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FIFTH FIVE-YEAR REVIEW REPORT FOR THE CONTINENTAL STEEL CORP. SUPERFUND SITE HOWARD COUNTY, INDIANA

Prepared by

U.S. Environmental Protection Agency
Region 5
CHICAGO, ILLINOIS

8/10/2022

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Signed by: DOUGLAS BALLOTTI

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LIST OF ABBREVIATIONS & ACRONYMS

ARARs	Applicable or Relevant and Appropriate Requirements
ALA	Acid Lagoon Area
CAMU	Corrective Action Management Unit
CDA	Crushed Drum Area
CERCLA	Comprehensive Environmental Response, Compensation and Liabilities Act
CFR	Code of Federal Regulations
DCE	Dichloroethene
DO	Dissolved Oxygen
ERC	Environmental Restrictive Covenant
ESD	Explanation of Significant Differences
ESO	Environmental Services and Operation
EPA	United States Environmental Protection Agency
FYR	Five-Year Review
GPM	Gallons Per Minute
HH	Human Health
HSVE	Heated Soil Vapor Extraction
ICs	Institutional Controls
IDEM	Indiana Department of Environmental Management
IWDP	Industrial Wastewater Discharge Permit
KWTP	Kokomo Wastewater Treatment Plant
MAQA	Markland Avenue Quarry Area
MCL	Maximum Contaminant level
mV	Millivolts
MK	Mann-Kendall
MMQ	Martin Marietta Quarry
MNA	Monitoring Natural Attenuation
MNAWs	MNA Wells UA-02, UA-108, UA-28, UA-121, UA-105, and UA-124
MPA	Main Plant Area
NA	Natural Attenuation
NCP	National Contingency Plan
NTCRA	Non-Time-Critical Removal Action
O&M	Operation and Maintenance
OCH, JV	Oneida Total Integrated Enterprises and CH2M Joint Venture Team
ORP	Oxidation Reduction Potential
OUs	Operable Units
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	Poly-Chlorinated biphenyls
PCE	Perchloroethylene
PP	Proposed Plan
RA	Remedial Action
RAO	Remedial Action Objective
ROD	Record of Decision
RSL	Regional Screening Level
Site	Continental Steel Corp. Superfund Site

SPA	Slag Processing Area
TCE	Trichloroethylene
TI	Technical Impracticability
TOC	Total Organic Carbon
UU/UE	Unlimited Use/Unlimited Exposure
VC	Vinyl Chloride
VI	Vapor Intrusion
VOCs	Volatile Organic Compounds
WCSC	Wildcat Creek Soccer Complex
WKCs	Wildcat and Kokomo Creeks
WWTP	Wastewater Treatment Plant

I. INTRODUCTION

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order 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 Contingency Plan (NCP) (40 Code of Federal Regulations (CFR). Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the fifth FYR for the Continental Steel Corp. Superfund Site (Site). The triggering action for this statutory review is the signature date of the previous FYR on August 22, 2017. 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 six Operable Units (OUs), all of which are addressed in this FYR (*see* below).

The Site FYR was led by Nabil Fayoumi, EPA Remedial Project Manager (RPM). Participants included Janet Pope, EPA Community Involvement Coordinator, and Jessica Fliss, Indiana Department of Environmental Management (IDEM). IDEM was notified of the initiation of the five-year review. The review began on August 18, 2021 (Appendix C – Attachment A).

Site Background

The Site is located on West Markland Avenue in Kokomo, Howard County, Indiana (Figure 1 – Site Location Map in Appendix B). The total Site covers approximately 183 acres and is comprised of six areas that were designated as OUs. The four source areas include:

- OU2, Acid Lagoon Area (ALA), a waste acid treatment and disposal facility;
- OU4, Markland Avenue Quarry Area (MAQA), a waste disposal area;
- OU5, Main Plant Area (MPA), an abandoned steel manufacturing facility; and
- OU6, Slag Processing Area (SPA), a slag processing and disposal area.

The two receptor areas are:

- OU1, Site-wide Groundwater; and
- OU3, Wildcat and Kokomo Creeks (WKCs)

The Site Main Plant was built in 1914. The plant produced nails, wire, and wire fence from scrap metal. Operations included reheating, casting, rolling, drawing, pickling, annealing, hot-dip galvanizing, tinning, and oil tempering. The steel manufacturing operations at the plant included the use, handling, treatment, storage, and disposal of hazardous materials. The Site operated from approximately 1914 to 1986. The company entered bankruptcy and the Site was abandoned in 1986. The area surrounding the Site is mixed residential, commercial, and industrial use and is zoned for general use, except for the MPA and ALA, which are zoned for industrial use.

Groundwater beneath the Site appears to have received contaminants from the MPA, the MAQA, the ALA, and possibly from adjacent industrial facilities. Groundwater quality varies considerably across the Site, and groundwater contamination exists outside the source areas identified above as well.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Continental Steel Corp.		
EPA ID: IND001213503		
Region: 5	**State:** IN	**City/County:** Kokomo/Howard

SITE STATUS	
NPL Status: Final	
Multiple OUs? Yes	**Has the Site achieved construction completion?** Yes

REVIEW STATUS
Lead agency: EPA
Author name (Federal or State Project Manager): Nabil Fayoumi, EPA Remedial Project Manager
Author affiliation: EPA
Review period: 08/18/2021 – 4/21/2022
Date of Site inspection: 6/28/2022
Type of review: Statutory
Review number: 5
Triggering action date: 8/22/2017
Due date *(five years after triggering action date)*: 8/22/2022

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

EPA and IDEM determined that the Site poses potential long-term risks to human health (HH) and the environment by the presence of chemical constituents above the acceptable cancer risk range of $1x10^{-4}$ to $1x10^{-6}$, and above the non-cancer hazard quotient of one (1) that were established in the NCP, 40 CFR 300.430(e)(2)(i)(A)(2). This determination was documented in the Record of Decision (ROD) for the Site, signed by EPA and IDEM on September 30, 1998 (EPA, 1998).

Inhalation of contaminated soil dust, dermal contact with contaminated soils, ingestion of contaminated soils and garden vegetables planted in contaminated soils, and inhalation of asbestos were identified as exposure routes for on-site workers, trespassers, and residents nearby the Site. The contaminants and associated remediation goals for each OU of the Site are listed in Tables 1 through 6 below:

Table 1 - Remediation Goals for Groundwater (OU1)

Chemical	Remediation Goals (µg /l)
Acrylonitrile	2
Arochlor-1242	0.5
Arochlor-1248	0.5
Arsenic	10
1,1-dichloroethene (1,1-DCE)	7
1,2-dichloroethene (1,2-DCE)	70
Benzene	5
Manganese	50
Chloroform	100
Methylene Chloride	5
Perchloroethene (PCE)	5
Trichloroethene (TCE)	5
Vinyl Chloride (VC)	2

Table 2 - Remediation Goals for Soil in ALA (OU2)

Chemical	Remediation Goals (µg/kg)
Benzo(a)anthracene	5,984
Benzo(a)pyrene	598
Benzo(b)flouranthene	5,984
Di-benzo(a,h)anthracene	598
Indeno(1,2,3-c,d)pyrene	5,984
Arochlor-1242	1,000
Arochlor-1248	1,000
Beryllium	2,000
Lead	1,096,000

Table 3 - Remediation Goals for Sediment in WKCs (OU3)

Chemical	Remediation Goals (µg/kg)
Benzo(a)pyrene	1,585
Benzo(b&k)flouranthene	1,361
Benzo(a)anthracene	1,853

Indeno(1,2,3-c,d)pyrene	930
Arsenic	19,000
Beryllium	840
Arochlor-1016	1,000
Arochlor-1242	1,000
Arochlor-1248	1,000
Arochlor-1254	1,000
Arochlor-1260	1,000

Table 4 - Remediation Goals for Sediment in MAQA (OU4)

Chemical	**Remediation Goals (µg/kg)**
Benzo(a)anthracene	546
Benzo(a)pyrene	501
Benzo(b&k)flouranthene	779
Di-benz(a,h)anthracene	180
Indeno(1,2,3-c,d)pyrene	404
Arochlor-1248	1,000
Arsenic	19,000
Lead	400,000

Table 5 - Remediation Goals for Soil at MPA (OU5)

Chemical	**Remediation Goals (µg /kg)**
Benzo(a)anthracene	13260
Benzo(a)pyrene	1330
Benzo(b&k)flouranthene	13260
Di-benzo(a,h)anthracene	1330
Indeno(1,2,3-c,d)pyrene	13260
Arochlor-1242	4640
Arochlor-1248	4640
Arochlor-1254	2650
Arochlor-1260	4640
Lead	400,000
Total Volatile Organic Compounds (VOCs)	1,000

Table 6 - Remediation Goals for Soil at SPA Area (OU6)

Chemical	**Remediation Goals (µg/kg)**
Arsenic	19,000
Lead	400,000

Response Actions

In 1990 EPA conducted a removal action at the MAQA and removed more than 400 drums, along with several tanks and other waste materials. Drums contained mostly oils, solvents, and refuse.

Interim Remedial Action (RA) - Decontamination and Demolition of MPA Buildings (OU 5). IDEM investigated the MPA in 1995 and reported that the buildings presented a potential risk to nearby residents and trespassers. IDEM performed an Interim Remedial Investigation/Feasibility Study (RIFS) for the MPA buildings in 1996 and developed an Interim Proposed Plan (PP) that recommended the buildings be decontaminated and demolished. The PP was presented to the public in March 1996, and an

Interim ROD was signed on September 3, 1996 (IDEM, 1996). Decontamination and demolition of the MPA Buildings was the selected remedy. The work began in April 1999 and was completed on December 28, 2000. The remedy included:

- Gross removal of lead dust from building interiors with disposal of dust as hazardous waste in a permitted facility;
- Management and proper disposal of rinse water collected from decontamination;
- Abatement of exposed friable asbestos-containing material and asbestos-containing insulation by removal and disposal at a permitted facility;
- Sampling to confirm decontamination;
- Removal of PCB-contaminated wood block floors and disposal as hazardous waste;
- Demolition of all building superstructures, tanks, and equipment to grade, leaving floor slabs;
- Salvaging of structural steel as scrap unless it could be decontaminated and reused;
- Disposal of all debris and demolition rubble as hazardous, special or non-hazardous waste as determined by waste characterization;
- Use of water for dust control during demolition. Dust control water runoff would be contained and managed properly;
- Pumping out flooded basements, removal of equipment and residue;
- Filling or covering of pits and basements;
- Finishing of unpaved areas with crushed stone; and
- Securing of the Site after the interim remedy was completed.

Non-Time Critical Removal Action (NTCRA) - Residential Soil Removal Action. IDEM performed a NTCRA to address the threat to HH posed by lead-contaminated residential soils. The work began May 5, 1998, and concluded February 26, 1999. The NTCRA included excavation of contaminated surface soil and disposal in an off-site landfill. The total volume of material excavated from the off-site residential area was approximately 14,700 cubic yards (cys). The components of this action were as follows:

- Removal of small shrubbery, yard equipment from the residential area of concern, restoration of the Site with sod, and replacement of small shrubbery;
- Removal of lead-contaminated surface soil to a depth of approximately one foot;
- On-site x-ray fluorescence testing of excavated surface soil samples for lead to determine limits of excavation;
- Laboratory confirmation sampling of approximately 20 percent of the surface soil samples;
- Backfill of excavations to grade with clean fill;
- Transportation of contaminated soil to an off-site landfill. The lead-soil stockpile from the NTCRA was staged, and later graded and seeded at the SPA;
- Dust suppression measures including wetting down and covering exposed soils during transportation off-site as appropriate; and
- Preventative safety measures during construction activities to inhibit visitor intrusion onto the removal area.

The preferred alternatives for final remedies at the six OUs at the Site were presented to the public in a PP in March 1997, and the final RA selection was documented in the ROD signed by EPA and IDEM on September 30, 1998 (EPA, 1998). The Remedial Action Objectives (RAOs) are:

- Prevent ingestion of shallow groundwater that contains contamination in excess of federal and state drinking water standards or criteria, or that poses a threat to HH.
- Restore groundwater to federal and state drinking water standards.
- Prevent the migration of contamination that would result in continued degradation of Site-wide groundwater or surface water to levels that exceed federal and state drinking water or water quality standards or criteria, or that pose a threat to HH or the environment, to the extent feasible and practical. For groundwater, this goal will be addressed through source remediation, extraction and treatment of shallow groundwater, control of the migration of intermediate and deep groundwater, and implementation of environmental restrictive covenants (ERCs) to restrict groundwater use. A Technical Impracticability (TI) Waiver of the drinking water Applicable or Relevant and Appropriate Requirements (ARARs) was granted due to the length of time necessary to attain drinking water standards in the intermediate and deep aquifers.
- Prevent incidental ingestion and direct contact with sludge, soil, and waste piles that contain contamination in excess of federal and state soil standards or criteria, or that pose a threat to HH.
- Prevent inhalation of airborne contaminants (from disturbed soil) that exceed federal and state air standards or criteria, or that pose a threat to HH.
- Prevent direct contact with contaminated sediment that exceeds federal and state standards or criteria, or that poses a threat to HH.
- Prevent ingestion of potentially contaminated fish from the creeks that may present a health risk.
- Prevent sediment impacts to the ecological environment.
- Restore sediments to levels protective of HH health and the environment, to the extent practical and feasible, while minimizing adverse impact to the wetlands from potential remedial activities and minimizing the potential for sediment to become suspended in the surface water column.
- Prevent surface water impacts to the ecological environment.
- Prevent dermal contact with groundwater that contains contamination in excess of federal and state standards or criteria, or that poses a threat to HH.

The remedial action at the Site included the following activities:

Site-Wide Groundwater (OU1)

- Collect Intermediate and Lower Groundwater at Martin Marietta Quarry (MMQ) to Contain Contaminants within Current Boundaries
- Dispose of Collected MMQ Groundwater Off-Site
- Collect Shallow Groundwater and Dispose Off-site at Kokomo Wastewater Treatment Plant (KWTP)
- Monitor Groundwater for Natural Attenuation (NA)
- Groundwater Use Restrictions

ALA (OU2)

- Resource Conservation and Recovery Act (RCRA) Surface Impoundment Closure
- Excavate Contaminated Solids and Consolidate On-Site
- Collect and Contain Shallow Groundwater with Expanded Interception Trench System and Dispose Off-Site
- Deed and Groundwater Use Restrictions

WKCs (OU3)

- Excavate Contaminated Creek Sediment and Consolidate in On-Site Corrective Action Management Unit (CAMU) Landfill

MAQA (OU4)

- Cover Contaminated Solids with Common Soil
- Dispose of Quarry Sediment in ALA CAMU
- Contain and Collect Shallow Groundwater and Dispose at KWTP
- Excavate Contaminated Sediment from MAQA
- Backfill MAQA with Alternative Fill Material
- Deed and Groundwater Use Restrictions

MPA (OU5)

- Excavate Polychlorinated Biphenyls (PCBs) Solids along Kokomo Creek and Dispose On-Site
- Install Common Soil Cover
- Collect and Contain Shallow Groundwater and Dispose Off-Site
- Elevated Volatile Organic Compounds (VOCs) Solids Removal and On-Site Disposal
- Deed and Groundwater Use Restrictions

SPA (OU6)

- Regrade Slag Pile
- Install Protective Common Soil Cover over Contaminated Solids
- Deed Restrictions
- Stabilize Creek Bank

Post ROD Decision Documents

- 2003 Explanation of Significant Differences (ESD) (IDEM, 2003) to incorporate a more stringent RA goal for PCBs in WKCs based on background levels; and incorporate the new Maximum Contaminant Level (MCL) for arsenic as a groundwater cleanup goal.
- 2005 ESD (IDEM, 2005) to describe significant differences from the 1998 remedy as shown in Table 7 below:

Table 7 – Summary of Changes, ESD, September 28, 2005

Elements Changed	Amended Remedy
ALA (OU2) Excavate contaminated solids and consolidate on-site in CAMU. Collect and contain shallow groundwater with expanded interception trench system and dispose off-site.	Solids will not be consolidated on-site. They will remain in place and a soil cover will be placed over the closed lagoons and surrounding area. Shallow groundwater will be extracted using wells, and the extracted water will be treated and discharged as appropriate.

WKCs (OU3) Excavate PCB solids (sediment and bank soil) along Kokomo Creek and dispose on-site in CAMU. Elevated VOC solids removal and on-site disposal.	Creek solids (PCB and VOC solids) will be disposed off-site at an existing permitted facility.
MAQA (OU4) Dispose of Quarry sediment in ALA CAMU.	Quarry sediment will be disposed off-site at an existing permitted facility.
MPA (OU5) Elevated VOC solids removal and on-site disposal in CAMU.	Elevated VOC solids will be treated in place using Heated Soil Vapor Extraction (HSVE).

A portion of the MPA south of Kokomo Creek, known as the Crushed Drum Area (CDA), was investigated with an electro-magnetic survey during the remedial design (RD). Anomalies were noted suggesting that one or more buried tanks might be in this location. In 2007, EPA performed a limited investigation of the CDA and discovered large pieces of buried slag, which may be the objects detected during the electro-magnetic survey. EPA subsequently removed large piles of slag and cinders from this area and transported the material to the ALA.

On September 22, 2010, EPA issued an ESD (EPA, 2010) documenting the addition of RA for the CDA of the MPA and the inclusion of the Continental Steel Maintenance Property to the ALA of the Site.

The SPA contained a stockpile of lead-contaminated soil from the Residential Soil NTCRA which was completed in December 1998. The lead-soil stockpile was graded and seeded by EPA on August 10, 2011.

The final remediation goals (i.e., cleanup standards) are presented in Tables 1 through 6 under *Basis for Taking Action*.

Status of Implementation

The Site-wide Groundwater (OU1)

EPA's Environmental Service and Operation (ESO) contractor, Oneida Total Integrated Enterprises and CH2M Joint Venture Team (OCH, JV), is implementing the groundwater remedy. The Site-wide Groundwater remedy includes the installation of a heated soil vapor extraction (HSVE) system at the northwest corner of the MPA and a groundwater pump and treatment system at the Site. Three wind turbines, at the MAQA, are producing enough energy to off-set approximately half to three quarters of the energy required to power the groundwater extraction system.

The HSVE system installation was completed on January 1, 2011, and the system was started on January 13, 2011. The HSVE work was completed in November 2012. Soil verification samples results indicated that levels of TCE were below IDEM Risk Integrated System of Closure Industrial Default Closure Levels of 350 ppb.

The groundwater extraction system was installed in the spring of 2011 and was started in the fall of 2011 after completing negotiations with the KWTP concerning discharge requirements. The extraction system is designed to intercept contamination in the upper aquifer. The three groundwater extraction arrays are

situated at strategic points within the groundwater plume (Figure 2 – Groundwater Extraction Wells Locations). These arrays are located in the following three areas:

- The MAQA array consists of two extraction wells (EW-15 and EW-16) located at the MAQA and positioned to address source contamination remaining at the quarry.

- The Wildcat Creek array consists of seven extraction wells installed near the intersection of Park Street and South Phillips Street, parallel to Wildcat Creek. The wells are positioned to intercept the groundwater plume downgradient of the MAQA at Wildcat Creek. The array consists of extraction wells EW-8 through EW-14.

- The ALA array consists of seven extraction wells located parallel to West Markland Avenue near the intersection with South Berkley and adjacent to the KWTP. The extraction wells are positioned to intercept the groundwater plume near its leading edge of the plume. The array consists of extraction wells EW-1 through EW-7.

ALA (OU2)
In September 2011, EPA completed the cleanup of the Acid Lagoon Area. The cleanup entailed clearing and grubbing, demolition of the groundwater treatment plant, excavation, and off-site disposal of TCE-contaminated soils, use of on-site slag as fill, rough grading, covering of the area with two feet of clean soil cap; and seeding of the area. Large amounts of asbestos-containing material, as well as a small quantity of PCB-contaminated soil was removed from the area of the treatment plant.

WKCs (OU3)
On October 4, 2010, EPA completed the RA at OU3,WKCs. The WKCs RA included a pre-construction sediments and soils investigation, dredging of contaminated sediments, removal of lead-contaminated soils along the northern bank of Kokomo Creek, transportation and disposal of contaminated sediments, and creeks restoration. All contaminated sediment above criteria was removed. The cleanup goals and the RAOs for sediment were met per confirmation sampling following the cleanup. There are no future use restrictions on WKCs.

MAQA (OU4)
On March 7, 2011, EPA completed the RA at OU4, MAQA. The MAQA RA included dewatering of the quarry to access drums, debris, and sediment, treatment of the quarry's water before discharging off-site, dredging of contaminated sediments, transportation, and disposal of contaminated sediments, backfill and cover installation.

MPA (OU5)
On August 10, 2011, IDEM completed the RA at the MPA (OU5). The MPA RA included pre-treatment sampling of contaminated soil, removal of Aboveground and Underground Storage Tanks, and asbestos-containing material, consolidation of contaminated soil, and the construction of the final cover.

Within the MPA, the RA work at the CDA included clearing and grubbing, grading, and installation of an asphalt cover, which was completed in May 2012.

SPA (OU6)
On August 10, 2011, EPA completed the RA at the SPA. The SPA RA included site preparation, excavation, and transportation of excess slag to the ALA, grading of remaining slag material and lead-impacted soil, installation of the final cover, and restoration activities.

Institutional Controls (ICs)

ICs are required to ensure the protectiveness of the remedy. ICs are nonengineered instruments, such as administrative and/or legal controls, that help minimize the potential for exposure to contamination and protect the integrity of the remedy. Implementation of and compliance with ICs is required to assure long-term protectiveness for any areas which do not allow for UU/UE.

Table 8: 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(s)	Title of IC Instrument(s) Implemented and Date (or planned)
Groundwater (OU1)	Yes	Yes	Area where groundwater exceeds cleanup standards	Prohibit groundwater use until cleanup standards are achieved.	The City Zoning Ordinance No. 6375, May 9, 2005. https://www.cityofkokomo.org/document_center/Zoning%20Ordinance%20as%20of%207_2017.pdf
ALA (OU2), MAQA (OU4), MPA (OU5), and SPA (OU6)	Yes	Yes	ALA, MAQA, MPA, and SPA	Prohibit residential or recreational use, require maintenance of cover and control excavation of contaminated media under the cover.	ERCs, recorded with the Howard County Recorder's Office on July 24 and 25, 2014.
WKCs (OU3)	Yes	Yes	WKCs	Prevent exposure to contaminated fish through consumption.	Indiana Department of Natural Resources, Indiana Department of Health, and IDEM issued a Fish Consumption Advisory in 1988. Indiana Fish Consumption Advisory (arcgis.com)

Figures 1-6, 1-7, 1-8, 1-9A, and 1-9B (in Appendix B) show the areas in which the ICs apply.

Status of Access Restrictions and ICs:
The 1998 ROD requires ICs for the ALA, the SPA, the MPA, the MAQA, and the Site-wide Groundwater OU since it was anticipated that the remedy would not achieve UU/UE of those areas and

the cleanup standards for groundwater would not be achieved for some time. The required ICs, in the form of ERCs, were implemented on July 24 and July 25, 2014. The City Zoning Ordinance No. 6375, dated May 9, 2005, prohibits groundwater uses until the cleanup standards have been met. ICs have been reviewed and evaluated by EPA and its ESO contractor OCH, JV annually. All required ICs are in place and effective. As part of the ICs review, the Howard County Recorder's Office confirmed that the ERCs are recorded at their office and are active. Also, the Kokomo-Howard County Plan Commission confirmed that according to zoning maps, the Site is still located within the Well Restriction Overlay District, indicating that Local Ordinance # 6375 is still active and effective. Furthermore, IDEM confirmed that the Kokomo and Wildcat Fish Consumption Advisories are still in place.

Current Compliance:
Based on the monthly Site inspections conducted by EPA's ESO contractor OCH, JV, no inappropriate land use was observed. Fish advisory signage was observed at creek access areas. EPA and IDEM are not aware of Site or media uses that are inconsistent with the stated objectives of the ICs. The current FYR confirmed, based on monthly and FYR inspections and annual reviews of ICs, that the objectives of the ICs are being complied with. No activities were observed that would have violated the ICs. No new uses of groundwater were observed. The remedy appears to be functioning as intended.

IC Follow-up Actions Needed:
The ICs and the current zoning restriction limit the use of the ALA to commercial/ industrial. The RA action cleanup goals for the ALA were developed to be protective for recreational use. A zoning adjustment for the ALA is required to allow for the recreational use as a soccer field complex. EPA and IDEM will work with the City to adjust this zoning. This zoning change does not affect the protectiveness of the remedy at the Site. As raised in the last FYR, the Site Operation and Maintenance (O&M) Plan needs to be updated to include these annual inspections and verification procedures.

Long-Term Stewardship:
Long-term protectiveness at the Site requires compliance with the ROD, ESDs and required ICs to assure the remedy continues to function as intended. The required ICs have been implemented and are effective. To assure proper maintenance and monitoring of effective ICs, the O&M Plan needs to be updated to include ICs annual inspections and verification procedures.

Redevelopment and Reuse
The Site's MAQA is being used by the City as a stormwater retention basin capable of storing 58,000 cys of stormwater. The basin was created by backfilling the excavated pond area to levels 8 to 10 feet below surrounding grades. The City installed water lines that would direct stormwater from adjacent neighborhoods to the basin instead of the City's combined sewer system. The basin also stores water accumulating in onsite areas, including parcels undergoing redevelopment. Infiltration of stormwater in the vicinity of the basin is fostered by prairie grasses, native plants and trees planted by the City. The City has responsibility for long-term O&M of the MAQA.

EPA, IDEM, the City, and the Kokomo Soccer Club worked on redevelopment and re-use plans for the ALA. This includes a 60-acre recreational field area called the Wildcat Creek Soccer Complex (WCSC). This recreational facility is partially completed. When totally completed, it will accommodate 30 youth and full-size soccer fields, a one and a quarter mile walking trail, parking, concession stand, storage

facilities, and restrooms. The WCSC will enhance the community's access to recreational and outdoor activities.

In 2016, a 7.2-megawatt solar farm, a $10 million energy project, was constructed on the MPA. This solar farm consists of approximately 21,000 photovoltaic panels and supporting infrastructure located across 26 acres where contaminated material had been covered with the soil cap. The solar farm generates about 9.1 million kilowatt of electricity each year, which is enough to power 1,000 typical homes. Through a 20-year power purchase agreement, Alterra Power Corp manages the project, Inovateus Solar LLC constructed and maintains the solar farm under a lease with the city, and Duke Energy Indiana purchases and distributes 100% of the generated electricity. The property lease provides revenue to the City each year, and adjacent space is available for potential expansion of the solar farm. Also, the Kokomo Park District is using the Crushed Drums Area for equipment storage.

Systems Operations/Operation & Maintenance

The remedial action have been implemented at the ALA, MAQA, MPA, and SPA. EPA has turned over the responsibility for maintaining the soil covers and vegetation at these areas to IDEM, who in turn signed an Interlocal Cooperation Agreement with the City on October 23, 2011, transferring these responsibilities to the City.

EPA's ESO contractor, OCH, JV, is responsible for systems operation and for O&M. The treatment system at the Site consists of groundwater extraction and discharge off-site. The groundwater extraction system consists of sixteen 6-inch extraction wells installed approximately 50 feet below ground and equipped with electric submersible pumps. The required electrical service and instrumentation is housed in three separate pumphouses, one for each of the three groundwater target areas. In addition, there is a sump, Pete's Run sump, that collects groundwater on the south side of the former MPA. Each extraction system and the sump have a discharge point (ALA Discharge Point, Wildcat Creek Discharge Point, MAQA Discharge Point, and the MPA Sump Discharge Point) to the KWTP that is regulated by the City's Individual Wastewater Discharge Permit **(**IWDP-024**)** (The City, 2020). Operations and maintenance procedures used at the Site are described in the O&M Plan (CH2M, 2020).

The groundwater extraction system is to be operated continuously, discharging groundwater at the target fixed pumping rates per extraction well. Groundwater is monitored to meet discharge and reporting requirements, as required by the City discharge permit. The total target flow rate to provide the necessary groundwater capture for the three-groundwater extraction well arrays is up to 266 gallons per minute (gpm). The Pete's Run sump is designed to add capacity by flowing intermittently at 25 gpm when saturated conditions force the pumps to run. These flow rates may be adjusted, as needed, to meet project objectives; however, the maximum flow rate is not to exceed 291 gpm. Occasional short-term shutdowns of the pumps due to power outages or pump failures are not expected to have a significant impact on the containment of the contaminant plumes.

On October 19, 2018, a permit modification request was submitted to the City to increase the pH limits for the MAQA Discharge Point to 12 pH units. The City denied the permit request on December 16, 2019. As a result, the acid delivery system at the MAQA was updated in spring 2020. The updates included installing an acid tote storage locker, a continuous dosing pump, and an inline screw mixer to deliver acid continuously and homogeneously in the discharge line. The IWDP-024 permit through the City for the Site was effective January 27, 2014, through January 26, 2017. The permit was

extended through June 8, 2018. A new permit was issued in May 2018, with a new effective date of June 9, 2018, through June 9, 2023.

The Site Slug Control Plan (CH2M, 2018), as required by discharge permit was, submitted to the City on October 8, 2018. The City approved the plan October 19, 2018. An updated Slug Control Plan was submitted to the City on December 11, 2019 (CH2M, 2019b). A subsequent update was submitted in February 2021 (OCH JV, 2021b).

Several pumps were pulled at the ALA in 2016. The subcontractor identified multiple issues with the system, and the solutions were adopted to complete the Wildcat Creek rehabilitation first. The Wildcat Creek rehabilitation (replace pumps, clean extraction wells, jet-wash the conveyance and process piping, and replace the header piping in the pumphouse) was completed in November 2017 and June 2018. The ALA pumphouse and extraction well rehabilitation was completed in 2019.

The following O&M activities were completed at the Wildcat Creek extraction wells during the FYR period:

- Based on recommendations provided in the 2018 Annual Report (CH2M, 2019), monitoring well repairs, abandonment, and replacement were completed the week of May 28, 2019.
- Monitoring well LA-114 was determined to not be collapsed and was left in place.
- Three monitoring well locations, UA-18, UA-136, and LA-127, were abandoned.
- Four monitoring well locations, UA-12/LA-05, LA-03E, LA/IA-120, and LA-123, were double cased with concrete and 0.5-inch-thick metal casing that extended between 30 to 50 feet below ground surface.
- Monitoring well UA-18R was installed as a piezometer to replace monitoring well UA-18 and was included in the performance monitoring network (to collect static water levels only).
- Based on recommendations from the 2018 Annual Report (CH2M 2019a), the monitoring wells were re-surveyed for their horizontal location and vertical positioning. This survey was completed in June 2019.
- The conveyance lines from the seven extraction wells to the pumphouse were jet-washed in May and June 2020. The extraction pumps and risers were pulled before jet-washing. The risers were brush-cleaned, and the pumps were cleaned using acid wash.
- New pH sensor installed in July 2020.
- New pH display unit installed at pumphouse in February 2021.
- pH and flowmeter annual calibration performed in February 2021.

The following O&M activities were completed at the MAQA extraction wells during the FYR period:

- The acid delivery system was updated in spring 2020. This update included installing an acid tote storage locker, a continuous dosing pump, and an inline screw mixer to deliver acid continuously and homogeneously in the discharge line.
- New magnetic flow converter display was installed in June 2020.
- EW-15 pump removed and replaced with a new pump and wired to EW-16 for operation in June 2020.

- New pH sensor installed in July 2020.
- pH display repaired in October 2020.
- Thermostat for heating, ventilation, and air-conditioning unit repaired in January 2021.
- pH meter annual calibration performed in February 2021.

Currently, extraction wells are not pumping at the designed flow rates due to iron fouling. They need to be rehabilitated. It is recommended to complete jetting and cleaning for both extraction systems regularly. This is an action item of this FYR.

Discharge Permit Compliance Sampling

Analytical sampling to determine compliance with the discharge permit requirements includes: (1) monthly analytes (total metals, cyanide, fluoride, phosphorous, carbonaceous biochemical oxygen demand, chemical oxygen demand, total suspended solids, ammonia-N, and oil and grease [polar and non-polar]), (2) quarterly (monthly analytes plus benzene, toluene, ethylbenzene, and xylene and select VOCs), and (3) semiannual (monthly and quarterly analytes, plus total toxic organics and phenols). In addition, pH and flow measurements are measured daily from the three discharge locations. pH and flow are measured monthly for Pete's Run Sump. The analytical results are included in a monthly discharge report. This monthly report also includes an operations report, a description of wells performance, maintenance logs, a log of alarms, and corrective actions completed during the month. This monthly report is required to be submitted to the KWTP the 28th of the month that follows.

III. PROGRESS SINCE THE LAST REVIEW

Table 9: Protectiveness Determinations/Statements from the 2017 FYR

OU #	Protectiveness Determination	Protectiveness Statement
1	Short-term Protective	The remedy at OU1 is currently protective of human health and the environment because it is functioning as designed. Threats at OU1 have been addressed through treatment of VOC solids in place using a heated soil vapor extraction system, and through extraction, treatment, and disposal of contaminated groundwater. However, in order for the remedy to be protective in the long-term, the following actions need to be taken to ensure protectiveness: update the O&M Plan to include regular inspection and an annual certification of ICs; rehabilitate and/or replace the extraction well pumps at the Acid Lagoon Area and at Wildcat Creek; replace monitoring wells UA-024 and UA-120; and evaluate the locations of the available monitoring wells to determine if additional monitoring wells should be installed. Long-term protectiveness at OU1 will be achieved by continuing the long-term operation and maintenance of the groundwater treatment system and by monitoring, maintaining, and enforcing the required ICs.
2	Short-term Protective	The remedy at OU2 is currently protective of human health and the environment because it is functioning as designed. Threats at OU2 have been addressed through demolition of the groundwater treatment plant, excavation, and off-site disposal of TCE-contaminated soils, use of on-site slag as fill; rough grading, covering of the Area with two feet of clean soil cap; and seeding of the Area. Large amounts of asbestos-containing material, as well as a small quantity of PCB-contaminated soil, were removed from the groundwater treatment plant area. However, in order for the remedy to be

		protective in the long-term, the following action needs to be taken to ensure protectiveness: update the O&M Plan to include regular inspection and an annual certification of ICs. Long-term protectiveness at OU2 will be achieved by monitoring, maintaining, and enforcing the required ICs to ensure long-term protectiveness.
3	Short-term Protective	The remedy at OU3 is protective of human health and the environment. Threats at OU3 have been addressed through dredging of contaminated sediments, removal of lead-contaminated soils along the northern bank of Kokomo Creek, transportation and disposal of contaminated sediments, and restoration of the Creeks.
4	Short-term Protective	The remedy at OU4 is currently protective of human health and the environment because it is functioning as designed. Threats at OU4 have been addressed through dewatering of the Markland Avenue Quarry to access drums, debris, and sediment, treatment of the Quarry's water before discharging it off-site, dredging of contaminated sediments, transportation, and disposal of contaminated sediments, backfill and cover installation. However, in order for the remedy to be protective in the long-term, the following action needs to be taken to ensure protectiveness: update the O&M Plan to include regular inspection and an annual certification of ICs. Long-term protectiveness at OU4 will be achieved by monitoring, maintaining, and enforcing the required ICs to ensure long-term protectiveness.
5	Short-term Protective	The remedy at OU5 is currently protective of human health and the environment because it is functioning as designed. Threats at OU5 have been addressed through removal of Underground Storage Tanks and Asbestos-Containing Material, consolidation of contaminated soil, and the construction of a final cover. However, in order for the remedy to be protective in the long-term, the following action needs to be taken to ensure protectiveness: update the O&M Plan to include regular inspection and an annual certification of ICs. Long-term protectiveness at OU5 will be achieved by monitoring, maintaining, and enforcing the required ICs to ensure long-term protectiveness.
6	Short-term Protective	The remedy at OU6 is currently protective of human health and the environment because it is functioning as designed. Threats at OU6 have been addressed through excavation and transportation of excess slag to the Acid Lagoon Area, rough grading of remaining slag material and lead-impacted soil, installation of the final cover, and restoration activities. However, in order for the remedy to be protective in the long-term, the following actions need to be taken to ensure protectiveness: update the O&M Plan to include regular inspection and an annual certification of ICs, and coordinate mowing of tall weeds and grass at the Slag Processing Area with the City of Kokomo. Long-term protectiveness at OU6 will be achieved by monitoring, maintaining, and enforcing the required ICs to ensure long-term protectiveness.
Site-wide	Short-term Protective	The Sitewide remedy is currently protective of human health and the environment because it is functioning as designed. Threats at the Site have been addressed through encapsulation of contaminated soils, offsite disposal of contaminated sediment, treatment of VOC solids in place using soil vapor extraction system, and extraction, treatment, and disposal of contaminated groundwater. However, in order for the remedy to be protective in the long-term, the following actions need to be taken to ensure protectiveness: update the O&M Plan to include regular inspection and an annual certification of ICs; rehabilitate and/or replace the extraction well pumps at the Acid Lagoon Area and at Wildcat Creek; replace monitoring wells UA-024 and UA-120; evaluate the locations of

		the available monitoring wells to determine if additional monitoring wells should be installed; and coordinate mowing of tall weeds and grass at the Slag Processing Area with the City of Kokomo.

Table 10: Status of Recommendations from the 2017 FYR

OU #	Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date
1,2, 4,5, 6	The O&M Plan should be updated to include a provision for regular inspection of ICs at the Site and an annual certification to EPA that the required ICs are in place and effective.	The O&M Plan will be updated to include regular inspection and an annual certification of ICs.	Ongoing	ICs review conducted by EPA determined that ICs are in place and effective. The O&M plan still needs to be modified documenting ICs annual inspection and certification procedures.	
1	These extraction wells at the ALA and Wildcat Creek are not pumping at the designed flow rates due to iron fouling. These extraction wells need to be rehabilitated and/or the extraction pumps possibly replaced.	Rehabilitate and/or possibly replace the extraction well pumps at the Acid Lagoon Area and at Wildcat Creek.	Completed	The Wildcat Creek extraction wells rehabilitation was performed by EPA's contractor (OCH, JV) in June 2018. The ALA extraction wells rehabilitation was also performed 2019 by OCH, JV. Additional jetting and cleaning were also performed in 2020.	10/30/2019
1	Monitoring wells UA-024 and UA-120 need to be replaced.	Replace monitoring wells UA-024 and UA-120.	Completed	Monitoring wells were replaced with wells UA-138 and UA-139 by OCH, JV.	11/30/2017
1	The locations of the available monitoring wells should be evaluated to determine if additional monitoring wells should be installed to refine plume delineation.	Evaluate the locations of the available monitoring wells to determine if additional monitoring wells should be installed.	Completed	The monitoring well network evaluation was included within the 2018 Annual Report (CH2M, 2019).	10/30/2018
6	Tall weeds and grass observed at the SPA require mowing by the City.	Coordinate mowing of tall weeds and grass at the SLPA with the City.	Completed	EPA and IDEM will continue to coordinate with the City on this issue.	11/30/2017

Other Findings from the 2017 FYR and Status Update

In addition, the following are recommendations that were identified during the FYR (and may improve performance of the remedy, reduce costs, improve management of O&M, accelerate site close out, conserve energy, promote sustainability, etc.), but do not affect current nor future protectiveness:

- *Some parts of the Site could be considered for delisting from the NPL. EPA and IDEM plan to pursue partial delisting of the Site.* The Site is a good candidate for a partial deletion for the land/soil portion of the site. However, the ROD includes cleanup standards for lead in soil. Because EPA Headquarters is in the process of re-evaluating the toxicity and cleanup standards for lead, we are awaiting further direction on when/whether parts of the Site can be delisted.

- *EPA is evaluating the progress of NA at the Site. EPA plans to collect geochemical parameters at selected wells to allow more detailed evaluation of aquifer redox conditions and to support evaluation of secondary lines of evidence for NA.* The results of the Natural Attenuation (NA) evaluation suggest that VOC concentrations on the west and east side of Wildcat Creek are generally stable or declining. However, further NA monitoring is necessary to understand the NA of the VOC plume.

- *The ICs and the current zoning restriction limit the use of the ALA to commercial/industrial. Zoning adjustment is required to allow for the planned recreational use as the WCSC complex. The City plans to adjust zoning restrictions.* EPA and IDEM will continue to work with the City on this zoning adjustment.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

A notice was published in the local newspaper, the Times, on August 7, 2021, stating that a FYR is being conducted, requesting public comments, and noting that the FYR report will be made available on EPA's website for the Site. EPA received no public comments regarding the FYR. The results of the review and the FYR report will be made available at www.epa.gov/superfund/continental-steel. A copy of the public notice can be found in Appendix C – Attachment B.

Data Review

All contaminated sediment above criteria was removed. The cleanup goals and the RAOs for sediment were met per confirmation sampling following the cleanup. There were no future use restrictions on the creeks. No long-term monitoring of surface water, sediment, and fish were performed since the completion of the sediment remedial action because such monitoring was not required by decision documents.

Sediment remedial action, including Creek's restoration, were conducted on stream reaches of the WKCs within the Site. There are other contamination sources upgradient from the Site that impacted and/or continue to impact the creeks. Therefore, the fish consumption advisory, which the State is responsible for issuing, is still in place.

Data Observation and Trends

Sitewide groundwater sampling occurs annually and monitoring natural attenuation (MNA) sampling occurs semiannually. The annual groundwater sampling consisted of collecting static water levels at 68 monitoring wells, with analytical samples collected from 50 of these wells. The 50 sampled wells were analyzed for VOCs, and a subset of 6 MNA wells, UA-02, UA-108, UA-28, UA-121, UA-105, and UA-

124, received additional analysis for MNA parameters (alkalinity, anions [nitrate, nitrite, sulfate], sulfide, dissolved gases [methane, ethane, ethene], dissolved metals [iron, manganese], and TOC).

MNA Wells (MNAWs):

- UA-02—Located on the east side of Wildcat Creek, south of MAQA. This well is located upgradient of impacted Site groundwater and is representative of background conditions.
- UA-028—Located upgradient of the East Bank Wildcat Creek extraction wells.
- UA-108—Located on east side of Wildcat Creek, and within the VOC plume in the MAQA.
- UA-105—Located near MAQA extraction wells.
- UA-121—Located on the west side of Wildcat Creek, downgradient of East Bank Wildcat Creek extraction wells.
- UA-124—Located within VOC plume upgradient of MAQA extraction wells (west side of Wildcat Creek).

Upper Aquifer Trends
Groundwater flows east to west across the Site (Figure 1-3, Appendix B). The overall elevation difference across the Site is approximately 38 feet, ranging from 762 to 800. The Wildcat Creek extraction system shows an area of influence reflected in the groundwater contour map.

Intermediate Aquifer Trends
Groundwater flows east to west across the Site toward the MMQ (Figure 1-4, Appendix B). The overall elevation change across the Site is about 50 feet, ranging from 741 to 793 feet. The groundwater elevations are similar to previous sampling events; however, a few distinctions exist. Groundwater elevations from monitoring wells IA-124 and IA-130 were not included in the 2018 annual report analysis because their elevations were unknown. Their inclusion in potentiometric map generation has produced an observable mounding effect at each location. The groundwater in the intermediate aquifer is strongly controlled by ongoing pumping in the MMQ to the west of the Site.

Lower Aquifer Trends
Groundwater flows east to west across the Site toward the MMQ (Figure 1-4, Appendix B). The overall elevation difference across the Site is about 100 feet, ranging from 694 to 792 feet.

Upper Aquifer Contaminant Plume
Perchloroethylene (PCE)
PCE was detected at concentrations exceeding its MCL of 5 µg/L in three monitoring wells (UA-06, UA-30, and UA-124) during the FYR period. Concentrations ranging from 520 µg/L (in June 2021) in monitoring well UA-06 to 3.7 µg/L at monitoring well UA-30. PCE in monitoring well UA-06 was not detected in October 2017, was 8 µg/L in June 2018, 420 µg/L in October 2018, and 370 µg/L in June 2019. The elevated concentrations of PCE detected in monitoring well UA-07 (ranging from 91 to 140 µg/L in 2015 and 2017) was significantly lower in 2018 (not detected in June 2018 and 0.93 µg/L in October 2018), and 1.8 µg/L in June 2019. The PCE concentration at monitoring well UA30 exceeded criteria in June 2020 (7.2 µg/L) but was below criteria in June 2021 (3.7 µg/L). The PCE concentration at well UA-124 exceeded criteria in June 2020 (13 µg/L) but was below criteria in June 2021 (4.5 µg/L).

Trichloroethylene (TCE)
TCE was detected at concentrations exceeding its MCL of 5 µg/L in seven monitoring wells (LA-03A, UA-06, UA-28, UA-109, UA-124, UA-138, and UA-139). Concentrations ranging from 620 µg/L at monitoring well UA-138 to 7.2 µg/L at monitoring well UA-124. TCE in monitoring well UA-06 was not detected in October 2017, detected at 0.57 µg/L in spring 2018, increased to 120 µg/L in October 2018, and was consistent in June 2019 at 110 µg/L. UA-138 (replacement well of UA-24) had a TCE detection of 620 µg/L in June 2019, much greater than the 220 µg/L detected in October 2018 or the last sample collected from monitoring UA-24 (140 µg/L) in fall 2015. TCE concentrations in monitoring UA-138 have since gone downward, with a concentration of 160 µg/L in June 2020, and a further decrease to 30 µg/L in June 2021.

Cis-1,2-Dichloroethene (Cis-1,2-DCE)
Cis-1,2-DCE was detected in 12 monitoring wells. Concentrations ranging from 2.2 to 1,000 µg/L. Concentrations exceeding the MCL of 70 µg/L were found in 4 monitoring wells: (1) UA-06 at 180 µg/L, (2) UA-111 at 1,000 µg/L, (3) UA-124 at 130 µg/L, and (4) UA-139 at 790 µg/L. The cis-1,2-DCE concentration in UA-06 increased from 2017 to 2018 and remained consistent in 2019. The largest change observed in 2018 was the increase in the cis-1,2-DCE concentration in monitoring well UA-06 (180 µg/L). The sample from monitoring well UA-138 had a cis-1,2-DCE concentration of 120 µg/L in October 2018 and 310 µg/L in June 2019, which is consistent with the last sample collected from monitoring well UA-24 (200 µg/L) in fall 2015.

Vinyl Chloride (VC)
VC was detected in seven monitoring wells. The highest concentrations exceeding the MCL of 2 µg/L were in monitoring wells LA-03A (25 µg/L), UA-110 (16 µg/L), UA-111 (180 µg/L), and UA-138 (12 µg/L). The only significant change that occurred was at monitoring well UA-110, where concentrations went from Nondetect (less than 5 µg/L) in 2020 to 16 µg/L in June 2021.

Manganese
Manganese was detected in all of the upper aquifer monitoring wells sampled at concentrations ranging from 0.22 µg/L (UA-138) to 1,080 µg/L (UA-119). In October 2018, over 61% of the monitoring wells contained manganese concentrations exceeding the remedial goal of 50 µg/L, except several monitoring wells in the southwestern corner of the Site (UA-14, UA-06, UA-07, UA-02, UA-108, and UA-01). However, the manganese concentrations in samples from monitoring wells UA-06 (1,760 µg/L), UA-07 (742 µg/L), and UA-01 (300 µg/L) were greater than 50 µg/L in the spring 2018 sampling event.

Intermediate Aquifer Contaminant Plume
PCE. PCE was not detected in the intermediate aquifer monitoring wells.

TCE. TCE was detected in six monitoring wells at concentrations ranging from 2.2 µg/L (IA-110) to 150 µg/L (IA-125), with five monitoring wells exceeding the MCL (IA-109 at 35 µg/L, IA-111 at 6.5 µg/L, IA-125 at 150 µg/L, IA-126 at 15 µg/L, and IA-128 at 26 µg/L). The result at monitoring well IA-125 decreased by one order of magnitude in 2019. The result at IA-128 decreased by one order of magnitude in 2021 from 2020.

Cis-1,2-DCE. Cis-1,2-DCE was detected in 13 monitoring wells at concentrations ranging from 2.9 to 810 µg/L. Concentrations exceeding the MCL were found in seven monitoring wells (IA-110 at 77 µg/L, IA-111 at 810 µg/L, IA-117 at 240 µg/L, IA-126 at 71 µg/L, IA-128 at 420 µg/L, IA-131 at 370 µg/L, and

LA-105C at 190 µg/L). Concentrations at monitoring well IA-126 decreased from above the MCL in 2020 (100 µg/L) to below MCL in 2021 (42 µg/L).

VC. VC was detected in 10 of the monitoring wells at concentrations ranging from 2.1 to 540 µg/L, exceeding the MCL criterion (IA-110 at 34 µg/L, IA-111 at 540 µg/L, IA-117 at 67 µg/L, IA-118 at 3.5 µg/L, IA 119 at 3.9 µg/L, IA-125 at 2.9 µg/L, IA-128 at 26 µg/L, IA-129 at 7.1 µg/L, IA-131 at 39 µg/L, and LA-105C at 10 µg/L). In 2018 and 2019, a second area of elevated VC concentrations defined by monitoring wells IA-117, IA-128, IA-119, LA105C, and IA-131, which is similar in configuration to the cis-1,2-DCE plume. The maximum VC concentration is detected at monitoring well IA-111, south of the MAQA.

Manganese. Manganese was detected in nine monitoring wells at concentrations exceeding the MCL criterion. The highest concentrations detected in monitoring wells IA-131 and IA-128. Unlike in the upper aquifer, elevated concentrations of manganese were not detected in the intermediate aquifer monitoring wells east of Wildcat Creek by the MAQA.

Lower Aquifer Contaminant Plume

PCE and TCE. PCE and TCE were not detected in the lower aquifer monitoring wells in 2017 and 2018. In 2019, TCE was detected in one monitoring well at a concentration above the MCL (LA-126 at 14 µg/L). In 2021 TCE was not detected in the lower aquifer monitoring wells.

Cis-1,2-DCE. Cis-1,2-DCE was detected in ten monitoring wells ranging from 2.2 to 370 µg/L, with three monitoring wells (LA-105E at 370 µg/L, LA-126 at 71 µg/L, and LA-131 at 150 µg/L) at concentrations exceeding the MCL criterion.

VC. VC was detected in seven monitoring wells at concentrations ranging from 2.1 to 99 µg/L. Concentrations exceeded the MCL criterion at LA-105E (11 µg/L), LA-119 (4.9 µg/L), LA-131 (98 µg/L), and LA-132 (33 µg/L). VC concentrations in the lower aquifer were similar in 2018 and 2019, except monitoring wells LA-102C (4.1 µg/L) and LA-126 (2.1 µg/L), which were above the remediation goal in 2018 but were not detected in 2019. Three wells (LA-102C, LA-111, and LA-116), which exceeded criteria in 2020 were Nondetect in 2021.

Manganese. Manganese was detected in nine monitoring wells sampled at concentrations exceeding the 50 µg/L criterion. High concentrations were detected downgradient of the Markland Quarry in monitoring wells LA-03C (349 µg/L), LA-109 (102 µg/L), and LA-110 (141 µg/L). The highest results are on the east and west ends of the Site and lower results in the center of the Site. Manganese results continue to show a significant decreasing trend.

Evaluation of MNA Data

NA refers to the reliance on naturally occurring processes to achieve site-specific remediation objectives within a timeframe that is reasonable compared to that offered by other more active remediation methods. For VOCs, these processes typically include aerobic and anaerobic biodegradation, dispersion, dilution, sorption, volatilization, and abiotic degradation. NA parameters collected during this FYR period from MNAWs were evaluated to determine if NA processes are successful at the Site, or if continued pumping of shallow groundwater is required. The following sections discuss MNA data or the availability of the MNA data to assess NA at the Site:

Mann-Kendall (MK)
One available statistical method for assessing whether VOC concentrations at a monitoring well location are stable, increasing, or decreasing is the Mann-Kendall (MK) statistical method. The MK method is a statistical procedure that is used for analyzing trends in data over time. The MK statistical method was applied on the MNAWs.

Analysis of the MK results indicates that while VOC concentrations are stable or declining in several locations, "No Trend" is indicated for some locations, and for those locations, data are insufficient to statistically determine whether a trend is present or whether concentrations are stable.

Results for MNAWs UA-105 and UA-124, located within the central portion of the plume between the Wildcat Creek and MAQA groundwater extraction areas, indicate stable, and decreasing trends for the VOCs. PCE and TCE were not detected in these wells, and the MK results indicate that cis-1,2-DCE and VC exhibit decreasing trends while PCE and TCE concentrations are Nondetect.

Results for MNAW UA-121, also located between the Wildcat Creek and MAQA groundwater extraction areas, indicate decreasing trends for VOCs. The MK results for this MNAW indicated decreasing trends for PCE, TCE, cis-1,2-DCE, and VC. Monitoring results indicate that these VOCs have been below their respective MCLs since October 2015. These results indicate that the VOC plume on the west side of Wildcat Creek is attenuating since implementation of the various RAs.

Results for MNAWs UA-108 and UA-02, on the east side of Wildcat Creek indicate stable or no trend. MK results for MNAW UA-28, located upgradient of Wildcat Creek extraction wells, show a decreasing trend for PCE, TCE, cis-1,2-DCE, and VC.

Overall, the results of the MK evaluation suggest that VOC concentrations on the west and east side of Wildcat Creek are generally stable or declining. Because of the overall MK results for several wells, further NA monitoring is necessary to understand VOC plume trends in these MNAWs. This is a recommendation of this FYR.

Evaluation of Geochemistry and Field Data
Geochemical data was collected from the groundwater along the plume flow path. These data include field parameters (such as dissolved oxygen (DO), oxidation reduction potential (ORP), pH, and temperature) and MNA parameters, such as nitrate/nitrite, dissolved iron and manganese, sulfate, sulfide, methane, ethane, ethene, and total organic carbon (TOC). During the FYR period these geochemical parameters were monitored in the six MNAWs to evaluate groundwater redox conditions within the plume. A summary of geochemical conditions for the MNAWs is presented below:

MNAW UA-02—Field parameters for this MNAW indicate that DO is present at concentrations ranging from 3.39 to 4.55 (mg/L), ORP range is negative (-17.4 millivolts [mV]) to 83.4 mV, and pH is near neutral (6.95 to 7.11). A significant amount of nitrate is present (14.6 mg/L to 27.6 mg/L), enough to support nitrate reduction, if adequate organic carbon is also present. Dissolved manganese is low, and dissolved iron, TOC and methane are below their detection limits. These data suggest that the aquifer in this area is generally aerobic, with adequate nitrate to support reduction conditions. No VOCs were detected in this MNAW.

MNAW UA-28—Field data this MNAW indicate that DO range is relatively low (0.32 mg/L to 0.57

mg/L), ORP range is from 86.3 to 161.9 mV, and pH is near neutral (6.23 to 6.83). Nitrate is present at a concentration range of 6.33 to 6.89 mg/L, while dissolved iron range is from non-detect to 23.7 µg/L, and dissolved manganese range is from 0.0309 to 101 µg/L. Methane and TOC are relatively low (3 to 10 µg/L and 3 to 7 mg/L, respectively). These data suggest that the aquifer redox conditions are somewhat aerobic, with some potential for nitrate reduction to occur, if adequate organic carbon is present. Neither iron nor manganese reducing conditions or methanogenic conditions appear to be present at a significant degree. Detection of cis-1,2-DCE at this MNAW suggests that microenvironments may be present upgradient of this MNAW in which some degree of reductive dechlorination (TCE to cis-1,2-DCE) is feasible. Overall geochemical conditions in this MNAW do not appear optimal for complete reductive dechlorination of PCE and TCE to ethene, potentially due to the limited amount of TOC present and relatively high redox. However, the presence of cis-1,2-DCE and previous detections of VC in this well suggest that there may be microenvironments within the aquifer upgradient of this well in which conditions for reductive dechlorination are more optimal.

MNAW UA-108—Field parameters from for this well indicate that DO range is from 0.13 to 0.47 mg/L, ORP range is from -70.5 to 42.9 mV, and pH range is from 11.80 to 12.31. With such elevated pH values, little biological activity, either aerobic or anaerobic, would be expected in groundwater near this MNAW. Nitrate range is from 0.32 to 0.42 mg/L, high enough to support some degree of nitrate reduction. TOC range is from 2 to 5 mg/L, a value relatively low for supporting a significant degree of reductive dechlorination. Dissolved iron, dissolved manganese, and methane are all relatively low, suggesting that iron and manganese reduction and methanogenesis are not occurring to a significant degree near the well. Little NA of TCE via biodegradation would be expected to occur in this location.

MNAW UA-105—Field data from for this well indicate that DO range is relatively low (0.20 to 0.21 mg/L), ORP range is from -63.0 to –31.0, and pH range is near neutral (6.92 to 7.32). Nitrate is absent, and dissolved iron is greater than 1 mg/L, suggesting that some degree of iron reduction is likely occurring in the vicinity of or upgradient of this MNAW. Methane is low, as is ethane (0.56 µg/L), and no ethene was detected. TOC range is from non-detect to 4 mg/L. Overall, groundwater geochemical conditions at this MNAW appear to be under iron-reducing conditions, generally favorable for reductive dechlorination of the more chlorinated VOCs (PCE and TCE) to cis-1,2-DCE. Based on detections of VC in this MNAW, microenvironments within the aquifer upgradient of this MNAW in which conditions for reductive dechlorination are more optimal may be present.

MNAW UA-121—Field data from this well indicate that DO range is from 0.19 to 0.26 mg/L, ORP range is negative (-31.5 mV) to positive (2.7 mV), and pH range is from 6.32 to 6.97. Nitrate is low at 0.12 mg/L, and dissolved iron is greater than 1 mg/L, a level that suggests that some degree of iron reduction is likely occurring in the vicinity of or upgradient of this MNAW. Methane is 180 µg/L. TOC range is below its detection limit. Ethene and ethane are not detected. Overall, groundwater geochemical conditions appear adequate for some degree of reductive dechlorination to occur, especially the degradation of the more chlorinated compounds (PCE and TCE) to cis-1,2-DCE. The lack of more strongly reducing conditions suggests more limited potential for biodegradation of cis-1,2-DCE to VC and for VC to ethene.

MNAW UA-124—Field data from this well show DO is relatively low (0.21 mg/L), ORP range is from 3.6 to 104.0 mV, and pH range is near neutral (6.4 to 7.42). Nitrate range is from non-detect to 0.58 mg/L, and dissolved iron is greater than 1 mg/L, a level that suggests that some degree of iron reduction is likely occurring in the vicinity of or upgradient of the MNAW. Methane is low, and no ethane or ethene are

detected. TOC range is from 3 to 6 mg/L. Overall, groundwater geochemical conditions at this MNAW appear to be under iron-reducing conditions, generally favorable for reductive dechlorination of the more chlorinated VOCs (PCE and TCE) to cis-1,2-DCE.

Overall, the geochemistry data suggest that on the east side of Wildcat Creek, near the original MPA and MAQA, groundwater conditions are not optimal for NA of chlorinated ethenes by biological processes. This is due to elevated pH (over 11), low levels of organic carbon in groundwater, and aerobic groundwater conditions.

Site Inspection

A Site inspection was conducted on June 28, 2022. In attendance were Nabil Fayoumi, EPA; Jessica Fliss, IDEM, and Sara Maihofer, Jacobs. The purpose of the inspection was to assess the protectiveness of the remedy, including the integrity of the cap at the ALA, the MAQA, the MPA, and the SPA. The inspection also assessed the condition of the groundwater extraction system and the monitoring and extraction wells.

A pre-inspection meeting was held at the MAQA prior to the inspection. EPA and IDEM inspected the Site caps, the groundwater extraction system, and the extraction and monitoring wells. The Site and all capped areas were in good condition. However, MAQA and MPA are starting to become overgrown, including a tree near the drain at MAQA, and plants are growing through the solar panels in some areas at the MPA. EPA and IDEM will continue to coordinate with the City for mowing and trees and plants removal at the MAQA and MPA.

The extraction wells at the ALA and WKCs are not pumping at the designed flow rates due to iron fouling. These extraction wells and associated piping should be cleaned regularly to increase flow rates at these two extraction systems. This is an action item for this FYR.

V. TECHNICAL ASSESSMENT

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

Question A Summary:

Remedial Action Performance

The review of site-specific documents, ARARs, risk assumptions, and groundwater monitoring data indicate that the implemented remedy is functioning as intended by the ROD, ROD Amendment, and ESDs. The remedy components that have been constructed at the Site include the SPA re-grading and final cover; the MAQA sediment removal and final cover; the ALA excavation of TCE-contaminated soil, backfilling, and final cover; the MPA HSVE for removal of VOCs; the Site-wide groundwater extraction system; the MPA contaminated soil consolidation and cover; and the WKCs PCB-contaminated sediment dredging and restoration.

The HSVE work is complete. The groundwater extraction system is performing as intended by the ROD, ROD amendment, and ESDs. The groundwater extraction system is effectively capturing the Upper Aquifer groundwater plume. All RAOs have been achieved except for the groundwater. The Site continues to make progress toward achieving groundwater RAOs.

System Operations/O&M
O&M activities of the groundwater extraction, treatment, discharge off-site to the KWTP, and groundwater monitoring program at the Site, as implemented, are working in a manner that will continue to maintain the effectiveness of the remedy. Groundwater monitoring is performed on a monthly, and semi-annual basis. Inspection of the groundwater extraction system is also carried out during these monitoring events. The extraction wells at the ALA and Wildcat Creek are not pumping at the designed flow rates due to iron fouling. Iron fouling continues to be an issue at the Site. These extraction wells and associated piping should be cleaned to increase flow rates at the two extraction systems. This is a recommendation of this FYR.

Implementation of ICs
The City acquired the ALA, the MAQA, the MPA, and the SPA properties. This acquisition facilitated implementation of the ICs and the required ICs have been fully implemented. These include land use restrictions in the form of ERCs that are components of the RA for the MPA Area, ALA, MAQA, and SPA. The City Zoning Ordinance No. 6375, dated May 9, 2005, prohibits groundwater uses until the cleanup standards have been met. Implementing and maintaining effective ICs are required to assure long-term protectiveness of the remedy. ICs are in place and are proving to be effective in preventing exposure. Based on the monthly Site inspections, EPA is not aware of any Site uses which are inconsistent with the stated objectives of the ICs. The remedy appears to be functioning as intended.

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

Question B Summary:
Groundwater samples were not collected for emerging contaminants such as PFAS and 1,4-dioxane because they are not a concern at the Site based on Site's history. However, because of the vapor intrusion (VI) concerns associated with the MAQA, VI investigations were conducted in 2003, 2009, and 2010 in homes downgradient of MAQA. Indoor air samples were collected in the main living quarters, basements, crawl spaces, and below the basement slabs beneath the homes. The VI investigations concluded that potential impacts to indoor air through VI may exist, but it is unlikely that the MAQA/the Site is the source of chemicals causing potential VI concerns (CH2MHill, 2011).

The RAOs in place at the time of the remedy selection are still valid. Other factors are discussed below:

Changes in Standards and To-Be-Considered Requirements: Standards outlined and updated in the decision documents are still valid at the Site. There have been no known changes in ARARs or standards affecting the protectiveness of the remedy since the ROD was signed.

Changes in Toxicity and Other Contaminant Characteristics: Neither the toxicity factors for the contaminants of concern (COC) nor other contaminant characteristics have changed in a way that could affect the protectiveness of the remedy. Because the remedy implemented ICs to prevent contact with contaminants that remain at the Site, changes in COC toxicity generally would not impact the effectiveness of the remedy.

Changes in Risk Assessment Methods: Standardized risk assessment methods have not changed in a way that could affect the assessment of the protectiveness of the remedy.

Changes in Exposure Pathways: There have been no changes in the potential exposure pathways at the Site since the ROD was issued. No other changes in the Site conditions that affect exposure pathways were identified as part of this FYR. A solar park was constructed at the MPA. The MAQA is being used by the City as a storm water retention pond. The City constructed the WCSC at the ALA. There are no current or known planned changes in the Site's land use. The current Site land use is compatible with the selected remedy and ICs.

Expected Progress towards Meeting RAOs: All RAOs have been achieved except for those for groundwater. Progress toward meeting the RAOs for the groundwater continues. The groundwater monitoring program will continue to ensure long-term protectiveness of the implemented remedy.

Historically, manganese was analyzed at all locations where VOC analysis was also performed. However, this has been discontinued in 2019 based on recommendations from the 2018 annual report (CH2M, 2019). The reasoning is summarized as follows:

- The extent and concentrations of manganese appear to be relatively stable over the period of monitoring. Also, the groundwater RA activities do not attempt to reduce manganese concentrations. Because manganese does not degrade, it will continue to persist, although dilution, adsorption, or other physical/chemical processes may serve to reduce concentrations in the future.
- The ROD does not specify a remediation goal for manganese. The remediation goal for manganese of 50 µg/L is a secondary MCL related to staining color or taste of drinking water. Secondary MCLs are not typically included as an ARAR. Furthermore, the basis of design report (CH2M, 2004) stated that groundwater will be remediated to the Indiana drinking water class criteria (327 Indiana Administrative Code 2-11-6). The code does not list manganese in its table; therefore, there is no specific remediation goal set for manganese based on the Indiana Administrative Code.

Even though there is not currently an MCL for manganese, EPA recently updated the Regional Screening Level (RSL) for manganese to 430 ug/L. Existing manganese data should be re-evaluated based on this updated RSL to determine if resuming of manganese monitoring is warranted.

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

The Site is vulnerable to flooding and associated soil and sediment erosion; approximately half of the site lies in a 100-year floodplain. Loss of electricity power and physical damage associated with potential tornadoes pose additional vulnerabilities. However, soft engineering techniques were used to minimize potential stormwater runoff and associated erosion at the 87-acre MPA, which predominantly slopes toward Wildcat Creek. During remedial excavation and backfilling, chipped wood from onsite trees requiring removal was used to construct berms in vulnerable areas and to buffer site roads or

augment other erosion controls. Additionally, large granite field stone was placed along the sides of WCKs to armor their banks.

Multiple flood resilience measures were integrated into design and construction of the groundwater extraction and monitoring wells (EPA, 2022), which are flush mounted. To prevent backflow of floodwater during flooding, check valves were installed in all extraction and monitoring wells. Each of the three groundwater extraction systems also was equipped with a remote monitoring system that includes an auto dialer enabling shutdown in advance of potential flooding or other hazardous conditions.

The City is using the MAQA as a stormwater retention basin area, which significantly reduced onsite runoff and successfully stored stormwater runoff from adjacent areas during flooding events. In addition, an acid tote locker required for remedial purposes was placed near the pumphouse located in the MAQA and bolted onto its concrete slab to prevent damage or movement associated with weather extremes. Collectively, the design and construction specifications for the groundwater extraction systems and supporting structures have provided resilience to flooding conditions (EPA, 2022).

VI. ISSUES/RECOMMENDATIONS

Issues and Recommendations Identified in the Five-Year Review:				
OU(s): **1, 2, 4, 5, 6**	**Issue Category: Institutional Controls**			
	Issue: The O&M Plan should be updated to include a provision for regular inspection of ICs at the Site and an annual certification to EPA that the required ICs are in place and effective.			
	Recommendation: The O&M Plan will be updated to include regular inspection and an annual certification of ICs.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	EPA	EPA/State	12/30/2022

OU(s): **1**	**Issue Category: Operations and Maintenance**			
	Issue: The extraction wells at the ALA and WKCs are not pumping at the designed flow rates due to iron fouling.			
	Recommendation: These extraction wells and associated piping should be cleaned regularly to increase flow rates at the two extraction systems.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	EPA	EPA/State	9/30/2023

OU(s): 4, 5	Issue Category: Operations and Maintenance			
	Issue: MAQA and MPA are starting to become overgrown, including a tree near the drain at MAQA, and plants are growing through the solar panels in some areas at the MPA.			
	Recommendation: EPA and IDEM will coordinate with the City for mowing and trees and plants removal at the MAQA and MPA.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	EPA	EPA/State	9/30/2023

OTHER FINDINGS

In addition, the following are recommendations that were identified during the FYR, but do not affect current nor future protectiveness:

- EPA will continue to pursue partial deletion of the Site areas (except Site-wide groundwater), where RA is complete, ICs are in place, and RAOs are achieved.
- EPA and IDEM will continue to work with the City on the ALA zoning adjustment.
- EPA will continue NA monitoring. Further NA monitoring is necessary to understand VOC plume trends in the MNAWs.
- In 2019, EPA discontinued manganese monitoring because there is not currently an MCL for manganese. EPA recently updated the RSL for manganese to 430 ug/L. EPA should re-evaluate existing manganese data based on this updated RSL to determine if resuming of manganese monitoring is warranted.
- The lack of sediment and fish monitoring data could impact EPA's ability to delete the Site. EPA will request fish monitoring data from IDEM needed for NPL deletion. Sediment remedial action, including Creek's restoration, were conducted on stream reaches of the WKCs within the Site. There are other contamination sources upgradient from the Site that impacted and/or continue to impact the creeks. Therefore, the fish consumption advisory, which the State is responsible for issuing, is still in place.

VII. PROTECTIVENESS STATEMENT

OU1 (Groundwater):

OU1 Protectiveness Statement
Protectiveness Determination: Short-term Protective
Protectiveness Statement:

The remedy at OU1 currently protects human health and the environment because it is functioning as designed. Threats at OU1 have been addressed through in-place treatment of VOC solids using a heated soil vapor extraction system, and through extraction, treatment, and disposal of contaminated groundwater. However, in order for the remedy to be protective in the long-term, the following actions need to be taken to ensure protectiveness: update the O&M Plan to include regular inspection and an annual certification of ICs, and the extraction wells and associated piping at the ALA and WCKs should be cleaned regularly to increase flow rates at these two extraction systems.

OU2 (The ALA):

OU2 Protectiveness Statement
Protectiveness Determination: Short-term Protective
Protectiveness Statement: The remedy at OU2 currently protects human health and the environment because it is functioning as designed. Threats at OU2 have been addressed through demolition of the groundwater treatment plant, excavation, and off-site disposal of TCE-contaminated soils, use of on-site slag as fill; grading, covering of the Area with two feet of clean soil cap; and seeding of the Area. Large amounts of asbestos-containing material, as well as a small quantity of PCB-contaminated soil, were removed from the groundwater treatment plant area. However, in order for the remedy to be protective in the long-term, the following action needs to be taken to ensure protectiveness: update the O&M Plan to include regular inspection and an annual certification of ICs.

OU3 (The WKCs):

OU3 Protectiveness Statement
Protectiveness Determination: Protective
Protectiveness Statement: The remedy at OU3 is protective of human health and the environment. Threats at OU3 have been addressed through dredging of contaminated sediments, removal of lead-contaminated soils along the northern bank of Kokomo Creek, transportation and disposal of contaminated sediments, and restoration of the Creeks.

OU4 (The MAQA):

OU4 Protectiveness Statement
Protectiveness Determination: Short-term Protective
Protectiveness Statement: The remedy at OU4 currently protects human health and the environment because it is functioning as designed. Threats at OU4 have been addressed through dewatering of the MAQA to access drums, debris, and sediment, treatment of the Quarry's water before discharging it off-

site, dredging of contaminated sediments, transportation, and disposal of contaminated sediments, backfill and cover installation. However, in order for the remedy to be protective in the long-term, the following actions need to be taken to ensure protectiveness: update the O&M Plan to include regular inspection and an annual certification of ICs, and coordinate mowing and tree removal near the drain with the City.

OU5 (The MPA):

OU5 Protectiveness Statement
Protectiveness Determination: Short-term Protective
Protectiveness Statement: The remedy at OU5 currently protects human health and the environment because it is functioning as designed. Threats at OU5 have been addressed through removal of Underground Storage Tanks and Asbestos-Containing Material, consolidation of contaminated soil, and the construction of a final cover. However, in order for the remedy to be protective in the long-term, the following actions need to be taken to ensure protectiveness: update the O&M Plan to include regular inspection and an annual certification of ICs, and coordinate mowing and plants removal with the City.

OU6 (The SPA):

OU6 Protectiveness Statement
Protectiveness Determination: Short-term Protective
Protectiveness Statement: The remedy at OU6 currently protects human health and the environment because it is functioning as designed. Threats at OU6 have been addressed through excavation and transportation of excess slag to the ALA, grading of remaining slag material and lead-impacted soil, installation of the final cover, and restoration activities. However, in order for the remedy to be protective in the long-term, the following action needs to be taken to ensure protectiveness: update the O&M Plan to include regular inspection and an annual certification of ICs.

Sitewide Protectiveness Statement
Protectiveness Determination: Short-term Protective
Protectiveness Statement: The Sitewide remedy currently protects human health and the environment because it is functioning as designed. Threats at the Site have been addressed through encapsulation of contaminated soils, offsite disposal of contaminated sediment, treatment of VOC solids in place using soil vapor extraction system, and extraction, treatment, and disposal of contaminated groundwater. However, in order for the remedy to be protective in the long-term, the following actions need to be taken to ensure protectiveness: update the O&M Plan to include regular inspection and an annual certification of ICs; the extraction wells and associated piping at the

ALA and WCKs should be cleaned regularly to increase flow rates at these two extraction systems; and coordinate mowing and tree and plants removal at MAQA and MPA with the City.

VIII. NEXT REVIEW

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

APPENDIX A – REFERENCE LIST

CH2MHILL, 2011. Continental Steel Site, Remedial Action Report, OU4, Markland Ave Quarry; SEMS ID: 399228

CH2MHILL, 2018. Continental Steel Site, Slug Control Plan; October; SEMS ID: 976804

CH2MHILL, 2019a. Continental Steel Site, 2018 Annual Report; October; SEMS ID: 950900

CH2MHILL, 2019b. Continental Steel Site, Slug Control Plan; December; SEMS ID: 957711

CH2MHILL, 2020a. Continental Steel Site, OU 1 Groundwater O&M Plan; June; SEMS ID: 958189

CH2MHILL, 2020b. Continental Steel Site, 2019 Annual Report; July; SEMS ID: 957726

City of Kokomo, 2020. Continental Steel Site, Individual Waste Disposal Permit; August; SEMS ID: 957717

EPA, 1998. Continental Steel Site, ROD; 9/30/1998; SEMS ID: 75504

EPA, 2010. Continental Steel Site, ESD; 9/22/2010; SEMS ID: 377586

EPA, 2017. Continental Steel Site, Fourth FYR Report; 8/22/2017; SEMS ID: 534975

EPA, 2022. Continental Steel Site, Superfund Climate Adaption Profile; April 2022; SEMS ID: 976787

IDEM, 1996. Continental Steel Site, ROD; 9/3/1996; SEMS ID:75504

IDEM, 2003. Continental Steel Site, ROD Amendment; 9/25/2003; SEMS ID: 201304

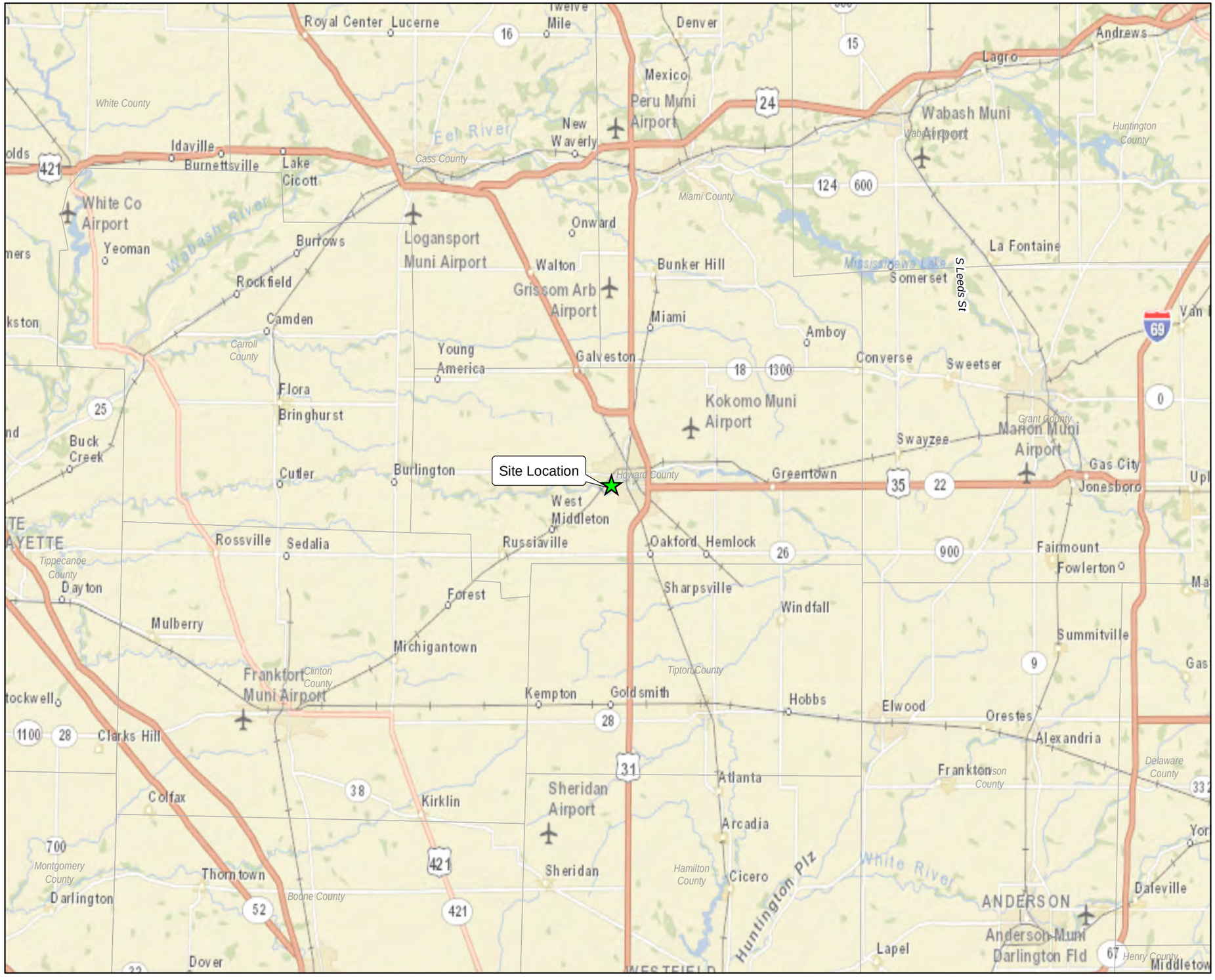
IDEM, 2005. Continental Steel Site, ESD; 9/28/05; SEMS ID: 238627

OCH JV, 2021a. Continental Steel Site, Draft 2021 Annual Report; January; SEMS ID: 976786

OCH JV, 2021b. Continental Steel Site, Slug Control Plan; February; SEMS ID: 976805

APPENDIX B – FIGURES

Figure 1-1 Site Location Map
Figure 1-2 – Site Features and Groundwater Monitoring Program
Figure 1-3 – Upper Potentiometric Surface Map
Figure 1-4 – Intermediate Potentiometric Surface Map
Figure 1-5 – Lower Potentiometric Surface Map
Figure 1-6 – Main Plant Area ICs Map
Figure 1-7 – Markland Ave Quarry ICs Map
Figure 1-8 – Acid Lagoon Area ICs Map
Figure 1-9A – Lagoon Area ICs Map
Figure 1-9B – Lagoon Area ICs Map



LEGEND

☆ Site Location

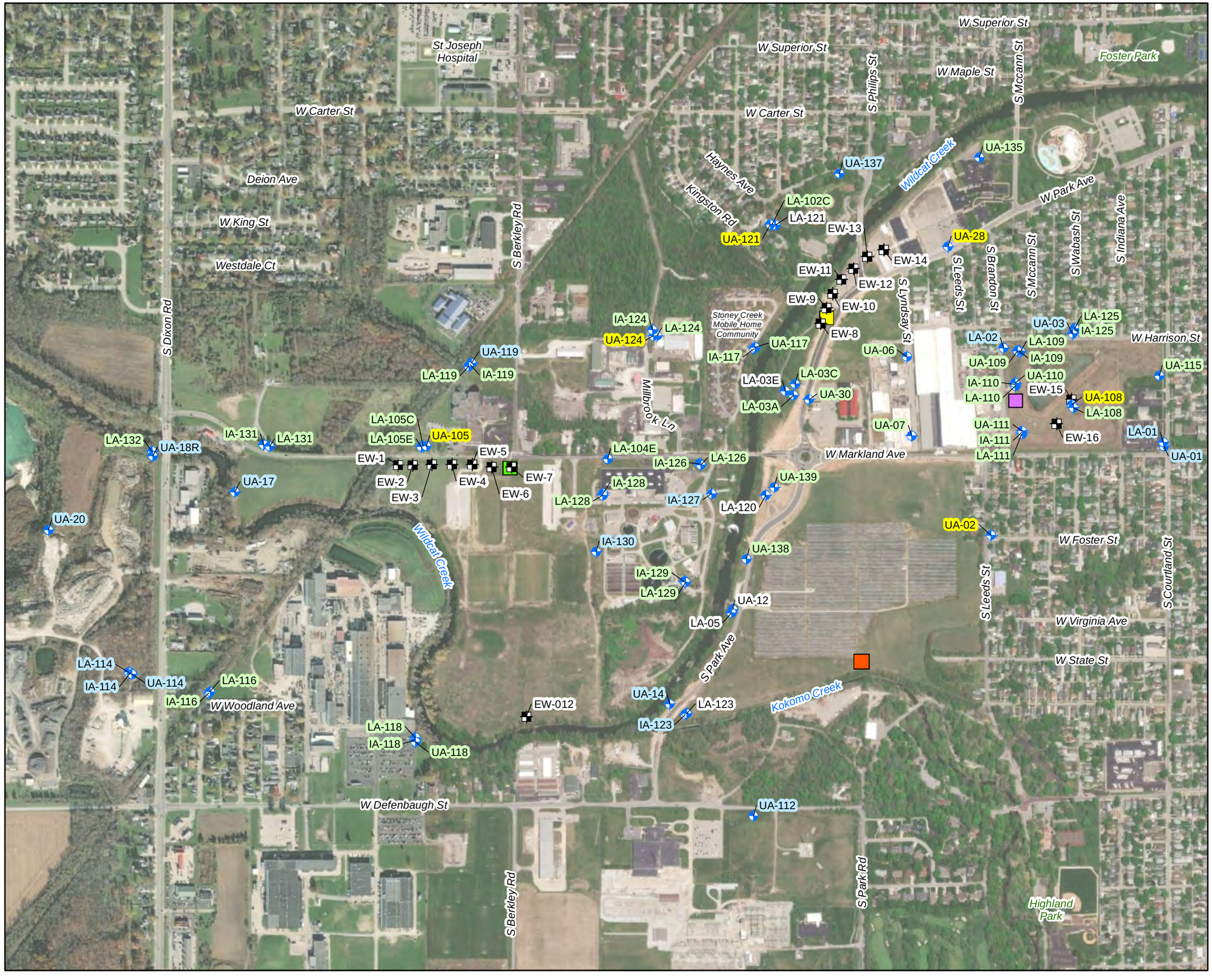
Notes:
1. Basemap provided by Esri ArcGIS Online Street Map

N

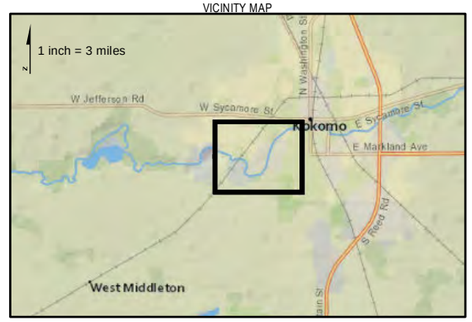
0 3 6
Miles

Figure 1-1. Site Location
2021 Annual Report
Continental Steel Superfund Site
Kokomo, Indiana

ch2m:



VICINITY MAP



LEGEND

- Monitoring Well
- Extraction Well

Pump House

- East Bank Wildcat Creek - IWDP-024 Discharge Point #002
- Markland Avenue Quarry - IWDP-024 Discharge Point #003
- Pete's Run Cut-off Wall (Sump) - IWDP-024 Discharge Point #004
- West Markland Avenue (Lagoons) - IWDP-024 Discharge Point #001

Recommended Monitoring:

- UA-### Gauging and VOC monitoring
- UA-### Water level elevation gauging only
- UA-### Gauging, VOC, and MNA monitoring
- UA-### Not included in site-wide monitoring program

Notes:

1. May 10, 2018 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
2. MNA - Monitored Natural Attenuation
3. VOC - Volatile Organic Compound
4. MNA geochemical parameters include: nitrate, nitrite, dissolved iron, dissolved manganese, ethane, ethene, methane, alkalinity, total organic carbon, sulfide, sulfate

N

0 375 750
Feet

Figure 1-2. Site Features and Groundwater Monitoring Program
2021 Annual Report
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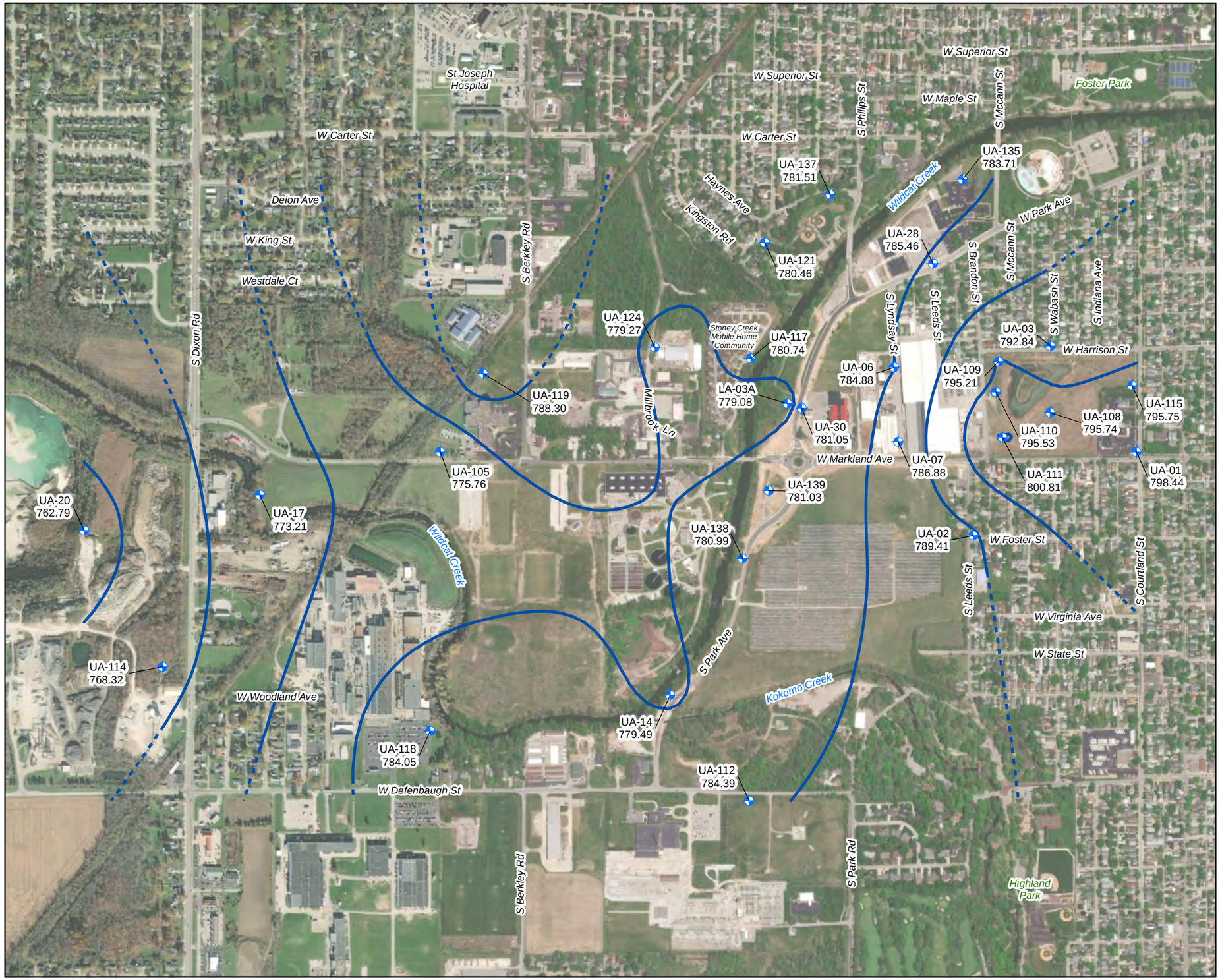
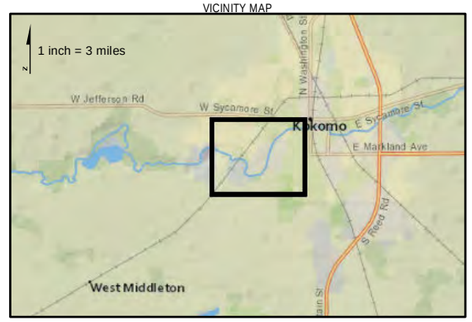


VICINITY MAP



LEGEND

- Monitoring Well
- Potentiometric Surface Contour (Dashed where inferred)

Notes:

1. May 10, 2018 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
2. Groundwater elevations measured in feet above mean sea level
3. LA-03A is labeled as lower aquifer, but is screened in upper aquifer

N

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Feet

Figure 1-3. Upper Potentiometric Surface Map - June 2021
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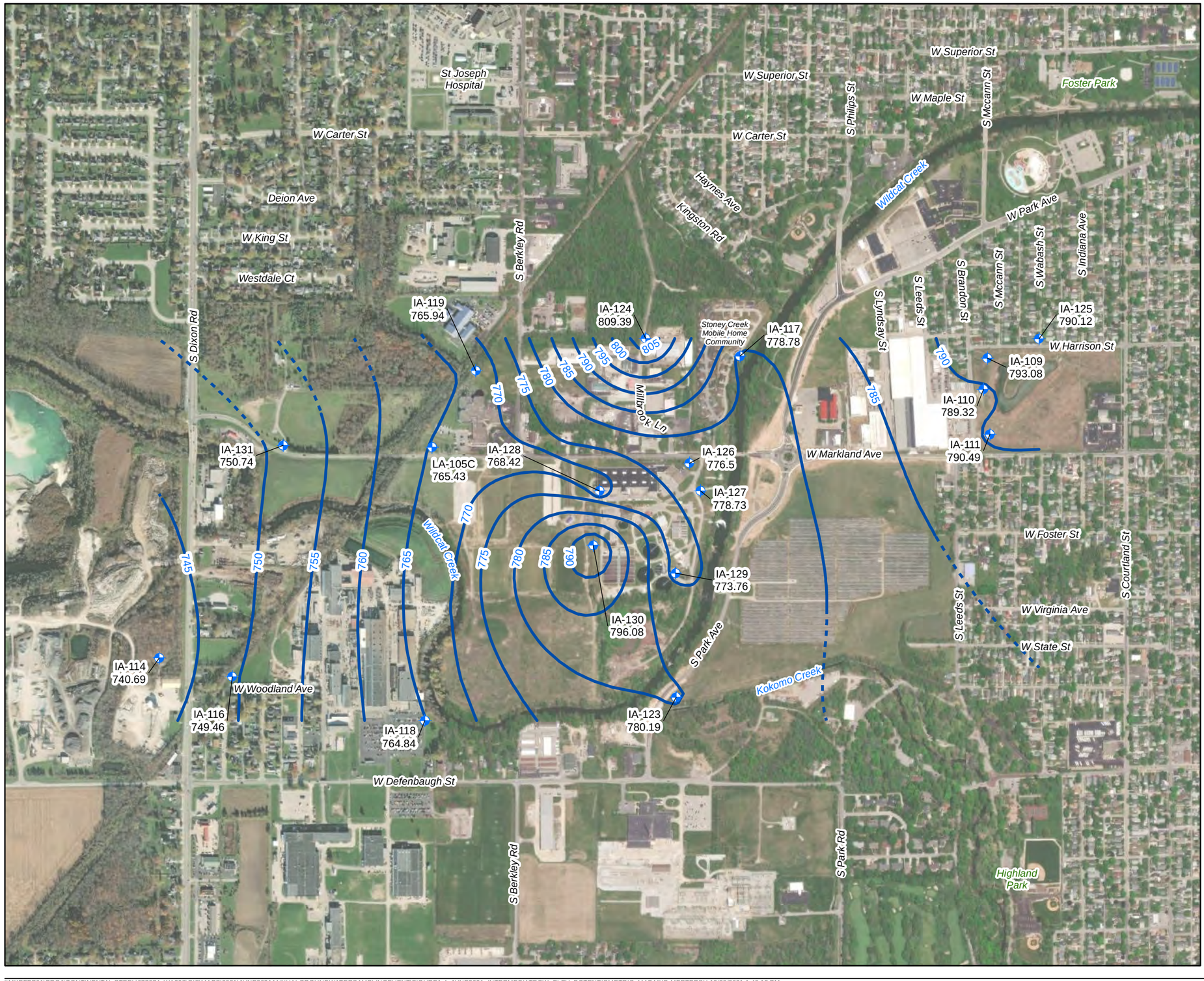
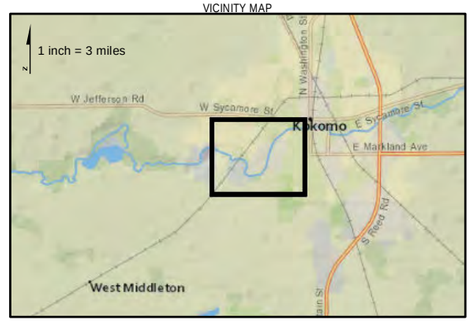


VICINITY MAP



LEGEND

- Monitoring Well
- Potentiometric Surface Contour (Dashed where inferred)

Notes:

1. May 10, 2018 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
2. Groundwater elevations measured in feet above mean sea level
3. LA-105C is labeled as lower aquifer, but is screened in intermediate aquifer

N

0 400 800
Feet

Figure 1-4. Intermediate Potentiometric Surface Map - June 2021
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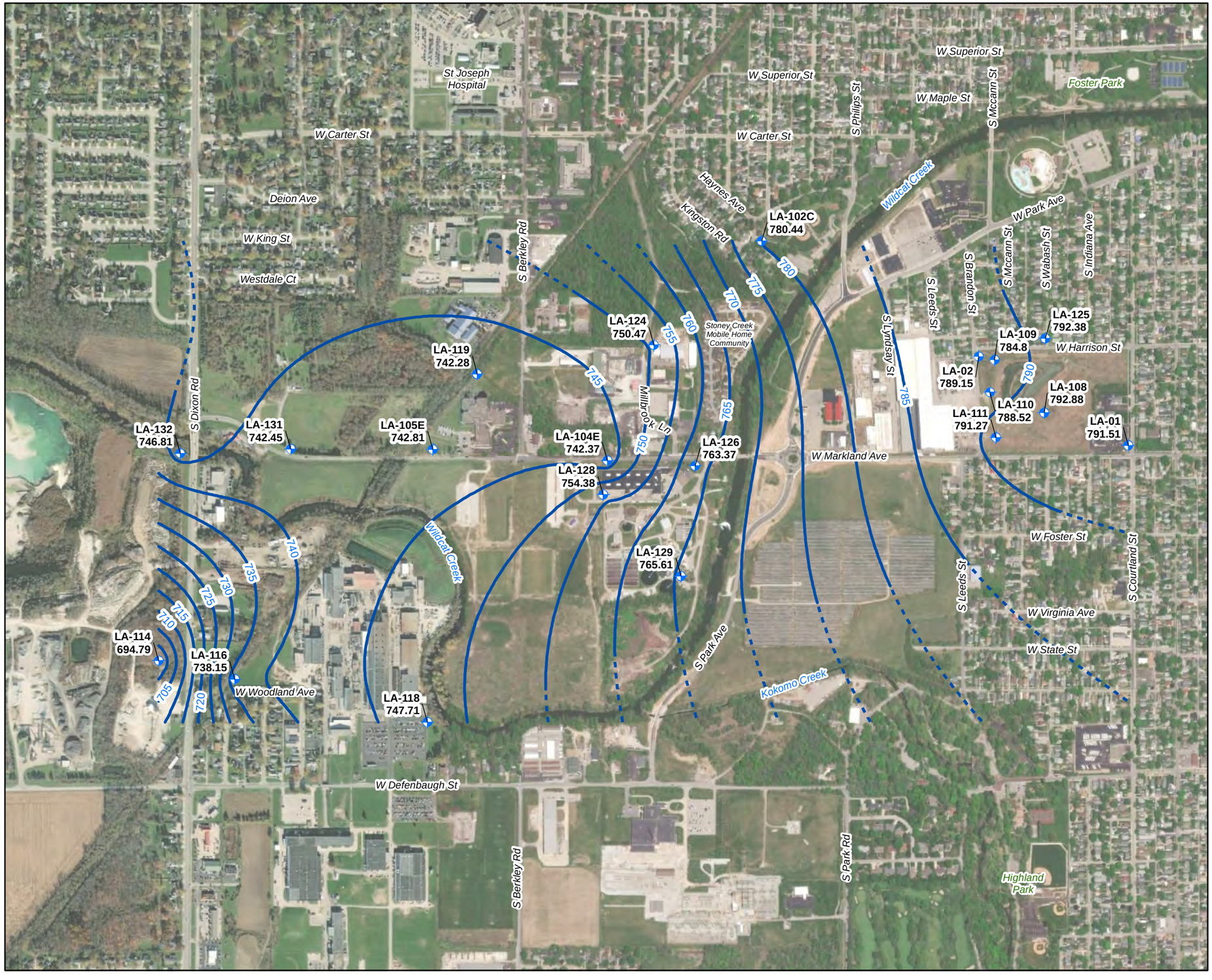

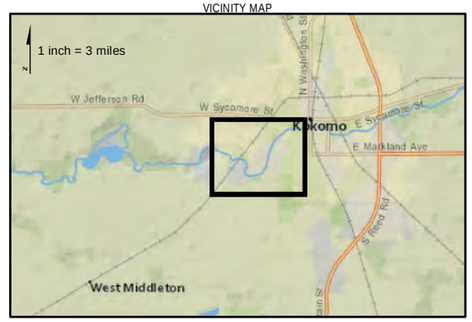

LEGEND

- Monitoring Well
- Potentiometric Surface Contour (Dashed where inferred)

Notes:

1. May 10, 2018 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
2. Groundwater elevations measured in feet above mean sea level
3. LA-03C had very little groundwater encountered during gauging and it's groundwater elevation was not included in the potentiometric surface

N

0 400 800
Feet

Figure 1-5. Lower Potentiometric Surface Map - June 2021
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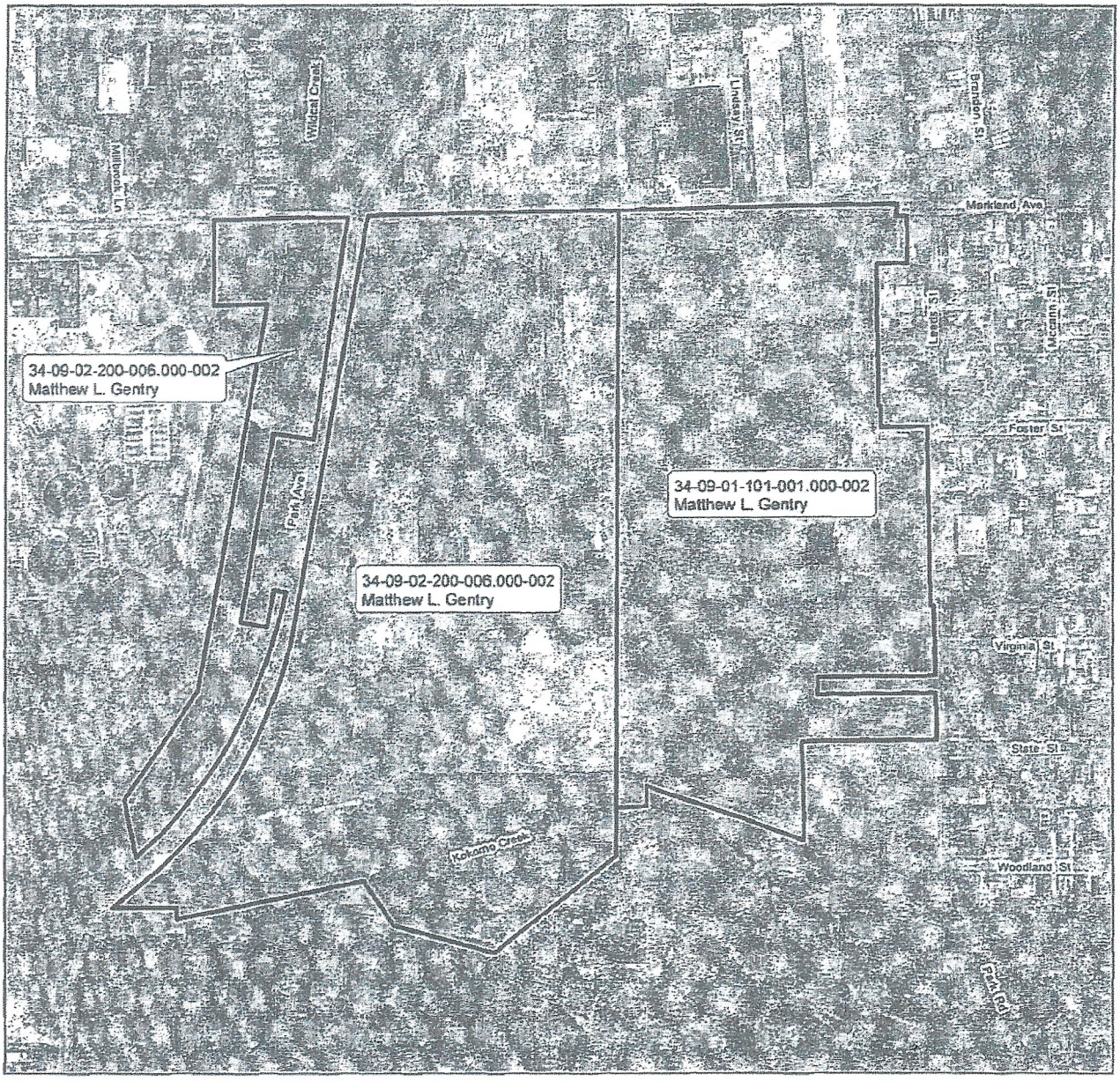
\\MKEFPP01\PROJ\CONTINENTAL STEEL\677674_WA208\GIS\MAPS\2021\JUNE2021ANNUALGROUNDWATERSAMPLINGEVENT\FIGURE1-5_JUNE2021_LOWERGW_ELEV_POTENTIOMETRIC_MAP.MXD MPETERSH 12/20/2021 2:42:09 PM

SF 7500040 (Matthew L. Gentry - Main Plant Area)
Proposed Environmental Restrictive Covenant



Mapped By:	Mike Hill, IDEM, Office of Land Quality, Science Services Branch, Engineering & GIS Services, December 14, 2011
Sources:	-Parcel lines based on Howard County parcel data obtained by Indiana Department of Homeland Security on 8/27/2011. -Parcel information based on Howard County database - http://beacon.schneidercorp.com obtained on 12/14/2011. -2005 State of Indiana Orthophotography (1 foot resolution)
Parcel Info:	34-09-01-101-001.000-002 (Section 1) 34-09-02-200-006.000-002 (Section 2)
Location Info:	Sections 1 & 2, T29N, R3E Center Township Kokomo, Howard County, IN
Disclaimer:	This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Parcel Line

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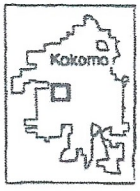
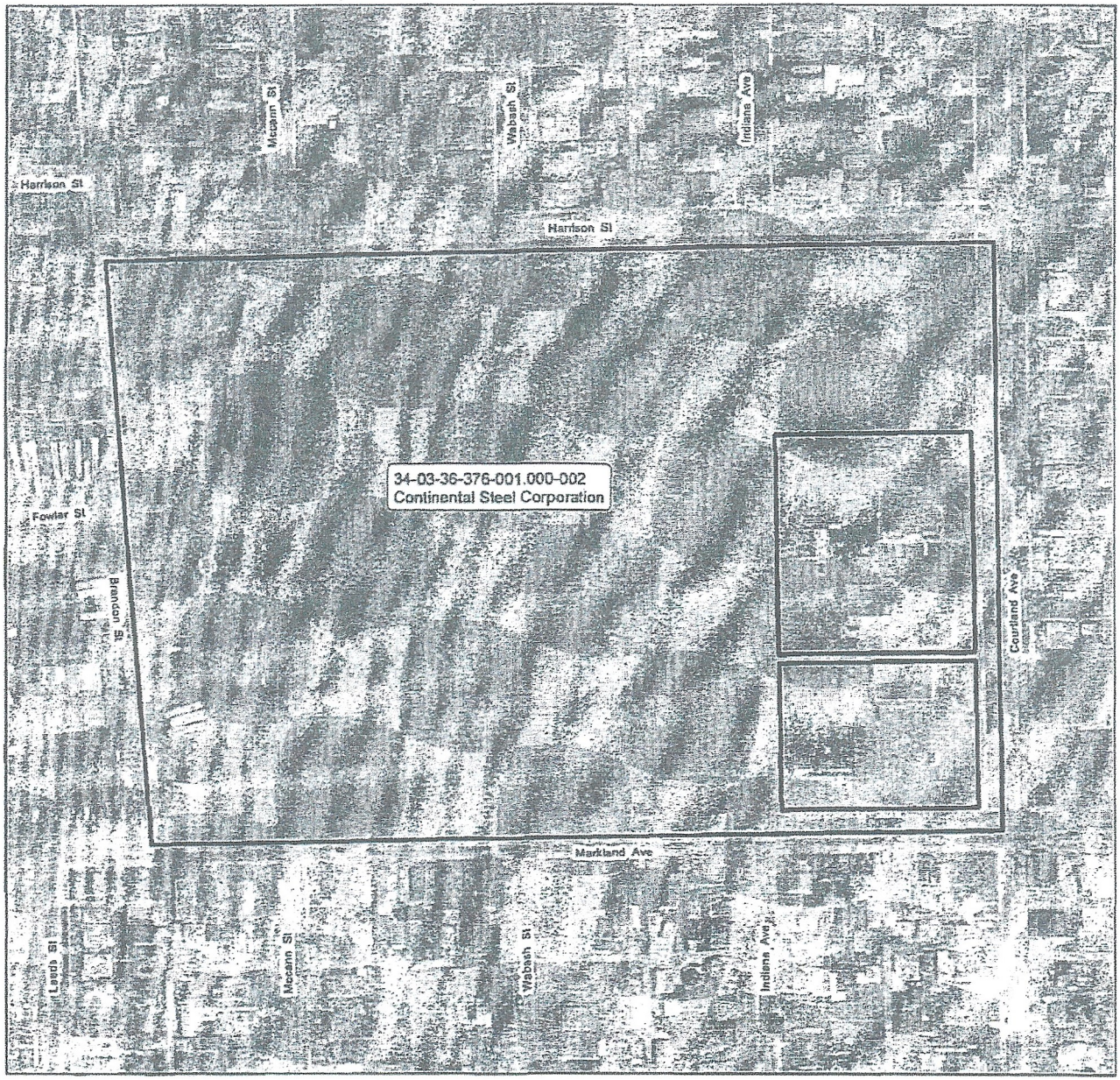
Howard County

Project Area



SF 7500040 (Continental Steel - Markland Quarry Area)
Proposed Environmental Restrictive Covenant



Mapped By:	Mike Hill, IDEM, Office of Land Quality, Science Services Branch, Engineering & GIS Services, December 8, 2011
Sources:	-Parcel lines based on Howard County parcel data obtained by Indiana Department of Homeland Security on 9/27/2011. -Parcel information based on Howard County database - http://beacon.schneidercorp.com obtained on 12/8/2011. -2005 State of Indiana Orthophotography (1 foot resolution)
Parcel Info:	34-03-36-376-001.000-002
Location Info:	Section 36, T24N, R3E Center Township Kokomo, Howard County, IN
Disclaimer:	This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Parcel Line

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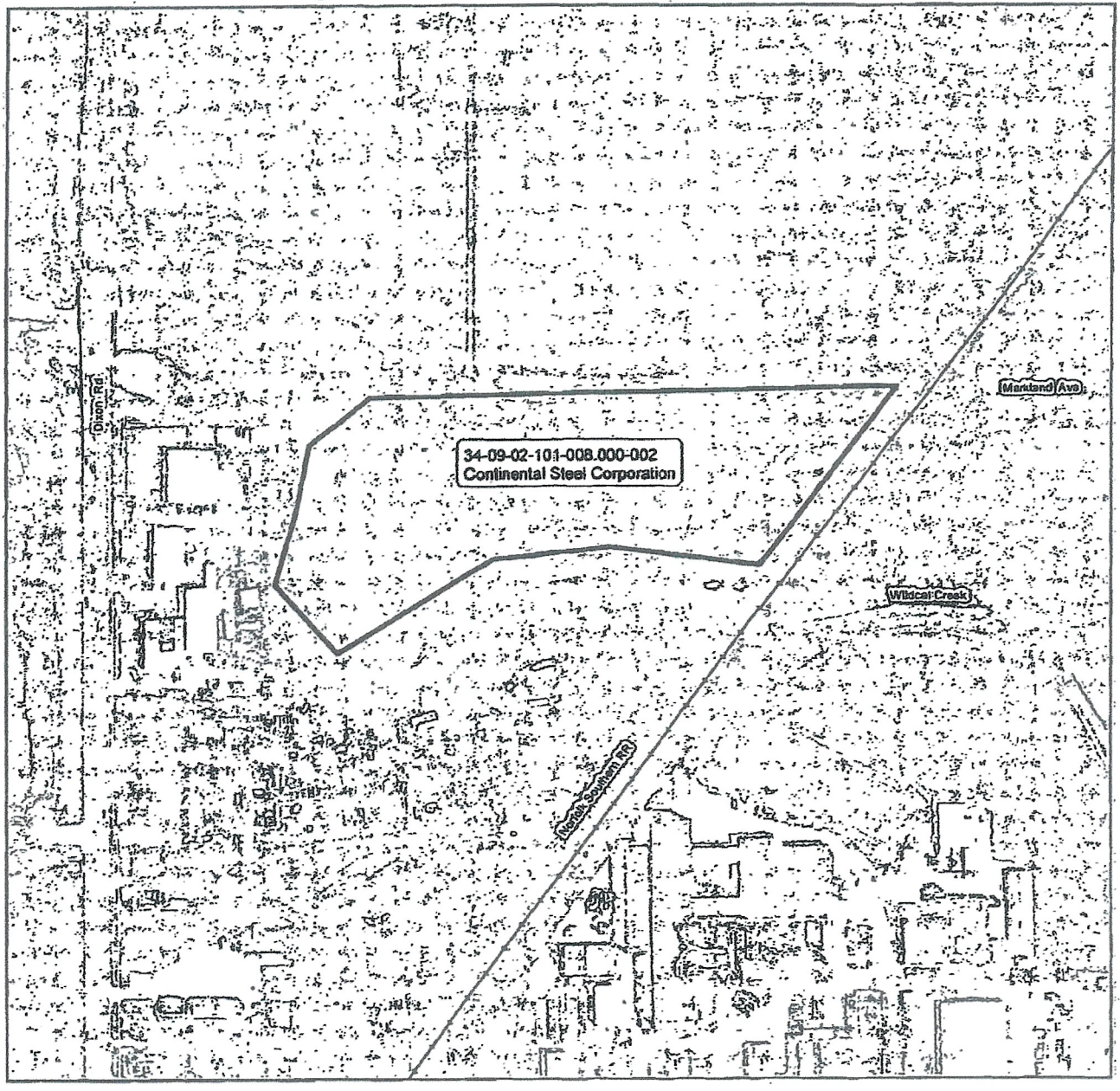
Howard County

Project Area

SF 7500040 (Continental Steel - Slag Area)
Proposed Environmental Restrictive Covenant



Mapped By:	Mike Hill, IDEM, Office of Land Quality, Science Services Branch, Engineering & GIS Services, December 14, 2011
Sources:	-Parcel lines based on Howard County parcel data obtained by Indiana Department of Homeland Security on 8/27/2011. -Parcel information based on Howard County database - http://beacon.schneidercorp.com obtained on 12/14/2011. -2005 State of Indiana Orthophotography (1 foot resolution)
Parcel Info:	34-09-02-101-008.000-002
Location Info:	Section 2, T23N, R3E Center Township Kokomo, Howard County, IN
Disclaimer:	This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Parcel Line
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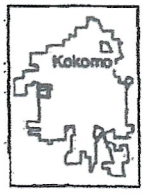
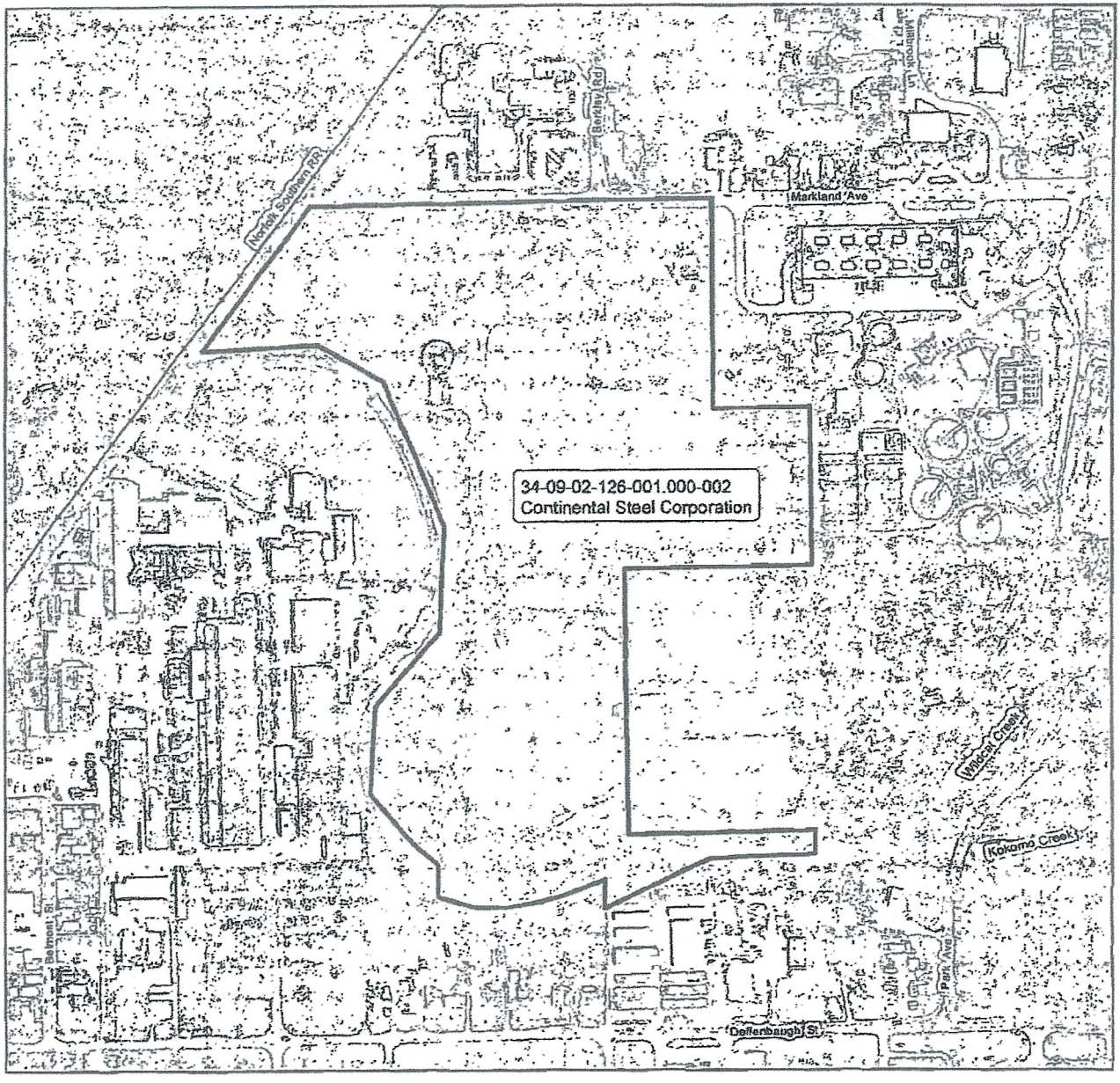
Howard County

Project Area



SF 7500040 (Continental Steel - Lagoon Area) – A
Proposed Environmental Restrictive Covenant



Mapped By:	Mike Hill, IDEM, Office of Land Quality, Science Services Branch, Engineering & GIS Services, December 14, 2011
Sources:	-Parcel lines based on Howard County parcel data obtained by Indiana Department of Homeland Security on 8/27/2011. -Parcel information based on Howard County database - http://pescan.schneidercorp.com obtained on 12/14/2011. -2005 State of Indiana Orthophotography (1 foot resolution)
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Location Info:	Section 2, T23N, R3E Center Township Kokomo, Howard County, IN
Disclaimer:	This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Parcel Line
Railroad

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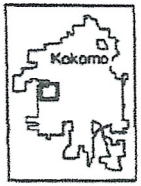
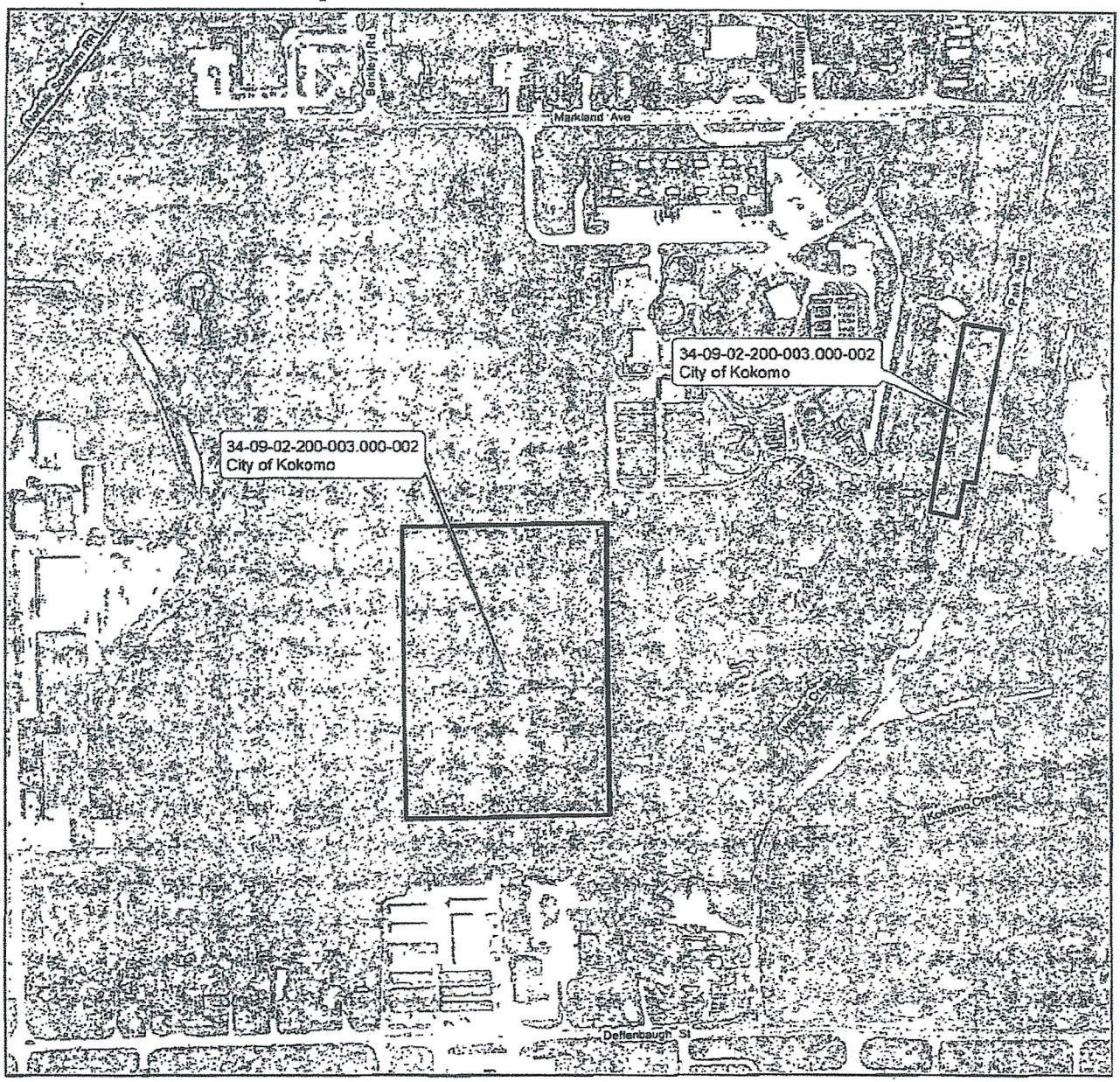
Howard County

Project Area



SF 7500040 (City of Kokomo - Lagoon Area) -B
Proposed Environmental Restrictive Covenant



Mapped By:	Mike Hill, IDEM, Office of Land Quality, Science Services Branch, Engineering & GIS Services, December 14, 2011
Sources:	-Parcel lines based on Howard County parcel data obtained by Indiana Department of Homeland Security on 8/27/2011. -Parcel information based on Howard County database - http://beacon.schneidercorp.com obtained on 12/14/2011. -2005 State of Indiana Orthophotography (1 foot resolution)
Parcel Info:	34-09-02-200-003.000-002
Location Info:	Section 2, T23N, R3E Center Township Kokomo, Howard County, IN
Disclaimer:	This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes

Parcel Line
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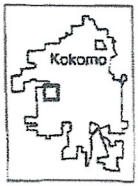
Howard County

Project Area



APPENDIX C – ATTACHMENTS

Attachment A – FYR Start Notification Letter
Attachment B – Public Notice

ATTACHMENT A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

August 18, 2021 Reply to: SR 6J

Ms. Jessica Fliss
Senior Project Manager
Federal Programs, Remediation Services Branch
Office of Land Quality
Indiana Department of Environmental Manangement

Re: Notification of Five-Year Review Start for the Continental Steel Site, Kokomo, Indiana

Dear Ms. Filss:

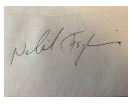
This letter is to notify you that U.S. EPA has begun the process of the Five-Year Review for the Continental Steel Site (the Site) in Kokomo, Indiana. U.S. EPA will lead the Site Five-Year Review. Statutory Five-Year Review for the Site will be conducted as required by Section 121 of CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA).

The Five-Year Review for the Site is due on August 30, 2022, and we are providing you this notification so that U.S. EPA and Indiana Department of Environmental Management (IDEM) can begin the necessary coordination activities. Necessary activities include such matters as notifying the public of the Five-Year Review process, accepting public input, gathering data in order to summarize the conditions of Site's hazardous substances and the performance of key contaminant treatment devices, arranging for site visit and inspection to review remediation as well as operation and maintenance functions, and develop any pertinent recommendations to identified issues, etc.

I look forward to working with IDEM in compiling the Five-Year Review Report for the Site. If you have any questions, please feel free to contact me at 312-886-6840 or via email at fayoumi.nabil@epa.gov.

Sincerely,

8/18/2021

X 

Signed by: Fayoumi, Nabil

cc: J. Pope, Community Involvement Coordinator

Tom Krueger, Office of Regional Counsel
Sara Maihofer, Jacobs

ATTACHMENT B

SPORTS

SPORTS BRIEFS

TC players set records in win

SHARPSVILLE — Tri-Central seniors Jake Chapman and Caden Leininger had record-breaking nights as the Trojans beat the Indiana Deaf School 79-53 Wednesday night for their fourth straight win.

Chapman scored a career-high and gym-record 46 points on 23-of-31 firing from the field and 3-of-4 shooting from the line. That beat the old gym mark of 44 set by Kory Fernung in 1987 and matched by Bret Bailey in 1997.

Leininger notched a school-record 19 assists for the Trojans, bettering the old mark of 18.

The Trojans led 33-21 at halftime and pulled away in the second half. Jace Cassity added 12 points for TC.

TC upped its record to 12-8 before Friday's season finale at Northfield. Indiana Deaf fell to 8-13.

Westfield tops Cassin boys hoops

WESTFIELD — The Westfield boys basketball team downed Cass 52-43 Wednesday night on the Shamrocks' court in a recently scheduled game.

Westfield (18-6) has an enrollment size of 2,625, more than six times that of Cass' 418, but the Kings (11-10) were able to keep it close for a lot of the game. The contest was tied 12-all after one quarter and Westfield led 24-18 at halftime. The Shamrocks outscored the Kings 19-7 in the third to take a 43-25 lead into the fourth. The Kings won the final quarter 18-9.

Tristin Miller led the Kings with 20 points. Luke Chambers scored nine and Tyson Good had eight.

Alex Romack had 22 points to lead the Shamrocks. Cam Haffner scored 12. Westfield played without Purdue recruit Braden Smith, who was out with an injury.

Cass travels to Lafayette Central Catholic on Friday.

MLB: Season could be shortened soon

JUPITER, Fla.(AP) — Major League Baseball said only five days remain to salvage March 31 openers and a full season, telling locked out players that games would be canceled if a labor contract is not agreed to by the end of Monday.

After the third straight day of negotiations with little movement, MLB went public with what it had told the union on Feb. 12.

"A deadline is a deadline. Missed games are missed games. Salary will not be paid for those games," an MLB spokesman said after Wednesday's bargaining ended. The spokesman spoke on behalf of MLB on the condition the spokesman not be identified by name.

Players have not accepted Monday as a deadline and have suggested any missed games could be made up as part of doubleheaders.

Former MLB player Julio Cruz dies

SEATTLE (AP) — Julio Cruz, an original Seattle Mariners player from their inaugural season who later became a Spanish-language broadcaster for the franchise, has died, the team announced Wednesday. He was 67.

Cruz died Tuesday at his home, according to a statement from his family. Cruz played for Seattle and the Chicago White Sox during his career.

Cruz, a switch-hitting second baseman, played 10 seasons total in the majors. He played parts of seven seasons with the Mariners, beginning with their inaugural season in 1977. Cruz made his debut with Seattle on July 4, 1977, after being selected from the California Angels organization during the expansion draft.

Cruz was traded to the Chicago White Sox during the 1983 season and spent the final 3½ seasons of his career playing in Chicago. White Sox Chairman Jerry Reinsdorf said Cruz was the catalyst for Chicago's run to the AL West title in 1983.

MCCLAIN

CONTINUED FROM B1

AAU in seventh grade. So it's always been a super fun game to play in.

Q: You're a multi-dimensional player, involved in everything on the floor. How did your all-action game come about?

A: Coming into high school, I knew I had to step up and become a leader very early. I was thrown into the fire a lot sooner than most girls are. I started as a freshman for Troy White. He expected big things from me and I was willing to take the steps needed to fill the role on the team. As I progressed through my four years at KHS I continued to build on my game and it really helped me to develop into a strong leader.

Q: You grew up in the Kat program. Did you have a favorite player to watch growing up?

A: I had multiple favorite players growing up, I was kind of a sucker for attention from all the girls because I really loved watching them play. I really enjoyed going to camp and seeing my girl Bri Poe as well as Emily Bailey and a few others. Since I've been through the program, I've built bonds with a lot of the Lady Kat players and I'm still super close with them today. Most people don't realize the impact that they have on younger players.

Q: What's the best thing about Memorial Gym?

A: I absolutely love Memorial Gym. The history that has built that gym makes it so special. It's my favorite spot to kind of go and get some shots up and drown out any outside noise. It's easy to just go there and forget about everything else going on. It's always been my second home.

Q: Who is the best teammate you've had and how did she help you or the team?

A: Well, I definitely don't pick favorites when it comes to teammates but there are a few individuals that really impacted my career at KHS. My freshman year I played with Adria Hartley who transferred from North Miami. I absolutely loved playing with her and she definitely took me under her wing and kind of helped me step out of my comfort zone to become a leader.

I did the same with our 2024s since their freshman year. Lilly Hicks and Kamaria White are definitely my girls and I absolutely loved playing with them their first two years of high school. They both have a fight in them to be the best and win games and we needed that from them to help turn the culture around. They were on the same end of things as I was and it was really fun to have teammates who wanted it just as bad as I did.

Q: Who was the biggest influence on your athletic career?

A: My freshman year after high school and getting into AAU I was starting to feel a little burnt out of basketball, especially after Troy White left the program I wasn't really ready to adjust to change. I had a big growing up moment over the summer and going into fall basketball workouts to really decide how I wanted to go about things. When Coach [Tod] Windlan was hired I was nervous to see how the season would turn out. Coach Windlan really influenced me to become not only a better basketball player but a better person.

Q: You're going to play basketball and study at Indiana Tech, where current Kat coach Haley Peckinpaugh went to college. What did you like about the school and hoops program that made you choose Tech?

A: When looking into colleges I really didn't even think about going to Indiana Tech. Once Coach Peck introduced me to the school and told me more about it, I really became interested. I met with Coach [Jessie] Biggs and Coach Ky [Kylene Biggs] and immediately knew it was where I belong. The campus is perfect for me and the basketball program really is something special. I love Fort Wayne and how close it is to home. I'm really looking forward to attending there in the fall.

KATS

CONTINUED FROM B1

for that," Spear said. "Top-15 team in the state, very athletic, very talented and we came out with the W."

The Kats (14-7 overall) received strong play from all positions against the Titans (17-6). Sophomore center Flory Bidunga had a Bidunga-like line of 11-of-13 shooting, 23 points, 13 rebounds, five blocked shots and two steals. Junior guard Zavion Bellamy scored 18 points, matching his season high. Spear scored 16 points and dished four assists. Zion Bellamy came off the bench to contribute eight points and five assists. Junior guard Reis Beard provided solid defense.

"It was a team effort. I'm proud of how we responded from the last two days of practice," Peckinpaugh said.

Following a back-and-forth first half, Kokomo had a key stretch in the third quarter. Down 46-41 midway through the quarter, the Kats rattled off 11 straight points. Spear ignited the run with a 3-pointer, Bidunga blocked a shot and Patrick Hardimon hit a 3-pointer to put the Kats up 47-46.

When Tech guard Dayveon Turner picked up a technical foul after Hardimon's triple, the Kats pounced on the opportunity. First, Zion Bellamy hit both technical free throws — and on the subsequent possession, Spear nailed another 3-pointer for a 52-46 lead.

Kokomo took a 53-50 lead into the final quarter. Tech grabbed a 60-57 lead, but Spear followed with another 3-pointer to forge a tie. Spear faked using a ball screen and went left instead to free himself.

"I felt it in the second half," said Spear, who finished with four 3-pointers to match his season high.

After Spear knotted the score, Zavion Bellamy took over for the Kats. He hit a short jumper for a 62-60 lead at 3:15. After Tech committed a turnover, Bidunga scored in the low post for a 64-60 lead at 2:48. From there, Tech scored on its next three possessions, but Zavion Bellamy answered each time. He a nice runner in the lane, a layup off a press break and a pullup jumper. The latter made it 70-68 at 1:16.

"They did a good job of making it hard on Flory to get catches and Zav got downhill and made a couple plays at the rim," Peckinpaugh said.

Tech's D'Fayebeon Pittman dunked at :47 for a 70-70 tie, but he was whistled for a technical for hanging on the rim. Zavion Bellamy hit both technical fouls for a 72-70 lead. From there, Kokomo ran 30 seconds off the clock before the Titans fouled Zion Bellamy. The Titans had a chance when he missed the front end of a one-and-one — but Bidunga blocked Reggie Bass' shot inside with :06 remaining. Kokomo rebounded and Spear hit two free throws to secure the win.

For good measure, Bidunga blocked Rahseed Jones' 3-point attempt at the buzzer to put an exclamation point on the win.

"That's a really, really good team at Tech and coach [Damon] Turner does a good job with them," Peckinpaugh said. "They're so explosive offensively, it can be really tough to guard them at times, but I thought our guys did a great job defensively of making things hard. And they have guys who hit tough shots. But I'm proud of our effort [Wednesday] on both ends of the floor."

Kokomo closes the regular season Friday when Huntington North visits. While Tech averages 73.9 points per game, which ranks No. 2 in the state, Huntington North averages 52.8. The Vikings hold opponents to 47.8.

"It's going to be just as tough a game," Peckinpaugh said. "Coach [Craig] Teagle is one of the best coaches in the state. It's going to be a slow, grind-it-out pace, but we'll be ready to go. We'll use [today] to get ready and we'll be back here Friday to finish it up and hopefully have another great showing and send us into the sectional feeling good about ourselves."

COLLEGE BASKETBALL

ND tops Syracuse, notches 20th win

CNHI AND AP REPORTS

Notre Dame saw four players score in double figures on Wednesday night against Syracuse, but not one of them made what turned out to be one of the game's biggest shots late.

With less than four minutes left in the second half, Notre Dame led Syracuse 65-63 with the ball. With the shot clock winding down, Prentiss Hubb – who had three points up to that point – had to get a shot up. Just before the shot clock expired, the senior stepped back behind the line and rainbowed a 3-point shot that would go in to give the Fighting Irish a five-point lead.

From there, Notre Dame outscored the Orange, 11-6, going on to win 79-69 and securing its 20th victory of the season Wednesday night at Purcell Pavilion.

"I thought we played well very well against the zone," Notre Dame head coach Mike Brey said. "We made a lot of good decisions and really believed we were going to win. This group always believes they're going to figure out ways to win.

"We've joked about Hubb wanting to take the big shots, and the worst low-percentage shot in maybe the history of Notre Dame basketball is in the air, and I'm thinking 'this is probably going in.' The guy just has a bunch of good karma around him. He believes, and that's just who he is."

The Fighting Irish (20-8, 13-4 ACC) and Syracuse (15-13, 9-8 ACC) went pound-for-pound throughout the first half.

Against the Orange's 2-3 zone, the Irish looked comfortable. Notre Dame maneuvered well offensively through the Syracuse defense, especially down low with graduate senior Paul Atkinson Jr. The Yale transfer had 14 points and 11 rebounds in the first half alone. That effort helped the Irish outrebound the Orange, 23-10, in the first half.

"The coaches just told me beforehand that against this zone, there will be a good chance for a lot of offensive rebounds," Atkinson said. "We took a lot of good shots [Wednesday] night, and I was just trying to get the ones we missed. I just felt really comfortable against the zone all night. We practiced all week against it in preparation. It was a little different than Syracuse, but it was still good preparation."

Combined with Atkinson's performance in the first half, senior Nate Laszewski scored nine, freshman Blake Wesley and Cormac Ryan each had six, and the Irish held a 42-38 lead at halftime over Syracuse.

Syracuse led 47-45 with 16:42 to go. Over the next four and-a-half minutes, Notre Dame went on a 13-0 run that featured seven points from Ryan and two three-point baskets from Laszewski. That blitz put the Irish ahead 58-47 with 12:15 to go.

Notre Dame upped its lead to 12 after a layup from Atkinson made it 60-48 with 11 minutes to play.

Over the next seven minutes, Syracuse chipped away to cut the lead to 65-63.

Syracuse played strong defense on the following possession, but Hubb's very difficult shot went in, and from there, the Orange didn't play with the same energy down the stretch.

Atkinson had the most impressive numbers on the night for Notre Dame, dropping in 20 points and 17 rebounds on Wednesday night. Laszewski scored 17 points, Ryan added 16 points and Wesley finished with 13.

— Evan Lepak, CNHI Sports Indiana

N. IOWA 88, ISU 82

AJ Green had 21 points as Northern Iowa topped Indiana State 88-82.

Noah Carter had 19 points for Northern Iowa (17-10, 13-4 Missouri Valley Conference).

Cameron Henry had 23 points and seven assists for the Sycamores (11-18, 4-13).

LOYOLA 82, EVANSVILLE 31

Aher Uguak had 13 points as Loyola Chicago romped past Evansville.

Lucas Williamson had 11 points for Loyola Chicago (22-6, 13-4 MVC).

Blake Sisley had nine points for the Purple Aces (6-22, 2-15).

DRAKE 71, VALPO 65

D.J. Wilkins posted 17 points as Drake beat Valparaiso.

ShanQuan Hemphill had 13 points and eight rebounds for Drake (21-9, 12-5 MVC).

Kevion Taylor had 20 points for Valpo (13-16, 6-11).

EPA

EPA Begins Review Of Continental Steel Corp. Superfund Site

Kokomo, Indiana

U.S. Environmental Protection Agency is conducting a five-year review of the Continental Steel Corp. Superfund Site in Kokomo, Indiana. The 183-acre Continental Steel Corp. Superfund site is located along W. Markland Avenue, in Kokomo, Indiana. 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 fifth five-year review of this site.

From 1914 to 1986, the Continental Steel Corp. facility produced nails, wire and wire fence from scrap steel on site. Manufacturing operations included the use, handling, storage and disposal of hazardous materials. Steel-making operations included reheating, casting, rolling, drawing, pickling, galvanizing, tinning and tempering. Facility operations resulted in contaminated soil, sediments, surface water and groundwater with volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs) and several metals, including lead. Sampling also detected lead contamination in some nearby residential soils. Cleanup finished in 2011. Groundwater treatment and monitoring is ongoing.

More information is available at the Kokomo Public Library, 220 N. Union St., Kokomo, IN., and at www.epa.gov/superfund/continental-steel. The current five-year review is expected to be completed on August 17, 2022.

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

Janet Pope
Community Involvement Coordinator
312-353-0628
pope.janet@epa.gov

Nabil Fayoumi
Remedial Project Manager
312-886-6840
fayoumi.nabil@epa.gov

You may call Region 5 toll-free at 800-621-8431, 9:30 a.m. to 5:30 p.m., weekdays.