIS\GIS\MXDs\Midco_InstitutionalControl_2020Summary.mxd





LEGEND

- FENCE
- SLURRY WALL
- 1,4-DIOXANE ISOCONCENTRATION (µg/L)
- MONITORING WELL LOCATION
- 16 CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- ND NOT DETECTED
- NS NOT SAMPLED
- J ESTIMATED VALUE

Notes

1. Only those monitoring locations included in the monitoring program for 1,4-Dioxane are presented.
2. The highest concentration for duplicates is shown.
3. Samples collected in November 2023.
4. Deep Well and building removed in 2021.

1,4-DIOXANE CONCENTRATIONS
SHALLOW MONITORING NETWORK

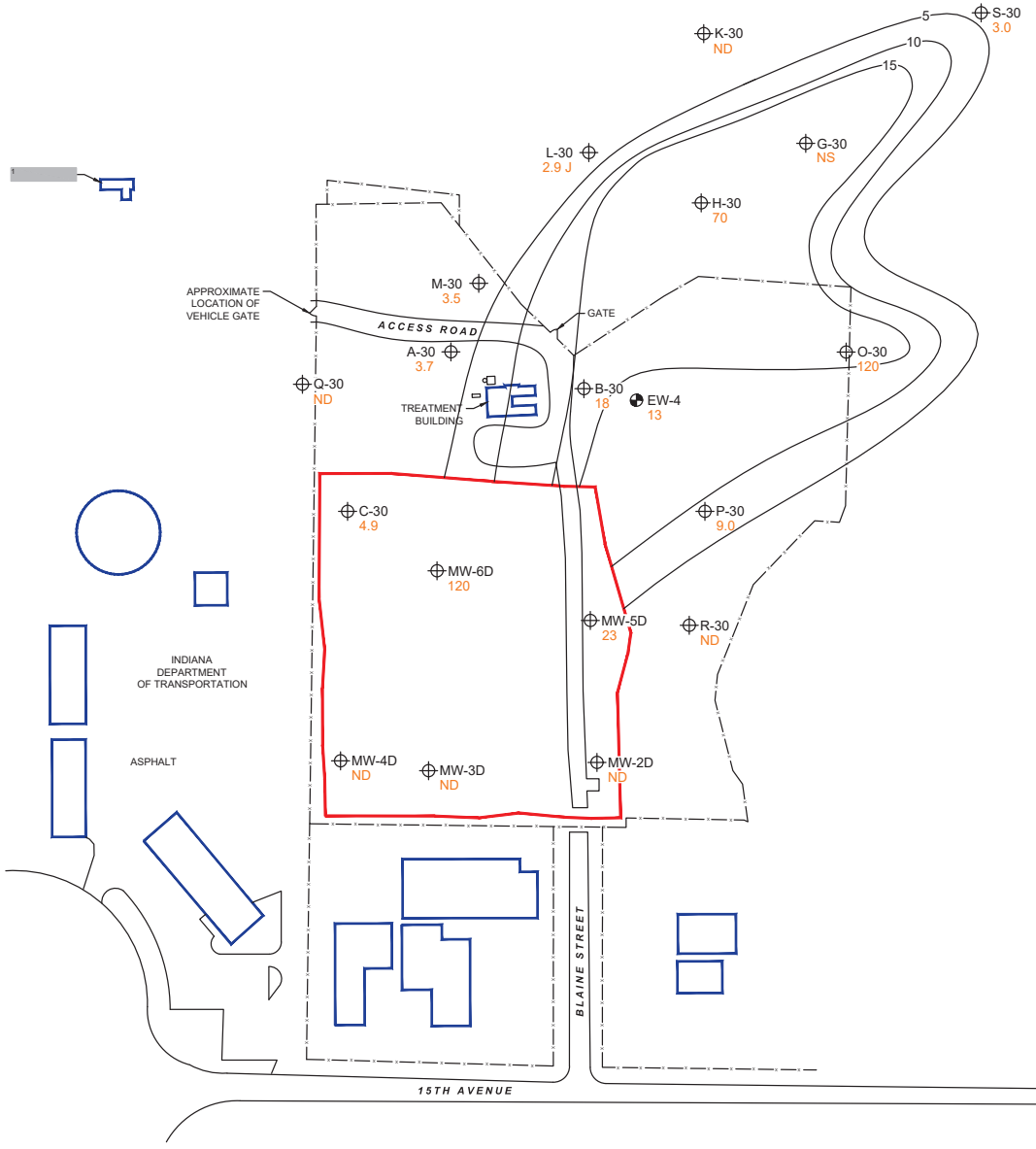
MIDCO I
GARY, INDIANA

FIGURE 5-3

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1940105351 DATED: 6/3/2024 DESIGNER: CKL/HJWELS L:\Loop Project Files_CAD\194\1940105351 Midco 2023 Annual GW Sampling\ 2025\5-3 1,4-Dioxane Concentrations - Shallow (MI)-REVISED.dwg



LEGEND

- FENCE
- SLURRY WALL
- 1,4-DIOXANE ISOCONCENTRATION (µg/L)
- MONITORING WELL LOCATION
- EXTRACTION WELL LOCATION
- PIEZOMETER LOCATION
- 18 CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- ND NOT DETECTED
- NS NOT SAMPLED
- J ESTIMATED VALUE

Notes

1. Only those monitoring locations included in the monitoring program for 1,4-Dioxane are presented.
2. The highest concentration for duplicates is shown.
3. Monitoring location G-30 not sampled due to standing water.
4. Samples collected in November 2023.
5. Deep Well and building removed in 2021.

1,4-DIOXANE CONCENTRATIONS
DEEP MONITORING NETWORK

MIDCO I
GARY, INDIANA

FIGURE 5-4

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

RAMBOLL

APPENDIX C – PUBLIC NOTICE OF REVIEW START

THE Beacon-News | LAKE COUNTY NEWS-SUN | NAPERVILLE SUN
THE COURIER-NEWS | Post-Tribune | DAILY Southtown

Classifieds

24/7 PLACE YOUR CLASSIFIED AD ONLINE AT:
PLACEANAD.TRIBUNESUBURBS.COM OR CALL: 866-399-0537

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All real estate advertised in this newspaper is subject to the Federal Fair Housing Act, which makes it illegal to advertise any preference, limitation, or discrimination based on race, color, religion, sex, handicap, familial status, or national origin, in the sale, rental, or financing of housing.

In addition the Illinois Human Rights Act prohibits discrimination based on age, ancestry, marital status, sexual orientation or unfavorable military discharge.

This paper will not knowingly accept any advertising for real estate which is in violation of the law. All persons are hereby informed that all dwellings advertised are available on an equal opportunity basis.

If you believe you have been discriminated against in connection with the sale, rental or financing of housing, Call:

West City and Suburbs:
HOPE Fair Housing Center
630-690-6500

South City and Suburbs:
South Suburban Housing Center
708-957-4674

North City and Suburbs:
Interfaith Housing Center
of the Northern Suburbs
847-501-5760

REAL ESTATE FOR SALE

Judicial Sales - Real Estate

STATE OF INDIANA IN THE LAKE SUPERIOR COURT CIVIL DIVISION 2 COUNTY OF LAKE CAUSE NUMBER:45D02-2311-MF-000740 SPECIALIZED LOAN SERVICING LLC, Plaintiff, vs. UNKNOWN HEIRS, DEVISEES, LEGATEES, PERSONAL REPRESENTATIVES, AND CREDITORS OF BARBARA J. BERNARDY (DECEASED), et al. Defendants. NOTICE OF SUIT SUMMONS - SERVICE BY PUBLICATION The State of Indiana to the defendants above named, and any other person who may be concerned. You are notified that you have been sued in the Court above named. The nature of the suit against you is a foreclosure of the real estate mortgage, legally described as: LOT 208, UNIT VIII, BRIARWOOD SUBDIVISION, AS PER PLAT THEREOF, RECORDED IN PLAT BOOK 46, PAGE 9, IN THE OFFICE OF THE RECORDER OF LAKE COUNTY, INDIANA. This property is commonly known as 943 Pawnee Drive, Crown Point, IN 46307 This summons by publication is specifically directed to the following Defendants whose addresses are known: Unknown Occupant, if any 943 Pawnee Drive Crown Point, IN 46307 Portfolio Recovery Associates, LLC Serve Highest Officer Found 135 North Pennsylvania Street, Suite 1610 Indianapolis, IN 46204 And to the following defendant whose addresses are unknown: Unknown heirs, devisees, legatees, personal representatives, and creditors of Barbara J. Bernardy (deceased) In addition to the above named Defendants being served by this summons there may be other Defendants who have an interest in this lawsuit. If you have a claim for relief against the Plaintiff arising from the same transaction or occurrence, you must assert it in your written answer. You must answer the Complaint in writing, by your attorney, on or before the 26th day of January, 2024, (the same being within thirty (30) days after the Third Notice of Suit), and if you fail to do so a judgment will be entered against you for what the Plaintiff has demanded. /s/ Christopher J. Arlinghaus Matthew C. Gladwell (30493-49) Christopher J. Arlinghaus (31680-15) Aaron Rodgers (28418-84) Attorneys for Plaintiff Reisenfeld & Associates LLC 3962 Red Bank Road Cincinnati, OH 45227 Voice: (513) 322-7000 Facsimile: (513) 322-7099 ATTEST: /s/ Michael A. Brown Clerk of the Lake County Circuit/Superior Court
12/13, 12/20, 12/27/2023 7546341

Legal Notices

EPA Begins Review of
MIDCO I Superfund Site
Gary, Indiana

The U.S. Environmental Protection Agency, in consultation with the Indiana Department of Environmental Management, is conducting a five-year review of the MIDCO I Superfund site in Gary, Indiana. MIDCO I is located at 7400 W. 15th Ave. The Superfund law requires regular checkups of sites that have been cleaned up – with waste managed on-site – to make sure the cleanup continues to protect people and the environment. This is the sixth five-year review of this site.

EPA's cleanup of contaminants from MIDCO I consisted of groundwater pumping and treatment, air sparging (a technology which removes contaminants from groundwater by the injection of oxygen), injection of treated groundwater into a deep saline aquifer, soil and sediment treatment using soil vapor extraction and solidification/stabilization, and placement of a cap over the site. The current groundwater cleanup strategy has changed from groundwater pumping and treatment to monitored natural attenuation.

More information is available at www.epa.gov/superfund/midco-i. The review will be completed by September 2024.

The five-year review is an opportunity for you to tell EPA about site conditions and any concerns you have. Contact:

Karen Chen
Community Involvement Coordinator
312-886-6009
chen.karen01@epa.gov

Jeffrey Dewey
Remedial Project Manager
312-353-1526
dewey.jeffrey@epa.gov

You may also call EPA toll-free at 800-621-8431, 8:30 a.m. to 4:30 p.m., weekdays.

Bid Notice

NOTICE TO BIDDERS
Notice is hereby given that **LAKE COUNTY** by and through its **BOARD OF COUNTY COMMISSIONERS** will receive sealed bids for the construction of:

The following Road Project:

Parrish Avenue - Cedar Lake Limits (125th Avenue) to 109th Avenue (US 231)
Fathke Road - 113th Avenue to 109th Avenue (US 231)
Burr Street - 125th Avenue to 113th Avenue

Sealed Bids will be received at the Lake County Auditor's Office, **Lake County Government Center, Crown Point, IN 46307 until 9:30 am (local time) on Wednesday, January 17, 2023.** All bids will then be publicly opened and read aloud at the County Commissioner's meeting at 10:00 am. Any bids received after the above designated time shall be returned unopened.

The proposed projects which bids are being received for will involve the Reconstruction and preservation of the following:

Parrish Avenue - Cedar Lake Limits (125th Avenue) to 109th Avenue (US 231)
Fathke Road - 113th Avenue to 109th Avenue (US 231)
Burr Street - 125th Avenue to 113th Avenue

The proposed work will consist of furnishing all labor, services, materials, insurance, and equipment to construct the public works improvements on the roads specified above in Lake County, Indiana. The work will include pavement reconstruction and preservation using various techniques as specified in the Contract Document and Plans.

All bids must be submitted on State Board of Accounts Form No. 96 together with the proper forms included in the Contract Documents, the entire set of which shall be filed intact as a bid.

The Contract Documents, including Plans and Specifications, are on file in the **LAKE COUNTY AUDITOR'S OFFICE LAKE COUNTY GOVERNMENT CENTER, 2293 NORTH MAIN STREET, CROWN POINT IN 46307** for review only.

Prospective Bidders may examine the Bidding Documents at the Issuing Office on Mondays through Fridays between the hours of 8:30 am and 4:00 pm, and may obtain copies of the Bidding Documents as described below.

Plans and Specifications MUST be obtained at the **LAKE COUNTY AUDITOR'S OFFICE, 2293 NORTH MAIN STREET, CROWN POINT, IN 46307**. Plans and Contract Documents can also be provided via. E-mail in PDF format AFTER INITIAL SET IS OPTAINED FROM THE AUDITOR'S OFFICE from:

LAKE COUNTY HIGHWAY DEPARTMENT
ATTN: Duane Alverson Email: alverda@lakecountyin.org
1100 East Monitor Street, Crown Point, IN 46307
PHONE: (219) 663-0525

Plans and Contract Documents **must be picked up at the Auditor's Office to be eligible to submit a bid on this contract**.

SECURITY: Any person, firm or corporation who submits a proposal MUST file with their bid a CERTIFIED CHECK, BANK DRAFT, CASHIER'S CHECK OR MONEY ORDER Issued by a financial institution insured by an agency of the United States in the amount of five percent (5%), made payable to Lake County. In lieu of the above, any person, firm or corporation who submits a proposal and has a principal place of business in the State of Indiana MAY file with their proposal a BID BOND in the amount of five percent (5%), made payable to the **LAKE COUNTY**.

Proposals may be held by **LAKE COUNTY** for a period not to exceed sixty (60) days from the public opening.

The successful Contractor will be required to furnish a Performance Bond in the amount of one hundred percent (100%) of the contract price within ten (10) days after award of the contract and a two (2) year Maintenance Bond in the amount of TWENTY percent (20%) of the contract price prior to completion and final payment of the contract.

No Contractor may withdraw his proposal within sixty (60) days after the actual date of the opening thereof.

LAKE COUNTY reserves the right to ask for clarification for any bid submitted. In comparing bids, consideration will not be confined to price only. The successful bid will be the one that is judged to best serve the interests of **LAKE COUNTY** when price, product, safety, quality and delivery are considered. **LAKE COUNTY BOARD OF COUNTY COMMISSIONERS** reserves the right to reject any proposal, to waive technicalities or irregularities therein, to delete any bid item or items and to award a contract on the proposal/proposals for each project that in their judgment is most advantageous to **LAKE COUNTY**.

Lake County requests each bidder submit one original and a duplicate copy of their bid.

LAKE COUNTY AUDITOR
Peggy H. Katona
December 20 & 27, 2023 - 7551021 HSPAXLP

Legal Notices

Bid Notice

Legal Notices

SUMMONS – SERVICE BY PUBLICATION
STATE OF INDIANA COUNTY OF LAKE
IN THE CIRCUIT COURT OF LAKE COUNTY
CROWN POINT, INDIANA
CAUSE NO: 45C01-2312-MF-000771
WELLS FARGO BANK, N.A., PLAINTIFF
VS.
CYNTHIA L. GIBSON, DECEASED; TASHA LAVERNE PERKINS; UNKNOWN HEIRS AND DEVISEES OF CYNTHIA L. GIBSON, DECEASED; ESTATE OF CYNTHIA L. GIBSON, DECEASED; THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT; FOUNDATION FINANCE COMPANY LLC
DEFENDANTS
To the defendants above named, and any other person who may be concerned.
You are notified that you have been sued in the Court above named.
The nature of the suit against you is the foreclosure of a mortgage upon the property legally described as follows:
The North 3 feet of Lot 43, all of Lot 44, and the South 9.65 feet of Lot 45, in Hamilton's Addition to East Chicago, as per plat thereof, recorded in Plat Book 14, page 30, in the Office of the Recorder of Lake County, Indiana.
Commonly known as:
4105 Walsh Avenue
East Chicago, IN 46312
This summons by publication is specifically directed to the following defendant(s) whose whereabouts are unknown.
Unknown Heirs and Devisees of Cynthia L. Gibson, Deceased
Estate of Cynthia L. Gibson, Deceased
In addition to the above-named defendants being served by this summons, there may be other defendants who have an interest in this lawsuit.
An answer or other appropriate response in writing to the Complaint must be filed either by you or your attorney with the Clerk of the Court for Lake County at:
Clerk of Lake County
2293 North Main Street
Crown Point, IN 46307
on or before the 2nd day of February, 2024, (the same being thirty (30) days after the Third Notice of Suit), and if you fail to do so a judgment may be entered against you for what the plaintiff has demanded.
Codilis Law, LLC
Electronically Signed by:
/s/ Robert S. Kruszynski
15488-45
ATTEST:
Clerk, Lake Circuit Court
Attorney for Plaintiff
Codilis Law, LLC
8050 Cleveland Place
Merrillville, IN 46410
(219) 736-5579
15-23-01665
NOTE: This law firm is a debt collector.
December 20, 27, 2023, January 3, 2024 7552281

Probate

SUMMONS – SERVICE BY PUBLICATION
STATE OF INDIANA COUNTY OF LAKE
IN THE SUPERIOR COURT OF LAKE COUNTY
GARY, INDIANA
WELLS FARGO BANK, N.A.
PLAINTIFF
VS
ELOY HERNANDEZ, DECEASED; DIANE HERNANDEZ, DECEASED; BRUCE VILLARREAL; TIFFANY HERNANDEZ; BRIAN HERNANDEZ; CHRISTOPHER HERNANDEZ; ERICA HERNANDEZ, PERSONAL REPRESENTATIVE OF THE ESTATE OF ELOY HERNANDEZ, DECEASED; UNKNOWN HEIRS AND DEVISEES OF ELOY HERNANDEZ, DECEASED; ESTATE OF ELOY HERNANDEZ, DECEASED; INDIANA HOUSING & COMMUNITY DEVELOPMENT AUTHORITY
DEFENDANTS
CAUSE NO: 45D04-2311-MF-000731
NOTICE OF SUIT
To the defendants above named, and any other person who may be concerned.
You are notified that you have been sued in the Court above named.
The nature of the suit against you is the foreclosure of a mortgage upon the property legally described as follows:
The East 14 feet of Lot 9 and the West 28 feet of Lot 10, Block 5, Calumet Center 2nd Addition, in the City of Hammond, as shown in Plat Book 19, page 22, in Lake County, Indiana.
Commonly known as:
1040 177th Street
Hammond, IN 46324
This summons by publication is specifically directed to the following defendant(s) whose whereabouts are unknown.
Bruce Villarreal
Tiffany Hernandez
Christopher Hernandez
Unknown Heirs and Devisees of Eloy Hernandez, Deceased
In addition to the above-named defendants being served by this summons, there may be other defendants who have an interest in this lawsuit.
An answer or other appropriate response in writing to the Complaint must be filed either by you or your attorney with the Clerk of the Court for Lake County at:
Clerk of Lake County
2293 North Main Street
Crown Point, IN 46307
on or before the 26th day of January, 2024, (the same being thirty (30) days after the Third Notice of Suit), and if you fail to do so a judgment may be entered against you for what the plaintiff has demanded.
Codilis Law, LLC
Electronically Signed by:
Robert S. Kruszynski
15488-45
ATTEST:
Michael A. Brown
Clerk, Lake Superior Court
Attorney for Plaintiff
Codilis Law, LLC
8050 Cleveland Place
Merrillville, IN 46410
(219) 736-5579
15-23-01580
NOTE: This law firm is a debt collector.
12/13,20,27/2023 7547698

STATE OF INDIANA COUNTY OF LAKE
IN THE LAKE SUPERIOR COURT ROOM NUMBER TWO
3711 MAIN STREET
SITTING AT EAST CHICAGO, INDIANA

IN THE MATTER OF THE SUPERVISED ADMINISTRATION OF THE ESTATE OF:
EDMOND WALTON, SR., Deceased.
CAUSE NO.
45D02-2312-ES-000190

NOTICE OF ADMINISTRATION
Notice is hereby given that **LATANZA BOARDEN** and **EDMOND WALTON, JR.** were on December 14, 2023, appointed Co-Personal Representatives of the Estate of Edmond Walton, Sr., deceased, who died on the 30th day of August, 2023.
All persons having claims against said estate, whether or not now due must file the same in said Court within three (3) months from the date of the first publication of this notice, or within nine (9) months after decedent's death, whichever is earlier, or the said claims will be forever barred.

Dated at East Chicago, Indiana, on 12/14/2023
CLERK, LAKE SUPERIOR COURT Michael A. Brown
By: /s/ Peter Thayer, Deputy

Mark R. Anderson, #21524-53
Attorney for the Petitioners/Co-Personal Representatives
of the Estate of Edmund Walton, Sr., Deceased
9211 Broadway
Merrillville, IN 46410
Tel: (219) 769-1892
Dec. 20 & 27, 2023 - 7552017

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APPENDIX D – REVIEW INSPECTION CHECKLIST AND PHOTOGRAPHS

Site Inspection Checklist

I. SITE INFORMATION	
Site name: **MIDCO I**	**Date of inspection:** **11/9/2023**
Location and Region: **Gary, Indiana Region 5**	**EPA ID:** IND9908615421
Agency, office, or company leading the FYR: U.S. EPA	**Weather/temperature:** Click or tap here to enter text.

Remedy Includes: (Check all that apply)

☒ Landfill cover/containment	☒ Monitored natural attenuation
☒ Access controls	☐ Groundwater containment
☒ Institutional controls	☒ Vertical barrier walls
☐ Groundwater pump and treatment	☐ Other: Click or tap here to enter text.
☐ Surface water collection and treatment	

Attachments:

☐ Inspection team roster attached	☐ Site map attached

II. INTERVIEWS (Check all that apply)
1. **O&M Site Manager** Name , Title , Click or tap to enter a date. Interviewed: ☐ at site ☐ at office ☐ by phone Phone Number: Click here to enter text. Problems, suggestions: ☐ Report attached Click or tap here to enter text.
2. **O&M Staff** Name , Title , Click or tap to enter a date. Interviewed: ☐ at site ☐ at office ☐ by phone Phone Number: Click here to enter text. Problems, suggestions: ☐ Report attached Click or tap here to enter text.
3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply. Agency: Click or tap here to enter text. Contact: Name , Title , Click or tap to enter a date., P: Phone Number Problems, suggestions: ☐ Report attached Click or tap here to enter text. Agency: Click or tap here to enter text. Contact: Name , Title , Click or tap to enter a date., P: Phone Number Problems, suggestions: ☐ Report attached Click or tap here to enter text. Agency: Click or tap here to enter text. Contact: Name , Title , Click or tap to enter a date., P: Phone Number Problems, suggestions: ☐ Report attached Click or tap here to enter text. Agency: Click or tap here to enter text. Contact: Name , Title , Click or tap to enter a date., P: Phone Number Problems, suggestions: Click or tap here to enter text.
4. **Other Interviews (optional):** ☐ Report attached Click or tap here to enter text.

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)			
1. O&M Documents			
☐ O&M manual	☐ Readily available	☐ Up to date	☒ N/A
☐ As-built drawings	☐ Readily available	☐ Up to date	☒ N/A
☐ Maintenance logs	☐ Readily available	☐ Up to date	☒ N/A
Remarks: Click or tap here to enter text.			
2. Site-Specific Health and Safety Plan		☐ Readily available	
☐ Contingency Plan/Emergency Response Plan		☐ Readily available	
Remarks: Click or tap here to enter text.			
3. O&M and OSHA Training Records			
	☐ Readily available	☐ Up to date	☒ N/A
Remarks: Click or tap here to enter text.			
4. Permits and Service Agreements			
☐ Air discharge permit	☐ Readily available	☐ Up to date	☒ N/A
☐ Effluent discharge	☐ Readily available	☐ Up to date	☒ N/A
☐ Waste disposal, POTW	☐ Readily available	☐ Up to date	☒ N/A
☐ Other permits: Click or tap here to enter text.			
Remarks: Click or tap here to enter text.			
5. Gas Generation Records			
	☐ Readily available	☐ Up to date	☒ N/A
Remarks: Click or tap here to enter text.			
6. Settlement Monument Records			
	☐ Readily available	☐ Up to date	☒ N/A
Remarks: Click or tap here to enter text.			
7. Groundwater Monitoring Records			
	☐ Readily available	☐ Up to date	☒ N/A
Remarks: Click or tap here to enter text.			
8. Leachate Extraction Records			
	☐ Readily available	☐ Up to date	☒ N/A
Remarks: Click or tap here to enter text.			

9. Discharge Compliance Records

☐ Air	☐ Readily available	☐ Up to date	☒ N/A
☐Water (effluent)	☐ Readily available	☐ Up to date	☒ N/A

Remarks: Click or tap here to enter text.

10. Daily Access/Security Logs

☐ Readily available ☐ Up to date ☒ N/A

Remarks: Click or tap here to enter text.

IV. O&M COSTS

1. O&M Organization

☐ State in-house ☐ Contractor for State

☐ PRP in-house ☒ Contractor for PRP

☐ Federal Facility in-house ☐ Contractor for Federal Facility

Remarks: Click or tap here to enter text.

2. O&M Cost Records

☒Readily available ☒ Up to date ☒ Funding mechanism/agreement in place

Original O&M cost estimate Click or tap here to enter text. ☐ Breakdown attached

Total annual cost by year for review period if available

From	To	Total cost	
Click or tap to enter a date.	Click or tap to enter a date.	Click or tap here to enter text.	☐ Breakdown attached
From Click or tap to enter a date.	To Click or tap to enter a date.	Total cost Click or tap here to enter text.	☐ Breakdown attached
From Click or tap to enter a date.	To Click or tap to enter a date.	Total cost Click or tap here to enter text.	☐ Breakdown attached
From Click or tap to enter a date.	To Click or tap to enter a date.	Total cost Click or tap here to enter text.	☐ Breakdown attached
From Click or tap to enter a date.	To Click or tap to enter a date.	Total cost Click or tap here to enter text.	☐ Breakdown attached

3. Unanticipated or Unusually High O&M Costs During Review Period

Describe costs and reasons:

Click or tap here to enter text.

V. ACCESS AND INSTITUTIONAL CONTROLS

☒ Applicable ☐ N/A

1. Fencing Damaged ☐ Location shown on site map ☒ Gates secured ☐ N/A

Remarks: Click or tap here to enter text.

2. Other Access Restrictions ☐ Location shown on site map ☒ Gates secured

Remarks: Click or tap here to enter text.

3. Institutional Controls (ICs)

A. Implementation and Enforcement

Site conditions imply ICs not properly implemented	☐ Yes	☒ No	☐ N/A
Site conditions imply ICs not being fully enforced	☐ Yes	☒ No	☐ N/A
Type of monitoring (*e.g.*, self-reporting, drive by)	Inspection		
Frequency	Click or tap here to enter text.		
Responsible party/agency	AECOM		

Contact: Tat Ebihara, Senior Technical Leader, Click or tap to enter a date., P: Phone Number

Reporting is up-to-date	☒ Yes	☐ No	☐ N/A
Reports are verified by the lead agency	☒ Yes	☐ No	☐ N/A
Specific requirements in deed or decision documents have been met	☒ Yes	☐ No	☐ N/A
Violations have been reported	☐ Yes	☐ No	☒ N/A

Other problems or suggestions:

Click or tap here to enter text.

B. Adequacy ☒ ICs are adequate ☐ ICs are inadequate ☐ N/A

Remarks: Click or tap here to enter text.

4. General

A. Vandalism/Trespassing ☐ Location shown on site map ☒ No vandalism evident

Remarks: Click or tap here to enter text.

B. Land use changes on site ☒ N/A

Remarks: Click or tap here to enter text.

C. Land use changes off site ☒ N/A

Remarks: Click or tap here to enter text.

VI. GENERAL SITE CONDITIONS

1. Roads ☒ Applicable ☐ N/A

A. Roads damaged ☐ Location shown on site map ☒ Roads adequate ☐ N/A

Remarks: Click or tap here to enter text.

B. Other Site Conditions

Remarks: Click or tap here to enter text.

VII. LANDFILL COVERS

1. Landfill Surface ☒ Applicable ☐ N/A

A. Settlement (Low Spots) ☐ Location Shown on Site Map ☒ Settlement Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

B. Cracks ☐ Location Shown on Site Map ☒ Cracking Not Evident

Lengths: Click or tap here to enter text. Widths: Click or tap here to enter text. Depths: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

C. Erosion ☐ Location Shown on Site Map ☒ Erosion Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

D. Holes ☐ Location Shown on Site Map ☒ Holes Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

E. Vegetative Cover ☐ Grass ☐ Cover Properly Established

☐ Tress/Shrubs (indicate size and locations on a diagram ☐ No Signs of Stress

Remarks: Click or tap here to enter text.

F. Alternative Cover (armored rock, concrete, etc.) ☒ N/A

Remarks: Click or tap here to enter text.

G. Bulges ☐ Location Shown on Site Map ☒ Bulges Not Evident

Areal Extent: Click or tap here to enter text. Height: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

H. Wet Areas/Water Damage ☒ Wet Areas/Water Damage Not Evident

☐ Wet Areas ☐ Location Shown on Site Map Areal Extent: Click or tap here to enter text.

☐ Ponding ☐ Location Shown on Site Map Areal Extent: Click or tap here to enter text.

☐ Seeps ☐ Location Shown on Site Map Areal Extent: Click or tap here to enter text.

☐ Soft Subgrade ☐ Location Shown on Site Map Areal Extent: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

I. Slope Instability ☐ Location Shown on Site Map ☒ Slope Instability Not Evident

☐ Slides Areal Extent: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

2. Benches ☐ Applicable ☒ N/A

(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

A. Flows Bypass Bench ☐ Location Shown on Site Map ☐ N/A or Okay

Remarks: Click or tap here to enter text.

B. Bench Breached ☐ Location Shown on Site Map ☐ N/A or Okay

Remarks: Click or tap here to enter text.

C. Bench Overtopped ☐ Location Shown on Site Map ☐ N/A or Okay

Remarks: Click or tap here to enter text.

3. Letdown Channels ☐ Applicable ☒ N/A

(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)

A. Settlement ☐ Location Shown on Site Map ☐ Settlement Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

B. Material Degradation ☐ Location Shown on Site Map ☐ Degradation Not Evident

Material Type: Click or tap here to enter text. Areal Extent: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

C. Erosion ☐ Location Shown on Site Map ☐ Erosion Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

D. Undercutting ☐ Location Shown on Site Map ☐ Undercutting Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

E. Obstructions ☐ Location Shown on Site Map ☐ Undercutting Not Evident

Type: Click or tap here to enter text.

Areal Extent: Click or tap here to enter text. Size: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

F. Excessive Vegetative Growth ☐ Location Shown on Site Map ☐ Excessive Growth Not Evident

Areal Extent: Click or tap here to enter text. ☐ Vegetation in channels does not obstruct flow

Remarks: Click or tap here to enter text.

4. Cover Penetrations ☒ Applicable ☐ N/A

A. Gas Vents ☐ Active ☐ Passive

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled

☐ Good condition ☐ Evidence of leakage at penetration

☐ Needs Maintenance ☐ N/A

Remarks: Click or tap here to enter text.

B. Gas Monitoring Probes

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled

☐ Good condition ☐ Evidence of leakage at penetration

☐ Needs Maintenance ☐ N/A

Remarks: Click or tap here to enter text.

C. Monitoring Wells

☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled

☒ Good condition ☐ Evidence of leakage at penetration

☒ Needs Maintenance ☐ N/A

Remarks: One well, MW-3S, is leaning and may need to be abandoned

D. Leachate Extraction Wells

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled

☐ Good condition ☐ Evidence of leakage at penetration

☐ Needs Maintenance ☒ N/A

Remarks: Click or tap here to enter text.

E. Settlement Monuments ☐ Located ☐ Routinely Surveyed ☒ N/A

Remarks: Click or tap here to enter text.

5. Gas Collection and Treatment ☐ Applicable ☒ N/A

A. Gas Treatment Facilities

☐ Flaring ☐ Thermal Destruction ☐ Collection for Reuse

☐ Good condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

B. Gas Collection Wells, Manifolds, and Piping

☐ Good condition ☐ Needs Maintenance ☐ N/A

Remarks: Click or tap here to enter text.

C. Gas Monitoring Facilities (e.g. gas monitoring of adjacent homes or buildings)

☐ Good condition ☐ Needs Maintenance ☐ N/A

Remarks: Click or tap here to enter text.

6. Cover Drainage Layer ☐ Applicable ☒ N/A

A. Outlet Pipes Inspected ☐ Functioning ☐ N/A

Remarks: Click or tap here to enter text.

B. Outlet Rock Inspected ☐ Functioning ☐ N/A

Remarks: Click or tap here to enter text.

7. Detention/Sediment Ponds ☐ Applicable ☒ N/A

A. Siltation ☐ Siltation Not Evident ☐ N/A

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

B. Erosion ☐ Erosion Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

C. Outlet Works ☐ Functioning ☐ N/A

Remarks: Click or tap here to enter text.

D. Dam ☐ Functioning ☐ N/A

Remarks: Click or tap here to enter text.

8. Retaining Walls ☐ Applicable ☒ N/A

A. Deformations ☐ Location Shown on Site Map ☐ Deformation Not Evident

Horizontal Displacement: Click or tap here to enter text.

Vertical Displacement: Click or tap here to enter text.

Rotational Displacement: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

B. Degradation ☐ Location Shown on Site Map ☐ Deformation Not Evident

Remarks: Click or tap here to enter text.

9. Perimeter Ditches/Off-Site Discharge ☐ Applicable ☒ N/A

A. Siltation ☐ Location Shown on Site Map ☐ Siltation Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

B. Vegetative Growth ☐ Location Shown on Site Map ☐ N/A

☐ Vegetation Does Not Impede Flow

Areal Extent: Click or tap here to enter text. Type: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

C. Erosion ☐ Location Shown on Site Map ☐ Erosion Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

D. Discharge Structure ☐ Functioning ☐ N/A

Remarks: Click or tap here to enter text.

VIII. VERTICAL BARRIER WALLS

☒ Applicable ☐ N/A

1. Settlement ☐ Location Shown on Site Map ☒ Settlement Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

2. Performance Monitoring Type of Monitoring: Click or tap here to enter text.

☐ Performance Not Monitored ☐ Evidence of Breaching

Frequency: Click or tap here to enter text. Head Differential: **12 inches**

Remarks: Click or tap here to enter text.

IX. GROUNDWATER/SURFACE WATER REMEDIES

☐ Applicable ☒ N/A

1. Groundwater Extraction Wells, Pumps, and Pipelines ☐ Applicable ☐ N/A

A. Pumps, Wellhead Plumbing, and Electrical ☐ N/A

☐ Good Condition ☐ All Required Wells Properly Operating ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

B. Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances

☐ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

C. Spare Parts and Equipment ☐ Needs to be Provided

☐ Readily Available ☐ Good Condition ☐ Requires Upgrade

Remarks: Click or tap here to enter text.

2. Surface Water Collection Structures, Pumps, and Pipelines ☐ Applicable ☐ N/A

A. Collection Structures, Pumps, and Electrical

☐ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

B. Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances

☐ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

C. Spare Parts and Equipment ☐ Needs to be Provided

☐ Readily Available ☐ Good Condition ☐ Requires Upgrade

Remarks: Click or tap here to enter text.

3. Treatment System ☐ Applicable ☐ N/A

A. Treatment Train (Check components that apply)

☐ Metals removal ☐ Oil/Water Separation ☐ Bioremediation

☐ Air Stripping ☐ Carbon Absorbers

☐ Filters Click or tap here to enter text.

☐ Additive (e.g. chelation agent, flocculent) Click or tap here to enter text.

☐ Others Click or tap here to enter text.

☐ Good Condition ☐ Needs Maintenance

☐ Sampling ports properly marked and functional

☐ Sampling/maintenance log displayed and up to date

☐ Equipment properly identified

☐ Quantity of groundwater treated annually Click or tap here to enter text.

☐ Quantity of surface water treated annually Click or tap here to enter text.

Remarks: Click or tap here to enter text.

B. Electrical Enclosures and Panels (properly rated and functional)

☐ N/A ☐ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

C. Tanks, Vaults, Storage Vessels ☐ N/A

☐ Proper Secondary Containment ☐ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

D. Discharge Structure and Appurtenances

☐ N/A ☐ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

E. Treatment Building(s)

☐ N/A ☐ Good condition (esp. roof and doorways)

☐ Needs repair ☐ Chemicals and equipment properly stored

Remarks Click or tap here to enter text.

F. Monitoring Wells (Pump and Treatment Remedy) ☐ N/A

☐ Properly secured/locked ☐ Functioning

☐ Routinely sampled ☐ All required wells located

☐ Good condition ☐ Needs Maintenance

Remarks Click or tap here to enter text.

4. Monitoring Data

A. Monitoring Data:

☒ Is Routinely Submitted on Time ☐ Is of Acceptable Quality

B. Monitoring Data Suggests:

☒ Groundwater plume is effectively contained ☒ Contaminant concentrations are declining

5. Monitored Natural Attenuation

A. Monitoring Wells (natural attenuation remedy) ☐ N/A

☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled

☐ All required wells located ☒ Needs Maintenance ☒ Good condition

Remarks: Key issues with some wells. N-10 and -30 are buried by neighboring company.

X. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

1. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

The current remedy, MNA, aims to cleanup groundwater to ARARs in a reasonable timeframe. The soil and final cap remedies along with ICs aim to contain waste left in place and ensure human health and the environment are protected. The soil and final cap remedy are effective and protective. However, the groundwater remedy lacks sufficient monitoring of northeastward groundwater plume movement. This information is necessary to ensure MNA cleans up groundwater to ARARs in a reasonable timeframe.

2. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

Overall, the O&M procedures procedures for the remedy are being implemented effectively and the O&M procedures, including an ICIAP and LTS plan, support long-term protectiveness of the remedy. The remaining issue at the site is groundwater plume delineation.

3. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.

The neighboring company is continuing to expand operations onto the Superfund Site and is disturbing the remedy. Moreover, their activities are likely increasing flooding issues in the north east well field area.

4. Early Indicators of Potential Remedy Problems

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

The lock and key system for monitoring wells has multiple different locks and keys. This system should be consolidated to one set of locks and keys to optimize monitoring well accessibility.

Site Inspection Checklist

Photograph in the northeast area of the Site near well S-30 showing evidence of dumping

Photograph showing well MW-4S (bottom left corner) and a nearby pole coated in a black substance (right side)

Closeup of the utility pole near well MW-4S coated from its base to approximately 5 feet with a dark substance.

Photograph taken of extraction well 4 EW-4 looking towards the approximate location of N10/30 and O-10/30

Some ponding observed onsite, but outside of the landfill and sediment caps

Photograph of well H-30 looking towards G-10/30. Phragmites approximately 8 feet tall along with flooding prevented access to wells G-10/30

APPENDIX E – MIDCO I INSTITUTIONAL CONTROLS TABLES

Table 1
Midco I Institutional Control Matrix
Gary, Indiana

Historic Parcel ID	Pin Numbers		Contaminated Media		Engineering Controls	Government Control	Informational Device[4] Site Remedy O&M Plan (Components below)									Institutional Control		
			Subsurface Soils[1]	Groundwater[2]		City of Gary Ordinance 7930[3]	Perimeter Fencing and Signage for Access Control	Groundwater Monitoring wells	Final Cover/ Barrier Wall	Sediment Cap	Stormwater Detention Pond	Groundwater Natural Attenuation Zone	Deep Injection Well	Site Building with Treatment System	Other site features (swale, access road, parking area)	Deed Restriction	Access Agreement	Deed Notice (USEPA) / Other Notification
Parcel 2 (East)	45-07-11-154-	039.000-004		x	None	x						x				x	x	
Parcel 2 (East)	45-07-11-154-	040.000-004		x	None	x						x			x	x	x	
Parcel 2 (East)	45-07-11-154-	041.000-004		x	None	x						x		x	x	x	x	
Parcel 2 (East)	45-07-11-154-	042.000-004		x	None	x						x		x	x	x	x	
Parcel 2 (East)	45-07-11-154-	043.000-004		x	None	x						x		x	x	x	x	
Parcel 2 (East)	45-07-11-154-	044.000-004		x	None	x						x			x	x	x	
Parcel 2 (East)	45-07-11-154-	045.000-004	x	x	Final Cover	x			x			x				x	x	
Parcel 2 (East)	45-07-11-154-	046.000-004	x	x	Final Cover, Barrier Wall	x			x			x				x	x	

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Gary, Indiana

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			Subsurface Soils[1]	Groundwater[2]		City of Gary Ordinance 7930[3]	Perimeter Fencing and Signage for Access Control	Groundwater Monitoring wells	Final Cover/ Barrier Wall	Sediment Cap	Stormwater Detention Pond	Groundwater Natural Attenuation Zone	Deep Injection Well	Site Building with Treatment System	Other site features (swale, access road, parking area)	Deed Restriction	Access Agreement	Deed Notice (USEPA) / Other Notification
Parcel 2 (East)	45-07-11-154-	047.000-004	x	x	Final Cover	x			x			x				x	x	
Parcel 2 (East)	45-07-11-154-	048.000-004	x	x	Final Cover	x			x			x				x	x	
Parcel 2 (West)	45-07-11-154-	013.000-004	x		Sediment Cover	NA	x			x					x	x	x	
Parcel 2 (West)	45-07-11-154-	014.000-004	x		Sediment Cover	NA	x			x					x	x	x	
Parcel 2 (West)	45-07-11-154-	015.000-004	x		Sediment Cover	NA	x			x					x	x	x	
Parcel 2 (West)	45-07-11-154-	016.000-004	x		Sediment Cover	NA	x			x					x	x	x	
Parcel 2 (West)	45-07-11-154-	017.000-004	x		Sediment Cover	NA	x			x					x	x	x	
Parcel 2 (West)	45-07-11-154-	018.000-004	x		Sediment Cover	NA	x			x					x	x	x	

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Midco I Institutional Control Matrix
Gary, Indiana

Historic Parcel ID	Pin Numbers		Contaminated Media		Engineering Controls	Government Control	Informational Device[4] Site Remedy O&M Plan (Components below)									Institutional Control		
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Parcel 2 (West)	45-07-11-154-	019.000-004	X		Sediment Cover	NA	x			x					x	x	x	
Parcel 2 (West)	45-07-11-154-	020.000-004	x		Sediment Cover	NA	x			x					x	x	x	
Parcel 2 (West)	45-07-11-154-	021.000-004			None	NA	x								x	x	x	
Parcel 2 (West)	45-07-11-154-	022.000-004			None	NA	x									x	x	
Parcel 2 (West)	45-07-11-154-	023.000-004			None	NA	x									x	x	
Parcel 2 (West)	45-07-11-154-	024.000-004			None	NA	x	x			x					x	x	
Parcel 2 (West)	45-07-11-154-	025.000-004			None	NA	x				x					x	x	
Parcel 2 (West)	45-07-11-154-	026.000-004			None	NA	x				x					x	x	

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Midco I Institutional Control Matrix
Gary, Indiana

Historic Parcel ID	Pin Numbers		Contaminated Media		Engineering Controls	Government Control	Informational Device[4] Site Remedy O&M Plan (Components below)									Institutional Control		
			Subsurface Soils[1]	Groundwater[2]		City of Gary Ordinance 7930[3]	Perimeter Fencing and Signage for Access Control	Groundwater Monitoring wells	Final Cover/ Barrier Wall	Sediment Cap	Stormwater Detention Pond	Groundwater Natural Attenuation Zone	Deep Injection Well	Site Building with Treatment System	Other site features (swale, access road, parking area)	Deed Restriction	Access Agreement	Deed Notice (USEPA) / Other Notification
Parcel 2 (West)	45-07-11-154-	027.000-004	x	x	Final Cover	x	x		x			x				x	x	
Parcel 3	45-07-11-154-	028.000-004	x	x	Final Cover, Barrier Wall	x	x	x	x			x				x	x	
Parcel 4	45-07-11-154-	030.000-004			None													
Parcel 4	45-07-11-154-	031.000-004	x		Sediment Cover	NA	x			x							x	
Parcel 4	45-07-11-154-	032.000-004	x		Sediment Cover	NA	x			x							x	
Parcel 5	45-07-11-154-	033.000-004		x	None	x	x					x					x	
Parcel 5	45-07-11-154-	034.000-004		x	None	x	x					x					x	
Parcel 5	45-07-11-154-	035.000-004		x	None	x	x	x				x					x	
Parcel 6	45-07-11-154-	036.000-004		x	None	x	x					x					x	
Parcel 6	45-07-11-154-	037.000-004		x	None	x	x					x			x		x	
Parcel 6	45-07-11-154-	038.000-004		x	None	x						x			x		x	
Parcel 7	45-07-11-156-	014.000-004	x	x	Final Cover	x			x			x				x	x	
Parcel 7	45-07-11-156-	015.000-004	x	x	Final Cover	x			x			x				x	x	
Parcel 7	45-07-11-156-	016.000-004	x	x	Final Cover	x			x			x				x	x	
Parcel 7	45-07-11-156-	017.000-004	x	x	Final Cover	x			x			x				x	x	

Table 1
Midco I Institutional Control Matrix
Gary, Indiana

Historic Parcel ID	Pin Numbers		Contaminated Media		Engineering Controls	Government Control	Informational Device[4] Site Remedy O&M Plan (Components below)									Institutional Control		
			Subsurface Soils[1]	Groundwater[2]		City of Gary Ordinance 7930[3]	Perimeter Fencing and Signage for Access Control	Groundwater Monitoring wells	Final Cover/ Barrier Wall	Sediment Cap	Stormwater Detention Pond	Groundwater Natural Attenuation Zone	Deep Injection Well	Site Building with Treatment System	Other site features (swale, access road, parking area)	Deed Restriction	Access Agreement	Deed Notice (USEPA) / Other Notification
Parcel 7	45-07-11-156-	018.000-004	x	x	Final Cover	x		x	x			x				x	x	
Parcel 7	45-07-11-156-	019.000-004	x	x	Final Cover	x			x			x				x	x	
Parcel 8	45-07-11-156-	020.000-004	x	x	Final Cover	x			x			x				x	x	
Parcel 8	45-07-11-156-	021.000-004	x	x	Final Cover	x			x			x				x	x	
Parcel 8	45-07-11-156-	022.000-004	x	x	Final Cover	x			x			x				x	x	
Parcel 8	45-07-11-156-	023.000-004	x	x	Final Cover	x			x			x				x	x	
Parcel 8	45-07-11-156-	024.000-004	x	x	Final Cover	x			x			x				x	x	
Parcel 8	45-07-11-156-	025.000-004	x	x	Final Cover, Barrier Wall	x	x		x			x				x	x	

Table 1
Midco I Institutional Control Matrix
Gary, Indiana

Historic Parcel ID	Pin Numbers		Contaminated Media		Engineering Controls	Government Control	Informational Device[4] Site Remedy O&M Plan (Components below)									Institutional Control		
			Subsurface Soils[1]	Groundwater[2]		City of Gary Ordinance 7930[3]	Perimeter Fencing and Signage for Access Control	Groundwater Monitoring wells	Final Cover/ Barrier Wall	Sediment Cap	Stormwater Detention Pond	Groundwater Natural Attenuation Zone	Deep Injection Well	Site Building with Treatment System	Other site features (swale, access road, parking area)	Deed Restriction	Access Agreement	Deed Notice (USEPA) / Other Notification
Parcel 12	45-07-11-156-	009.000-004	x	x	Final Cover, Barrier Wall	x	x	x	x			x				x	x	
Parcel 12	45-07-11-156-	010.000-004	x	x	Final Cover, Barrier Wall	x	x	x	x			x				x	x	
Parcel 12	45-07-11-156-	011.000-004	x	x	Final Cover, Barrier Wall	x	x		x			x				x	x	
Parcel 12	45-07-11-156-	012.000-004	x	x	Final Cover, Barrier Wall	x	x		x			x				x	x	
Parcel 13	45-07-11-156-	001.000-004	x	x	Final Cover, Barrier Wall	x	x		x			x				x	x	
Parcel 13	45-07-11-156-	002.000-004	x	x	Final Cover, Barrier Wall	x	x		x			x				x	x	
Parcel 13	45-07-11-156-	003.000-004	x	x	Final Cover, Barrier Wall	x	x		x			x				x	x	
Parcel 13	45-07-11-156-	004.000-004	x	x	Final Cover, Barrier Wall	x	x		x			x				x	x	
Parcel 13	45-07-11-156-	005.000-004	x	x	Final Cover, Barrier Wall	x	x	x	x			x				x	x	

Table 1
Midco I Institutional Control Matrix
Gary, Indiana

Historic Parcel ID	Pin Numbers		Contaminated Media		Engineering Controls	Government Control	Informational Device[4] Site Remedy O&M Plan (Components below)									Institutional Control		
			Subsurface Soils[1]	Groundwater[2]		City of Gary Ordinance 7930[3]	Perimeter Fencing and Signage for Access Control	Groundwater Monitoring wells	Final Cover/ Barrier Wall	Sediment Cap	Stormwater Detention Pond	Groundwater Natural Attenuation Zone	Deep Injection Well	Site Building with Treatment System	Other site features (swale, access road, parking area)	Deed Restriction	Access Agreement	Deed Notice (USEPA) / Other Notification
Parcel 13	45-07-11-156-	006.000-004	x	x	Final Cover, Barrier Wall	x	x	x	x			x				x	x	
Parcel 13	45-07-11-156-	007.000-004	x	x	Final Cover, Barrier Wall	x	x		x			x				x	x	
Parcel 13	45-07-11-156-	008.000-004	x	x	Final Cover, Barrier Wall	x	x		x			x				x	x	
Parcel 15	45-07-11-176-	009.000-004		x	None	x						x						
Parcel 28	45-07-11-176-	010.000-004		x	None	x						x						
Parcel 35	45-07-11-176-	001.000-004	x	x	Sediment Cover	x	x	x	x	x		x				x		
Parcel 35	45-07-11-176-	002.000-004	x	x	Sediment Cover	x	x	x		x		x				x		
Parcel 35	45-07-11-176-	003.000-004	x	x	Final Cover, Barrier Wall, Sediment Cover	x		x	x	x		x				x		
Parcel 36	45-07-11-176-	006.000-004	x		Sediment Cover	NA	x			x					x	x		
Parcel 37	45-07-11-176-	005.000-004	x		Sediment Cover	NA	x			x						x		
Parcel 38	45-07-11-176-	008.000-004		x	None	x						x						
Parcel 39	45-07-11-176-	004.000-004	x	x	Final Cover, Barrier Wall, Sediment Cover	x	x	x	x	x		x			x	x		
INDOT	45-07-11-155-	001.000-004			Former Deep Injection Well	x							x				x	
INDOT	45-07-11-155-	007.000-005			None	x							x				x	
Gary Materials	45-07-11-126	002.000-004		x	None	x		x				x					x	
Gary Materials	45-07-11-126	003.000-004		x	None	x						x						
Gary Materials	45-07-11-126	004.000-004		x	None	x						x						

Table 1
Midco I Institutional Control Matrix
Gary, Indiana

Historic Parcel ID	Pin Numbers		Contaminated Media		Engineering Controls	Government Control	Informational Device[4] Site Remedy O&M Plan (Components below)									Institutional Control		
			Subsurface Soils[1]	Groundwater[2]		City of Gary Ordinance 7930[3]	Perimeter Fencing and Signage for Access Control	Groundwater Monitoring wells	Final Cover/ Barrier Wall	Sediment Cap	Stormwater Detention Pond	Groundwater Natural Attenuation Zone	Deep Injection Well	Site Building with Treatment System	Other site features (swale, access road, parking area)	Deed Restriction	Access Agreement	Deed Notice (USEPA) / Other Notification
Rail Road Right of Way	Rail Road Right of Way	Rail Road Right of Way		x	None	x						x						
13th Ave (Proposed)	Northeast corner N:2858526.50999	Northeast corner E:2310150.69989	x	x	Final Cover, Barrier Wall	x	x	x	x			x			x			x
	Northwest corner N:2858224.79012	Northwest corner E:2310153.13984																
	Southeast corner N:2858526.44011	Southeast corner E:2310090.70001																
	Southwest corner N:2858224.71991	Southwest corner E:2310093.13012																
Blaine Street and Proposed Extension	Northeast Corner N:2858557.21991	Northeast Corner E:2310779.8151	x	x	Final Cover, Barrier Wall	x	x	x	x			x			x			x
	Northwest Corner N:2858527.2266	Northwest Corner E:2310780.08398																
	Southeast Corner N:2858556.10081	Southeast Corner E:2309794.09496																
	Southwest Corner N:2858526.09923	Southwest Corner E:2309791.44995																

Table 1
Midco I Institutional Control Matrix
Gary, Indiana

Historic Parcel ID	Pin Numbers		Contaminated Media		Engineering Controls	Government Control	Informational Device[4] Site Remedy O&M Plan (Components below)									Institutional Control		
			Subsurface Soils[1]	Groundwater[2]		City of Gary Ordinance 7930[3]	Perimeter Fencing and Signage for Access Control	Groundwater Monitoring wells	Final Cover/ Barrier Wall	Sediment Cap	Stormwater Detention Pond	Groundwater Natural Attenuation Zone	Deep Injection Well	Site Building with Treatment System	Other site features (swale, access road, parking area)	Deed Restriction	Access Agreement	Deed Notice (USEPA) / Other Notification
ROW - Owner Unknown	Northeast corner N: 2858399.19004	Northeast corner E:2310625.71994	x	x	Final Cover, Barrier Wall, Sediment Cover	x	x	x	x	x	x	x			x			x
	Northwest corner N:2858383.19007	Northwest corner E:2310625.88004																
	Southeast corner N:2858398.63984	Southeast corner E:2310151.73007																
	Southwest corner N:2858382.65004	Southwest corner E:2310151.85999																

(1) Parcels with Subsurface soils that may contain residual VOCs, SVOCs, metals, and PCB/pesticides are addressed with the following Cleanup Objective, Use Restriction/IC Objective and Conditions for Termination:

1. Cleanup Objective: Prohibit dermal contact, prevent damage to cap
2. Use Restrictive/ IC Objective: Prohibit Interference with the constructed remedy components
3. Condition for Termination: Levels allowing for unlimited use and unrestricted exposure were not intended to be achieved by response actions, Termination of ICs may occur at the end of the site remedy O&M period.

(2) Parcels with Groundwater that may contain residual benzene, 1,4-dioxanes are addressed with the following Cleanup Objective, Use Restriction/IC Objective and Conditions for Termination:

1. Cleanup Objective: Prohibit consumptive use of contaminated groundwater
2. Use Restrictive/ IC Objective: Prohibit consumptive use of the groundwater plume areas until performance standards are achieved
3. Termination could be pursued once cleanup action levels (CALs) are obtained and/or at the end of the site remedy O&M period.

(3) City of Gary restricts the use of shallow groundwater for potable uses (Ordinance 7930).
Although, all parcels are within the City of Gary, "NA" is indicated in parcels that do not contain residual groundwater impacts and are not part of the MNA program.

(4) Site Remedy Component locations are based on visual assessment. Survey may be required to verify.

Table 2
Midco I Institutional Control and Ownership Summary by Parcels
Gary, Indiana

				Institutional Controls		
Current (2022) Pin Number[1]	Current (2022) Owner[1]	Historic (1992) Parcel ID[2]	Historic (1992) Owner[2]	Deed Restriction	Access Agreement	Deed Notice (USEPA) / Other Notification
45-07-11-176-006.000-004	Capital, LLC	Parcel 36	Michael Kibler	Environmental Restrictive Covenant was signed by owner on August 11, 2020, and recorded on September 28, 2020.	Not Required	Not Required
45-07-11-176-005.000-004		Parcel 37	Michael Kibler	Environmental Restrictive Covenant was signed by owner on August 11, 2020, and recorded on September 28, 2020.	Not Required	Not Required
45-07-11-176-003.000-004	Gary Material Supply LLC	Parcels 35	Michael Kibler	Environmental Restrictive Covenant was signed by owner on September 23, 2020, and recorded on September 24, 2020.	Not Required	Not Required
45-07-11-176-004.000-004		Parcel 39	V & E Corporation	Environmental Restrictive Covenant was signed by owner on September 23, 2020, and recorded on September 24, 2020.	Not Required	Not Required
45-07-11-176-001.000-004		Parcels 35	Michael Kibler	Environmental Restrictive Covenant was signed by owner on September 23, 2020, and recorded on September 24, 2020.	Not Required	Not Required
45-07-11-176-002.000-004		Parcels 35	Michael Kibler	Environmental Restrictive Covenant was signed by owner on September 23, 2020, and recorded on September 24, 2020.	Not Required	Not Required
45-07-11-126-002.000-004		Gary Materials	IC not required in 1993	Not Required	Access Agreement Pursuit was signed by owner on September 23, 2020.	Not Required
45-07-11-176-008.000-004		Parcel 38	Mercantile National Bank Trustee, Trust #4918	Not Required	Not Required	Not Required
45-07-11-126-004.000-004		Gary Materials	IC not required in 1993	Not Required	Not Required	Not Required
45-07-11-176-010.000-004*		Parcel 28	Initial Deed Restriction/ Access agreement not required in 1993	Not Required	Not Required	Not Required
45-07-11-153-001.000-004	State of Indiana INDOT Facility	INDOT	Initial Deed Restriction/ Access agreement not required in 1993	Not Required	Access agreement signed August 19, 2020.	Not Required
45-07-11-155-007.000-004		INDOT	Initial Deed Restriction/ Access agreement not required in 1993	Not Required	Access agreement signed September 4, 2020.	Not Required
Northeast corner N:2858526.50999 E:2310150.69989	City of Gary / State of Indiana 13th Ave (Proposed) Right-Of-Way	13th Ave (Proposed)	Initial Deed Restriction/ Access agreement not required in 1993	Not Required	Not Required	Notification to the entity who controls the ROW that explains potential environmental exposure dated August 26, 2020 and delivered on September 1, 2020.
Northwest corner N:2858224.79012 E:2310153.13984						
Southeast corner N:2858526.44011 E:2310090.70001						
Southwest corner N:2858224.71991 E:2310093.13012						

Table 2
Midco I Institutional Control and Ownership Summary by Parcels
Gary, Indiana

				Institutional Controls		
Current (2022) Pin Number[1]	**Current (2022) Owner[1]**	**Historic (1992) Parcel ID[2]**	**Historic (1992) Owner[2]**	**Deed Restriction**	**Access Agreement**	**Deed Notice (USEPA) / Other Notification**
Northeast Corner N:2858557.21991 E:2310779.8151 Northwest Corner N:2858527.2266 E:2310780.08398 Southeast Corner N:2858556.10081 E:2309794.09496 Southwest Corner N:2858526.09923 E:2309791.44995	City of Gary / State of Indiana Blaine Street and Proposed Extension Right-Of-Way	Blaine Street and Proposed Extension	Initial Deed Restriction/ Access agreement not required in 1993	Not Required	Not Required	Notification to the entity who controls the ROW that explains potential environmental exposure dated August 26, 2020 and delivered on September 1, 2020.
Northeast corner N: 2858399.19004 E:2310625.71994 Northwest corner N:2858383.19007 E:2310625.88004 Southeast corner N:2858398.63984 E:2310151.73007 Southwest corner N:2858382.65004 E:2310151.85999	City of Gary / State of Indiana Right-Of-Way	ROW - Owner Unknown	Initial Deed Restriction/ Access agreement not required in 1993	Not Required	Not Required	Notification to the entity who controls the ROW that explains potential environmental exposure dated August 26, 2020 and delivered on September 1, 2020.
45-07-11-154-031.000-004	Young, Andy (continued on following page)	Parcel 4	IC not required in 1993	Environmental Restrictive Covenant was signed by owner on September 3, 2020, and recorded on September 24, 2020.	Not Required	Not Required
45-07-11-154-032.000-004		Parcel 4	IC not required in 1993	Environmental Restrictive Covenant was signed by owner on September 3, 2020, and recorded on September 24, 2020.	Not Required	Not Required
45-07-11-154-033.000-004		Parcel 5	Hoosier State Bank of Indiana (Gainer Bank), Trust #1457	Not Required	Access agreement signed September 3, 2020.	Not Required
45-07-11-154-035.000-004		Parcel 5	Hoosier State Bank of Indiana (Gainer Bank), Trust #1457	Not Required	Access agreement signed September 3, 2020.	Not Required
45-07-11-154-030.000-004		Parcel 4	IC not required in 1993	Not Required	Not Required	Not Required
45-07-11-154-042.000-004		Parcel 2 (East)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-043.000-004		Parcel 2 (East)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-013.000-004		Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required

Table 2
Midco I Institutional Control and Ownership Summary by Parcels
Gary, Indiana

				Institutional Controls		
Current (2022) Pin Number[1]	Current (2022) Owner[1]	Historic (1992) Parcel ID[2]	Historic (1992) Owner[2]	Deed Restriction	Access Agreement	Deed Notice (USEPA) / Other Notification
45-07-11-154-017.000-004	Young, Andy (continued from previous page)	Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-019.000-004		Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-024.000-004		Parcel 8	Eugene L. Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-011.000-004		Parcel 12	Robert Dawson, Jr.	Deed restriction (#93034418) was recorded with Lake County, Indiana on May 26, 1993 by owner (Robert Dawson).	Original owner identified as Class 1 Defendant, Robert Dawson.	Not Required
45-07-11-156-012.000-004		Parcel 12	Robert Dawson, Jr.	Deed restriction (#93034418) was recorded with Lake County, Indiana on May 26, 1993 by owner (Robert Dawson).	Original owner identified as Class 1 Defendant, Robert Dawson.	Not Required
45-07-11-156-002.000-004		Parcel 13	Robert Dawson, Jr.	Deed restriction (#93034418) was recorded on May 26, 1993 and Deed restriction (#93003288) was recorded on January 14, 1993 with Lake County, Indiana by owner (Robert Dawson).	Original owner identified as Class 1 Defendant, Robert Dawson.	Not Required
45-07-11-156-008.000-004		Parcel 13	Robert Dawson, Jr.	Deed restriction (#93034418) was recorded on May 26, 1993 and Deed restriction (#93003288) was recorded on January 14, 1993 with Lake County, Indiana by owner (Robert Dawson).	Original owner identified as Class 1 Defendant, Robert Dawson.	Not Required
45-07-11-154-044.000-004	Pawel, Garus	Parcel 2 (East)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-045.000-004		Parcel 2 (East)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-047.000-004		Parcel 2 (East)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-048.000-004		Parcel 2 (East)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-019.000-004		Parcel 7	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-020.000-004		Parcel 8	Eugene L. Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-021.000-004		Parcel 8	Eugene L. Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-022.000-004		Parcel 8	Eugene L. Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-023.000-004		Parcel 8	Eugene L. Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-046.000-004		Parcel 2 (East)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992. Updated October 25, 2019	Not Required

Table 2
Midco I Institutional Control and Ownership Summary by Parcels
Gary, Indiana

				Institutional Controls		
Current (2022) Pin Number[1]	Current (2022) Owner[1]	Historic (1992) Parcel ID[2]	Historic (1992) Owner[2]	Deed Restriction	Access Agreement	Deed Notice (USEPA) / Other Notification
45-07-11-154-016.000-004	Allen, Barry A (continued on following page)	Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-021.000-004		Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-022.000-004		Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-023.000-004		Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-026.000-004		Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-014.000-004		Parcel 7	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-016.000-004		Parcel 7	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-017.000-004		Parcel 7	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-018.000-004	Allen, Barry A (continued from previous page)	Parcel 7	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-004.000-004		Parcel 13	Robert Dawson, Jr.	Deed restriction (#93034418) was recorded on May 26, 1993 and Deed restriction (#93003288) was recorded on January 14, 1993 with Lake County, Indiana by owner (Robert Dawson).	Original owner identified as Class 1 Defendant, Robert Dawson.	Not Required
45-07-11-156-005.000-004		Parcel 13	Robert Dawson, Jr.	Deed restriction (#93034418) was recorded on May 26, 1993 and Deed restriction (#93003288) was recorded on January 14, 1993 with Lake County, Indiana by owner (Robert Dawson).	Original owner identified as Class 1 Defendant, Robert Dawson.	Not Required
45-07-11-154-039.000-004	Klisiak, Eugene L	Parcel 2 (East)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-025.000-004		Parcel 8	Eugene L. Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-041.000-004		Parcel 2 (East)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-018.000-004		Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-006.000-004		Parcel 13	Robert Dawson, Jr.	Deed restriction (#93034418) was recorded on May 26, 1993 and Deed restriction (#93003288) was recorded on January 14, 1993 with Lake County, Indiana by owner (Robert Dawson).	Original owner identified as Class 1 Defendant, Robert Dawson.	Not Required
45-07-11-156-007.000-004		Parcel 13	Robert Dawson, Jr.	Deed restriction (#93034418) was recorded on May 26, 1993 and Deed restriction (#93003288) was recorded on January 14, 1993 with Lake County, Indiana by owner (Robert Dawson).	Original owner identified as Class 1 Defendant, Robert Dawson.	Not Required

Table 2
Midco I Institutional Control and Ownership Summary by Parcels
Gary, Indiana

				Institutional Controls		
Current (2022) Pin Number[1]	Current (2022) Owner[1]	Historic (1992) Parcel ID[2]	Historic (1992) Owner[2]	Deed Restriction	Access Agreement	Deed Notice (USEPA) / Other Notification
45-07-11-154-014.000-004	Itsekiri Association of Chicago	Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-025.000-004		Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-036.000-004		Parcel 6	Coy Ann Gentz	Not Required	Access agreement dated January 15, 1993.	Not Required
45-07-11-154-027.000-004	Ochiabutor, Anthony	Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992. Updated October 25, 2019	Not Required
45-07-11-156-010.000-004		Parcel 12	Robert Dawson, Jr.	Deed restriction (#93034418) was recorded with Lake County, Indiana on May 26, 1993 by owner (Robert Dawson).	Original owner identified as Class 1 Defendant, Robert Dawson.	Not Required
45-07-11-154-015.000-004	City of Gary	Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-015.000-004		Parcel 7	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-020.000-004		Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-154-024.000-004		Parcel 2 (West)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-009.000-004		Parcel 12	Robert Dawson, Jr.	Deed restriction (#93034418) was recorded with Lake County, Indiana on May 26, 1993 by owner (Robert Dawson).	Original owner identified as Class 1 Defendant, Robert Dawson.	Not Required
45-07-11-156-001.000-004		Parcel 13	Robert Dawson, Jr.	Deed restriction (#93034418) was recorded on May 26, 1993 and Deed restriction (#93003288) was recorded on January 14, 1993 with Lake County, Indiana by owner (Robert Dawson).	Original owner identified as Class 1 Defendant, Robert Dawson.	Not Required
45-07-11-154-040.000-004	Lewis, Airree	Parcel 2 (East)	Eugene L. and Jeanette Klisiak	Deed restriction (#92083117) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated May 28, 1992.	Not Required
45-07-11-156-003.000-004	Ezeofor, Elijah	Parcel 13	Robert Dawson, Jr.	Deed restriction (#93034418) was recorded on May 26, 1993 and Deed restriction (#93003288) was recorded on January 14, 1993 with Lake County, Indiana by owner (Robert Dawson).	Original owner identified as Class 1 Defendant, Robert Dawson. Updated November 2019.	Not Required
45-07-11-154-028.000-004	Northwestern University (New Owner Unknown)	Parcel 3	Northwestern University	Deed restriction (#92083125) was recorded with Lake County, Indiana on December 30,1992.	Access agreement dated November 6, 1992.	Not Required
45-07-11-154-034.000-004	Nowacki, James	Parcel 5	Hoosier State Bank of Indiana (Gainer Bank), Trust #1457	Not Required	Access agreement dated January 15, 1993.	Not Required
45-07-11-154-037.000-004		Parcel 6	Coy Ann Gentz	Not Required	Access agreement dated January 15, 1993.	Not Required
45-07-11-154-038.000-004		Parcel 6	Coy Ann Gentz	Not Required	Access agreement dated January 15, 1993.	Not Required
45-07-11-126-003.000-004	Gubala, John & Angie Gubala	Gary Materials	Initial Deed Restriction/ Access agreement not required in 1993	Not Required	Not Required	Not Required
45-07-11-176-010.000-004*	From Conrad Whitmore & Blake	Parcel 28	Initial Deed Restriction/ Access agreement not required in 1993	Not Required	Not Required	Not Required

Table 2
Midco I Institutional Control and Ownership Summary by Parcels
Gary, Indiana

				Institutional Controls		
Current (2022) Pin Number[1]	**Current (2022) Owner[1]**	**Historic (1992) Parcel ID[2]**	**Historic (1992) Owner[2]**	**Deed Restriction**	**Access Agreement**	**Deed Notice (USEPA) / Other Notification**
Rail Road Right of Way	Unavailable	Rail Road Right of Way	Initial Deed Restriction/ Access agreement not required in 1993	Not Required	Not Required	Not Required
45-07-11-176-009.000-004	Miksich, Katherine (Re-recorded)	Parcel 15	Initial Deed Restriction/ Access agreement not required in 1993	Not Required	Not Required	Not Required

Notes

(1) The following resources were used in December 2022 to determine current owner information and verify parcels. Current owner information is not provided for parcels that do not require ICs
- Lake County, IN GIS Portal (Current owner information): https://portico.mygisonline.com/html5/?viewer=lakeinsurveyor
- Lake County, Indiana Tax Assessor Parcel Search: https://engage.xsoftinc.com/lake
- Communications with property owner between 2018-2020
- Site Zoning based on City of Gary Zoning Map Copyright © 2020 Carto, mscollins1920, (https://gary.gov/redevelopment/codes/)

(2) Current Pin numbers and Historic Parcels Numbers from the 1992 Parcel Map are shown in Figure 1 (USEPA IC Status Memo, dated September 28, 2020).

Table 3
Midco I Institutional Control Implementation Summary
Gary, Indiana

Instrument Name	Deed Restriction	Access Agreement	Operation and Maintenance (O & M) Plan	City of Gary Groundwater Use Ordinance
Instrument Category	Proprietary Control	Proprietary Control	Informational Device	Government Control
Institutional Control (IC) Objectives(a)	1, 2	1, 2	1, 2	2
Use Restriction	Deed restricts use of structures and infrastructure on property and prohibits interference with remedy	Access agreement allows inspection of site remedy and land use, maintenance and completion of groundwater MNA	Best Management Practices and Engineering Controls	Not Applicable
Implementation Prerequisites	Deed restrictions were complete and filed with the Lake County, IN Record of Deeds	Planned access agreements were complete and signed by property owners	Already in place	Already in place
Implementation Complete	Complete	Complete	Already in place, to be updated	Already complete
Person or Organization Responsible for performing implementation and contact information	USEPA, IDEM, City of Gary, Property Owner, MRC and Settling Defendants	USEPA, IDEM, City of Gary, Property Owner, MRC, and Settling Defendants	USEPA, IDEM, City of Gary, Property Owner, MRC and Settling Defendants	City of Gary
Instrument Lifespan	Until modification is warranted or termination at the end of the site remedy O&M period.			
Condition for Termination of IC	Permanent removal and disposal of residual contaminants that would permit removal of site remedy engineering controls			Achievement of cleanup action levels (CALs)

(a) Institutional Control (IC) Objectives

1. Prohibit Interference with the constructed remedy components
2. Prohibit consumptive use of the groundwater plume areas until performance standards are achieved