



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 W. JACKSON BLVD
CHICAGO, IL 60604

US EPA RECORDS CENTER REGION 5



475535

MEMORANDUM

SUBJECT: ACTION MEMORANDUM – Determination of Threat to Public Health and the Environment and Selection of Time-Critical Removal Actions at the Dixon Road Site, Kokomo, Howard County, Indiana (Site ID # C5M5)

FROM: Shelly Lam, On-Scene Coordinator
Emergency Response Branch 1/Response Section 1

THRU: Jason H. El-Zein, Chief
Emergency Response Branch 1

TO: Richard C. Karl, Director
Superfund Division

I. PURPOSE

This memorandum documents the determination of an imminent and substantial threat to public health, welfare, and the environment posed by the presence of uncontrolled hazardous substances, and requests and documents your approval of the time-critical removal actions to be performed at the Dixon Road Site (the Site) in Kokomo, Howard County, Indiana. The actions proposed herein are necessary in order to mitigate threats to public health, welfare, and the environment posed by the presence of uncontrolled hazardous substances at the site. Hazardous substances, including arsenic, cadmium, lead, hexavalent chromium, mercury, and polychlorinated biphenyls (PCBs), have been documented at the Site.

The time-critical removal actions proposed herein will mitigate the threats by establishing site security; conducting a comprehensive site assessment and engineering evaluation to determine the extent of buried drums and contamination in soil and potential removal options to control, contain, and/or remove drums, waste, and contaminated soil; implementing the selected control and/or removal action as approved by the U.S. Environmental Protection Agency (EPA); transporting and disposing hazardous substances, pollutants and contaminants off-site; taking any other response actions to address any release or threatened release of a hazardous substance, pollutant or contaminant that the EPA On-Scene Coordinator (OSC) determines may pose an imminent and substantial endangerment to the public health or the environment.

These response actions will be conducted in accordance with Section 104(a)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S. Code (U.S.C.) § 9604(a)(1), and 40 C.F.R. § 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) to abate or eliminate the immediate threats posed to public health and/or the environment. The uncontrolled conditions of the hazardous substances present at the Site require that this action be classified as a time-critical removal action.

There are no nationally significant or precedent setting issues associated with the Site. This Site is not listed on the National Priorities List (NPL).

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: INN000510728
RCRA ID: Pending
Category: Time-Critical Removal Action

The Dixon Road Site occupies 10.08 acres on two parcels - 9.76 acres at 1114 South Dixon Road (Parcel No. 34-09-02-101-009.000-002) and 0.32 acre at 1110 ½ -1112 South Dixon Road (Parcel No. 34-09-02-101-004.000-002). The Vernon L. Graves Revocable Living Trust has owned the property since 2007, when it was conveyed to the Trust by Vernon L. and Shirley F. Graves. In 1976, Edward and Melba C. Graves conveyed the property to Vernon and Shirley Graves. Edward and Melba Graves, the parents of Vernon L. Graves, acquired the Site property in 1951, along with the adjacent Kokomo Dump Site property, located to the South, which they conveyed to the City of Kokomo (the City) in 1963.

The Dixon Road Site lies adjacent to the Kokomo Dump Site (Site ID C564), which is still owned by the City of Kokomo (the City) (Photo 1 and Figures 1 and 2). The City operated an incinerator and municipal landfill at the Kokomo Dump Site from approximately 1963 to the 1970s. EPA documented the presence of drums and hazardous substances, pollutants, and contaminants at the Kokomo Dump Site (Administrative Record [AR] #9). A list of Howard County dumps provided by the Indiana Department of Environmental Management (IDEM) indicates that residue from the City's incinerator went to the "Graves Dump," which is the Dixon Road Site (AR #1). Vernon L. Graves, the trustee of the Vernon L. Graves Revocable Living Trust that currently owns the Site property, has also stated that the City disposed of ash from their incinerator at the Dixon Road Site.

Edward and Melba Graves operated a dump at the Site in the 1950s. Neighboring landowners sued Edward and Melba Graves over their dumping operations in 1958 and obtained an injunction in 1959. On May 12, 1958 Edward and Melba Graves had entered an Option and Agreement for Dumping Trash and Refuse that gave the City the option of dumping trash and refuse on their property at the southeast corner of Dixon Road and the extension of Markland Avenue for a period of 5 years. Vernon L. Graves, son of Edward and Melba Graves, was the president of Graves Westside Auto Parts, Inc., which operated at the Site between 1961 and at least 1977. A 1982 article in the Kokomo Tribune says that Westside Auto Parts held the City's towing contract. Other operators at the Site may have included the dissolved Dillon's Westside Auto & Wrecker, Inc., whose officers had entered into a contract for Sale of Real Estate for the

Site and another property with Vernon and Shirley Graves in 1986 and quitclaimed it back to them in 1998; the dissolved First Choice Auto Repair; Sutton's Towing and Repair, Inc., which filed for bankruptcy in 2011; Johnson's Towing and Recycling, whose operations were damaged by a fire in 2003; and Going Green Recycling, which began operating a metal recycling facility at the Site in 2011. As of April 2014, the Site was vacant.

A. Site Description

1. Removal Site Evaluation

IDEM discovered drums at the neighboring Kokomo Dump Site in April 2011 during an oil spill at the nearby Haynes International property. IDEM documented that drums and waste piles extended onto the property to the north (the Dixon Road Site). Drums were exposed on the banks of Wildcat Creek (Photo 2) on the Dixon Road Site. The drums were in poor condition. Waste extended down the creek banks. IDEM requested assistance from EPA with both properties.

EPA, IDEM, and the Superfund Technical Assessment and Response Team (START) contractor conducted a Site Assessment at the Dixon Road Site on December 3, 2012. During the assessment, EPA documented numerous drums and waste piles (Photos 3-7). The Site is on the south bank of Wildcat Creek and waste extended down the creek bank (Photo 8). Site assessment activities included sampling surface soil, subsurface soil, waste piles, and buried waste. The Site Assessment Report is posted to the Administrative Record (AR #11). Photographs of sampling activities are attached to this Action Memorandum (Photos 9-10). Sample locations are shown in Figure 3 and analytical results are presented in Tables 1 and 2.

Analytical results were compared to:

- EPA's June 2014 Removal Management Levels (RML) for industrial soil;
- IDEM's 2014 commercial/industrial direct contact soil exposure levels. IDEM identified their Remediation Closure Guide, including the exposure levels therein, as an applicable or relevant and appropriate requirement (ARAR) (see Section V.A.4); and
- Regulatory levels for toxicity established in regulations promulgated under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901-6992, at 40 CFR § 261.24. A solid waste that exhibits the characteristic of toxicity at 40 CFR § 261.24 is a hazardous waste under RCRA.

Surface Soil Results

During the assessment, EPA collected nine surface soil samples for total and Toxicity Characteristic Leaching Procedure (TCLP) metals, pesticides, and PCBs analysis. The bullets below summarize surface soil and surface waste pile sample results above screening levels.

- Aroclors 1248 and 1254, both PCBs, were detected in all surface soil samples. Concentrations ranged from 0.099 milligrams per kilogram (mg/kg) to 19 mg/kg. In three samples, the concentrations of both Aroclors exceeded the IDEM screening level of 7.4 mg/kg.

- Total lead concentrations exceeded the RML and IDEM screening level of 800 mg/kg in all nine surface soil samples. Concentrations ranged from 1,400 to 32,000 mg/kg.
- Mercury exceeded the IDEM screening level of 3.1 mg/kg in one sample, at a concentration of 13 mg/kg.
- Hexavalent chromium (chromium VI) exceeded the RML of 630 mg/kg and IDEM screening level of 56 mg/kg in one sample, at a concentration of 1,100 mg/kg.
- Three surface soil samples exceeded the 40 CFR § 261.24 TCLP level for lead of 5 milligrams per liter (mg/L), at concentrations ranging from 5.4 to 19 mg/L.
- One surface soil sample exceeded the 40 CFR § 261.24 TCLP level for cadmium of 1 mg/L, at a concentration of 2.3 mg/L.

Subsurface Soil Results

EPA advanced soil borings in subsurface soil and buried waste to a minimum depth of four feet below ground surface (bgs), with approximately every third boring extended to a depth of 12 feet bgs to assess the depth of waste. EPA collected 11 subsurface samples for total and TCLP metals, total and TCLP semi-volatile organic compounds (SVOC), pesticides, and PCBs. Subsurface soil and buried waste sample results above screening levels are summarized below.

- Six samples contained Aroclor 1248 above IDEM's screening level of 7.4 mg/kg, at depths up to 12 feet bgs. Aroclor 1248 was detected at a maximum concentration of 95 mg/kg.
- Aroclor 1254 exceeded IDEM's screening level of 7.4 mg/kg in five samples, at concentrations ranging from 9.1 to 28 mg/kg at depths ranging from 1-8 feet bgs.
- Arsenic exceeded IDEM's screening level of 24 mg/kg in two samples, at concentrations of 25 and 27 mg/kg.
- Lead exceeded the RML and IDEM screening level of 800 mg/kg in all samples at a maximum concentration of 2,500 mg/kg at a depth from 1-4 feet. Concentrations ranged from 910 to 2,500 mg/kg and lead was detected above the RML at a maximum depth of 12 feet bgs.
- Mercury was above IDEM's screening level of 3.1 mg/kg in one sample, at a concentration of 4.2 mg/kg at a depth from 4-8 feet bgs.
- Cadmium was above the 40 CFR § 261.24 TCLP limit of 1 mg/L in one sample, at a concentration of 2.2 mg/L at a depth of 1-4 feet bgs.

The nature and type of contamination at the Dixon Road Site was similar to that found at the Kokomo Dump Site. At the Kokomo Dump Site, EPA documented drums and waste piles, and identified lead, arsenic, and Aroclors 1248 and 1254 above screening levels (AR #9). The Site Assessment results from the Dixon Road Site and historical documentation indicate that the Kokomo Dump Site is a likely contributor to contamination at the Dixon Road Site.

2. Physical location

The Dixon Road Site is located at 1110-1/2 to 1112 and 1114 S. Dixon Road in Kokomo, Howard County, Indiana, 46901. The Site is in an area that is residential, commercial, and industrial. It is bounded by Wildcat Creek to the north, Haynes International and a railroad to the east, the Kokomo Dump Site to the south, and residential properties and Dixon Road to the west. The geographical coordinates for the Site are 40.474473° north latitude and 86.162617° west longitude.

EPA conducted an Environmental Justice (EJ) analysis for the Site. Screening of the surrounding area used Region 5's EJ Screen Tool, which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT). Region 5 has reviewed environmental and demographic data for the area surrounding the Site, and determined there is a low potential for EJ concerns at this location.

3. Site characteristics

The Site is 10.08 acres in size, and contains three buildings. As of April 2014, the Site was vacant. Prior to that, the facility was operated as a dump, auto salvage yard, towing yard, and metal recycling facility.

The proposed time-critical removal will be the first removal action at the Site by EPA. Based on the OSC's observations in April 2014, it appears that someone had removed drums and possibly surface waste since the Site Assessment. However, based on available information, no one has conducted efforts to characterize, delineate, monitor, or control hazardous substances, pollutants, or contaminants. IDEM indicated that this site is not enrolled in any state cleanup programs.

4. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant

A release or threat of release of hazardous substances, pollutants, or contaminants is present at the Site. EPA confirmed the presence of hazardous substances as defined by Section 101(14) of CERCLA including arsenic, lead, mercury, cadmium, hexavalent chromium, and PCBs. The Site Assessment Report documenting these findings is part of the Administrative Record (AR #11).

Hazardous substances are present in waste piles, surface and subsurface soil, and buried waste. Release mechanisms from these sources include fugitive dust generation from surface soil or waste piles to air; contaminated surface soil or waste pile runoff and overland flow to Wildcat Creek; leaching of surface and buried waste to deeper soils, groundwater, or Wildcat Creek; and tracking of contaminated surface soil or waste. Possible exposure routes for hazardous substances include dermal contact with contaminated soil or waste piles; inhalation or accidental ingestion of fugitive dust; and direct contact with potentially-impacted surface water or sediment in Wildcat Creek. Potential human receptors include site workers, site visitors, trespassers at the Site, recreational users of Wildcat Creek, and nearby residents.

5. NPL status

This site is not on the NPL. The Site has not been proposed for the NPL and has not received a Hazard Ranking Score (HRS). The OSC does not know if IDEM will refer the Site to the NPL site assessment program.

6. Maps, pictures and other graphic representations

The following figures are attached to this memorandum.

- Figure 1 Site Location Map
- Figure 2 Site Features Map
- Figure 3 Sample Location Map, and
- Photographs

B. Other Actions to Date

1. Previous actions

No previous actions have been conducted.

2. Current actions

No actions are currently being conducted at the Site.

C. State and Local Authorities' Roles

IDEM requested assistance from EPA because IDEM does not have the resources to mitigate the threat of release. On April 6, 2011, IDEM requested assistance from EPA with the Site and the adjacent Kokomo Dump Site. By email dated December 28, 2012, IDEM requested further assistance at the Dixon Road Site (AR #10).

III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions present at the Dixon Road Site present an imminent and substantial threat to the public health, or welfare, and the environment based upon the factors set forth in NCP § 300.415(b)(2). These factors include, but are not limited to, the following:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

As detailed in the Removal Site Evaluation section, the Site Assessment documented that hazardous substances were present in waste piles, surface soil, subsurface soil, and buried waste. As recently as 2013, the facility was operated as a metal recycling center, and was open to the public. Additionally, the facility was not fenced completely along the southern, western, and

northern property boundaries, potentially allowing access to trespassers. The OSC observed that waste extended down the banks to Wildcat Creek (Photos 2 and 8). Hazardous substances identified include arsenic, cadmium, hexavalent chromium, lead, mercury, and PCBs.

Release mechanisms from these sources include fugitive dust generation from surface soil or waste piles to air; contaminated surface soil or waste pile runoff and overland flow to Wildcat Creek; leaching of surface and buried waste to deeper soils, groundwater, or Wildcat Creek; and tracking of contaminated surface soil or waste. Possible exposure routes for hazardous substances include dermal contact with contaminated soil or waste piles; inhalation or accidental ingestion of fugitive dust; and direct contact with potentially impacted surface water or sediment in Wildcat Creek. Potential human receptors include current and future site workers, site visitors, trespassers at the Site, recreational users of Wildcat Creek, and nearby residents. The closest residence is located at the western part of the Site, near Dixon Road.

The Agency for Toxic Substances and Disease Registry (ATSDR) has studied the health effects of these hazardous substances, and information about each is provided below.

Arsenic: Ingesting very high levels of arsenic can result in death. Exposure to lower levels can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of “pins and needles” in hands and feet. Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the appearance of small “corns” or “warts” on the palms, soles, and torso. Skin contact with inorganic arsenic may cause redness and swelling. Several studies have shown that ingestion of inorganic arsenic can increase the risk of skin cancer and cancer in the liver, bladder, and lungs. Inhalation of inorganic arsenic can cause increased risk of lung cancer. The Department of Health and Human Services (DHHS) and the EPA have determined that inorganic arsenic is a known human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic arsenic is carcinogenic to humans (AR #5).

Cadmium: Breathing high levels of cadmium can severely damage the lungs. Eating food or drinking water with very high levels severely irritates the stomach, leading to vomiting and diarrhea. Long-term exposure to lower levels of cadmium in air, food, or water leads to a buildup of cadmium in the kidneys and possible kidney disease. Other long-term effects are lung damage and fragile bones. DHHS has determined that cadmium and cadmium compounds are known human carcinogens (AR #6).

Chromium: Breathing high levels of chromium (VI), or hexavalent chromium, can cause irritation to the lining of the nose, nose ulcers, runny nose, and breathing problems, such as asthma, cough, shortness of breath, or wheezing. The concentrations of chromium in air that can cause these effects may be different for different types of chromium compounds, with effects occurring at much lower concentrations for chromium (VI) compared to chromium (III). The main health problems seen in animals following ingestion of chromium (VI) compounds are irritation and ulcers in the stomach and small intestine and anemia. Sperm damage and damage to the male reproductive system have also been seen in laboratory animals exposed to chromium (VI). Skin contact with certain chromium (VI) compounds can cause skin ulcers. Some people are extremely sensitive to chromium (VI) or chromium (III). Allergic reactions consisting of

severe redness and swelling of the skin have been noted. DHHS, the IARC, and EPA have determined that chromium (VI) compounds are known human carcinogens (AR #7).

Lead: Lead can affect almost every organ and system in the body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high levels of exposure to lead may cause miscarriage. High-level exposure in men can damage the organs responsible for sperm production. DHHS has determined that lead and lead compounds are reasonably anticipated to be human carcinogens and the EPA has determined that lead is a probable human carcinogen (AR #4).

Mercury: The nervous system is very sensitive to all forms of mercury. Methyl mercury and metallic mercury vapors are more harmful than other forms, because more mercury in these forms reaches the brain. Exposure to high levels of metallic, inorganic, or organic mercury can permanently damage the brain, kidneys, and developing fetus. Effects on brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory problems. The EPA has determined that mercuric chloride and methyl mercury are possible human carcinogens (AR #3).

PCBs: The most commonly observed health effects in people exposed to large amounts of PCBs are skin conditions such as acne and rashes. Studies in exposed workers have shown changes in blood and urine that may indicate liver damage. A few studies of workers indicate that PCBs are associated with certain kinds of cancer in humans, such as cancer of the liver and biliary tract. Rats that ate food containing high levels of PCBs for two years developed liver cancer. DHHS has concluded that PCBs may reasonably be anticipated to be carcinogens. The EPA and the IARC have determined that PCBs are probably carcinogenic to humans (AR #2).

Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release;

EPA documented numerous drums and other containers at the Site (see photos). Drums were exposed in the bank of Wildcat Creek and lying on the ground surface. Drum contents pose a threat of release.

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate;

Site assessment results indicated high levels of hazardous substance in surface soil, as high as 32,000 mg/kg for lead and 1,100 mg/kg for hexavalent chromium. Leachable concentrations of both lead and cadmium were detected in surface soils. Additionally, sample results from subsurface soils showed that arsenic, lead, cadmium, and PCBs have migrated to deeper soils.

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;

Weather conditions could cause hazardous substances to migrate or be released. High winds could cause dispersion of surface soils or waste. Additionally, heavy rains could cause runoff or overland flow of soil or waste to Wildcat Creek, thereby causing migration through surface water and sediment.

The availability of other appropriate federal or State response mechanisms to respond to the release;

On December 28, 2012, IDEM requested assistance from EPA (AR #10). IDEM does not have the resources to mitigate the threat of release.

IV. ENDANGERMENT DETERMINATION

Given the site conditions, the nature of the known and suspected hazardous substances on site, and the potential exposure pathways described in Sections II and III, actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

Analytical data documented that soil results exceeded relevant screening or regulatory levels. These conditions document the need for a time-critical removal action.

V. PROPOSED ACTIONS

A. Proposed Actions

1. Proposed action description

The following response actions are required to mitigate threats posed by the presence of hazardous substances at the Dixon Road Site:

1. Develop and implement site plans including a site-specific Quality Assurance Project Plan (QAPP), Health and Safety Plan, an Emergency Contingency Plan, and a Work Plan, including an Air Monitoring Plan;
2. Establish site security;
3. Conduct a comprehensive site assessment and engineering evaluation to determine the extent of buried drums and contamination in soil; evaluate potential removal options to control, contain, and/or remove drums, waste, and contaminated soil.
4. Implement the selected control and/or removal action as approved by EPA.

5. Consolidate and package hazardous substances, pollutants and contaminants for transportation and off-site disposal in accordance with the EPA Off-Site Rule at 40 C.F.R. § 300.440.

The removal actions will be conducted in a manner not inconsistent with the NCP. The OSC has begun planning for provision of post-removal site control, consistent with the provisions of 40 C.F.R. § 300.415(l).

The threats posed by uncontrolled substances considered hazardous meet the criteria listed in 40 C.F.R. § 300.415(b)(2), and the response actions proposed herein are consistent with any long-term remedial actions which may be required. Elimination of hazardous substances, pollutants and contaminants that pose a substantial threat of release is expected to minimize substantial requirements for post-removal site controls.

2. Contribution to remedial performance

The proposed action should not impede future actions based on available information.

3. Engineering Evaluation/Cost Analysis (EE/CA)

Not Applicable

4. Applicable or relevant and appropriate requirements

The OSC sent a letter on March 28, 2013, to Rex Osborn at IDEM requesting the identification of any applicable state ARARs (AR #12). IDEM identified the following ARARs (AR #13).

Action Specific

1. Pursuant to Indiana Administrative Code (IAC) tit. 326 r. 6-4-2(4), visible fugitive dust must not cross an adjacent property line.
2. Pursuant to IAC tit. 326 r. 6-4-4, any vehicle driven on any public right of way must not allow its contents to escape and form fugitive dust.
3. IAC tit. 327 r. 2-11-1 through 2-11-9 maintains and protects the quality of Indiana's groundwater. For example, no person shall cause the groundwater in a drinking water supply wells (IAC tit. 327 r. 2-11-2(e)) or nondrinking water supply well (IAC tit. 327 r. 2-11-2(f)) to have contaminant concentration that renders the well unusable for its current use.
4. Pursuant to IAC tit. 327 r. 5-2-2, any discharge of pollutants into water of the State as a point of source discharge during the removal action would require a National Pollutant Discharge Elimination System (NPDES) permit. However, this is a U.S. EPA removal action, and as pursuant to IAC tit. 327 r. 5-2-4(5), discharges of pollutants in compliance with the instruction of a U.S. EPA OSC will not require a NPDES permit. Moreover,

pursuant to Section 121(e)(1) of CERCLA, 42 U.S.C. § 9621(e)(1), no federal, state or local permit is required for that portion of any removal action conducted entirely on-site. The substantive requirements of a permit, however, will still need to be met.

Chemical Specific

5. IAC tit. 329 r. 3.1 regulates the management of hazardous wastes. Indiana rule IAC tit. 329 r. 3.1-1-1 adopts RCRA regulations of 40 CFR 260 through 40 CFR 270. More specifically:
 - a. 40 CFR § 262.11 requires that a proper hazardous waste determination must be made on all wastes generated from removal actions including substances in containers, drums, pits, waste piles, and tanks along with any decontamination washes or rinsates.
 - b. 40 CFR § 262.12 requires a generator not treat, store, dispose of, or offer for transportation, hazardous waste without receiving a U.S. EPA identification number. A generator must not offer his hazardous waste to transporters or treatment, storage, or disposal facilities that have not received a U.S. EPA identification number.
 - c. 40 CFR § 261, Subpart B requires that all hazardous waste must be properly packaged, with labels, marking and placards prior to transport (see also 40 CFR §§ 262.30 - packaging, 262.31 - labeling, 262.32 - marking, and 263.33 - placarding).
 - d. 40 CFR Part 261, Subpart B requires that hazardous waste must be manifested as such for transport to a permitted treatment, storage, and disposal facility (TSDF).
 - e. For all hazardous waste related equipment, structures, and pads, remove or decontaminate all hazardous waste residues, contaminated containment components, contaminated soils, and structures and equipment contaminated with waste and manage them as hazardous waste unless 40 CFR § 261.3(d) applies
 - f. 40 CFR § 262.34 requires that hazardous waste containers shall not be accumulated on-site for greater than 90 days without a hazardous waste permit for storage. As indicated above, however, a permit is not required for activities conducted on-site.
 - g. Excavated contaminated soils must not be placed back on the ground so as to create a waste pile as defined in 40 CFR Part 264, Subpart L.
 - h. 40 CFR § 265.17 includes general requirements for ignitable, reactive, or incompatible wastes.

- i. Hazardous waste in containers shall be managed in accordance with the standards of 40 CFR Part 263, Subpart I.
 - j. 40 CFR Part 268 identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances under which an otherwise prohibited waste may continue to be land disposed.
6. IAC tit. 329 art. 3.1 establishes standards for identifying hazardous waste as well as standards for hazardous waste management procedures for generators, transporters, and owners or operators of hazardous waste facilities.
 7. IAC tit. 329 art. 10 regulates the management of solid wastes. IAC tit. 329 r. 10-7.2-1 requires all waste to undergo a waste determination, and if found to be nonhazardous, be disposed of in a permitted solid waste disposal facility.

Location Specific

8. If there is soil excavation or other work within the floodway of a stream/creek, then Indiana Code (IC) § 14-28-1 applies. Approval is needed by Indiana Department of Natural Resources (IDNR) for any construction, excavation or filling in or on floodways.
9. If there is soil excavation or other work along a public freshwater lake, then IC § 14-26-2 applies. Approval is needed by IDNR for any construction, excavation, or filling in along a public freshwater lake.

To Be Considered (TBC)

10. The IDEM Remediation Closure Guide (RCG) is a Nonrule Policy Document (NPD) that provides guidance for the investigation, remedy selection, and closure of contaminated sites. As an NPD, the IDEM RCG does not have the effect of law. If a conflict exists between the RCG and state or federal rules and statutes, the rules and statutes will prevail.

The OSC determined ARARs identified by IDEM may apply to the Site, with the following exceptions:

- ARAR #5: 40 CFR Part 270 applies to permitting requirements, such as application requirements, standard permit conditions, and monitoring and reporting requirements, at operating landfills. The Site is not an operating landfill. However, the substantive requirements of 40 CFR Part 270 may apply if waste is generated and stored for more than 90 days; if waste is treated in a containers other than a tank; or if waste is treated and placed back in the ground. As mentioned above, no federal, state or local permit is required for that portion of any removal action conducted entirely on-site.
- ARAR #9: No excavations will be conducted along a public freshwater lake.

The OSC also identified the following ARARs:

1. Hazardous substances, pollutants or contaminants removed off-site pursuant to this emergency response action for treatment, storage and disposal shall be treated, stored, or disposed at a facility in compliance, as determined by EPA, with the EPA Off-Site Rule, 40 C.F.R. § 300.440.
2. 49 U.S.C. § 5101 et seq. regulates the transportation of hazardous waste and hazardous substances by aircraft, railcars, vessels, and motor vehicles to or from a site.
3. The regulations promulgated under the Toxic Substances Control Act, 15 U.S.C. §§ 2601-2697, at 40 CFR Part 761, regulate the storage, incineration, and landfilling of PCBs.
4. The regulations promulgated under the Fish and Wildlife Coordination Act, 16 U.S.C. §§ 661 – 667e, at 40 CFR § 6.302 and 40 CFR Part 6, Appendix A, regulate the protection of floodplains. Removal actions must avoid adverse effects, minimize potential harm, restore and preserve natural and beneficial values of floodplains.
5. If a cap is placed over waste, 40 CFR § 264.288(a) (Surface Impoundments), 40 CFR § 264.258(b) (Waste Piles), or 40 CFR § 264.310(a) (Landfills) may apply. Placement of a cap over waste (e.g., closing a landfill, or closing a surface impoundment or waste pile as a landfill, or similar action) requires a cover designed and constructed to:
 - a. Provide long-term minimization of migration of liquids through the capped area;
 - b. Function with minimum maintenance;
 - c. Promote drainage and minimize erosion or abrasion of the cover;
 - d. Accommodate settling and subsidence so that the cover's integrity is maintained; and
 - e. Have a permeability less than or equal to the permeability of any bottom liner system or natural sub-soils present.
6. If any containers are found in surface waste piles or buried in the subsurface, the following may apply to container storage:
 - a. Containers of RCRA hazardous waste must be maintained in good condition; compatible with hazardous waste to be stored; and closed during storage (except to add or remove waste) (40 CFR §§ 264.171-172);
 - b. Containers must be placed on a sloped, crack-free base, and protect from contact with accumulated liquid. Provide containment system with a capacity of 10 percent of the volume of containers of free liquids. Remove spilled or leaked waste in a timely manner to prevent overflow of the containment system (40 CFR § 264.175);
 - c. Containers of ignitable or reactive waste must be kept at least 50 feet from the facility's property line (40 CFR § 264.176);
 - d. Incompatible materials must be kept separate. Incompatible materials stored near each other must be separated by a dike or other barrier (40 CFR § 264.177);

- e. At closure, all hazardous waste and residue from the containment system must be removed, and all containers or liners must be decontaminated or removed (40 CFR § 264.178).

Pursuant to 40 CFR § 300.415(j), removal actions shall, to the extent practicable considering the exigencies of the situation, attain ARARs. Pursuant to Section 121(e)(1) of CERCLA, 42 U.S.C. § 9621(e)(1), no federal, state or local permit is required for that portion of any removal action conducted entirely on-site.

The response actions described in this memorandum directly address the actual or threatened release of hazardous substances, pollutants, or contaminants at the Site which may pose an imminent and substantial endangerment to public health or welfare or to the environment. These response actions do not impose a burden on affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Given the site conditions, the nature of the hazardous substances documented on-site, and the potential exposure pathways to nearby populations described in Sections II and III above, actual or threatened release of hazardous substances from the Site, if not addressed by implementing the time-critical actions described in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment. Delayed or no action concerning the remaining hazardous substances, pollutants and contaminants at the Site will result in increased potential of the toxic and hazardous substances to release, thereby threatening the environment and the health and welfare of nearby residents and other persons who are in proximity to the Site.

VII. OUTSTANDING POLICY ISSUES

None.

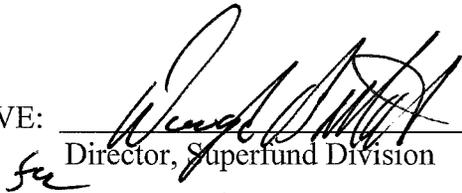
VIII. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this site is contained in the Confidential Enforcement Addendum.

IX. RECOMMENDATION

This decision document represents the selected removal actions for the Dixon Road Site located in Kokomo, Howard County, Indiana. This document has been developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Site (see Attachment II).

Conditions at the Site meet the NCP criteria at 40 C.F.R. § 300.415(b)(2) for time-critical removal actions. The PRPs are expected to perform the time-critical removal action. I recommend your approval of the proposed removal action. You may indicate your decision by signing below.

APPROVE:  DATE: 10/10/2014
Director, Superfund Division

DISAPPROVE: _____ DATE: _____
Director, Superfund Division

Enforcement Addendum

Figures:

- 1 Site Location Map
- 2 Site Features Map
- 3 Soil Boring Locations and Sample Locations Map

Tables:

- 1 Surface Soil Analytical Results
- 2 Subsurface Soil Analytical Results

Attachments:

- I. Site Photo Log
- II. Administrative Record Index

cc: Sherry Fielding, U.S. EPA, 5104A
Valencia Darby, U.S. DOI, **w/o Enf. Addendum**
Rex Osborn, IDEM **w/o Enf. Addendum**

BCC PAGE HAS BEEN REDACTED

**NOT RELEVANT TO SELECTION
OF REMOVAL ACTION**

ENFORCEMENT ADDENDUM

HAS BEEN REDACTED – NINE PAGES

ENFORCEMENT CONFIDENTIAL

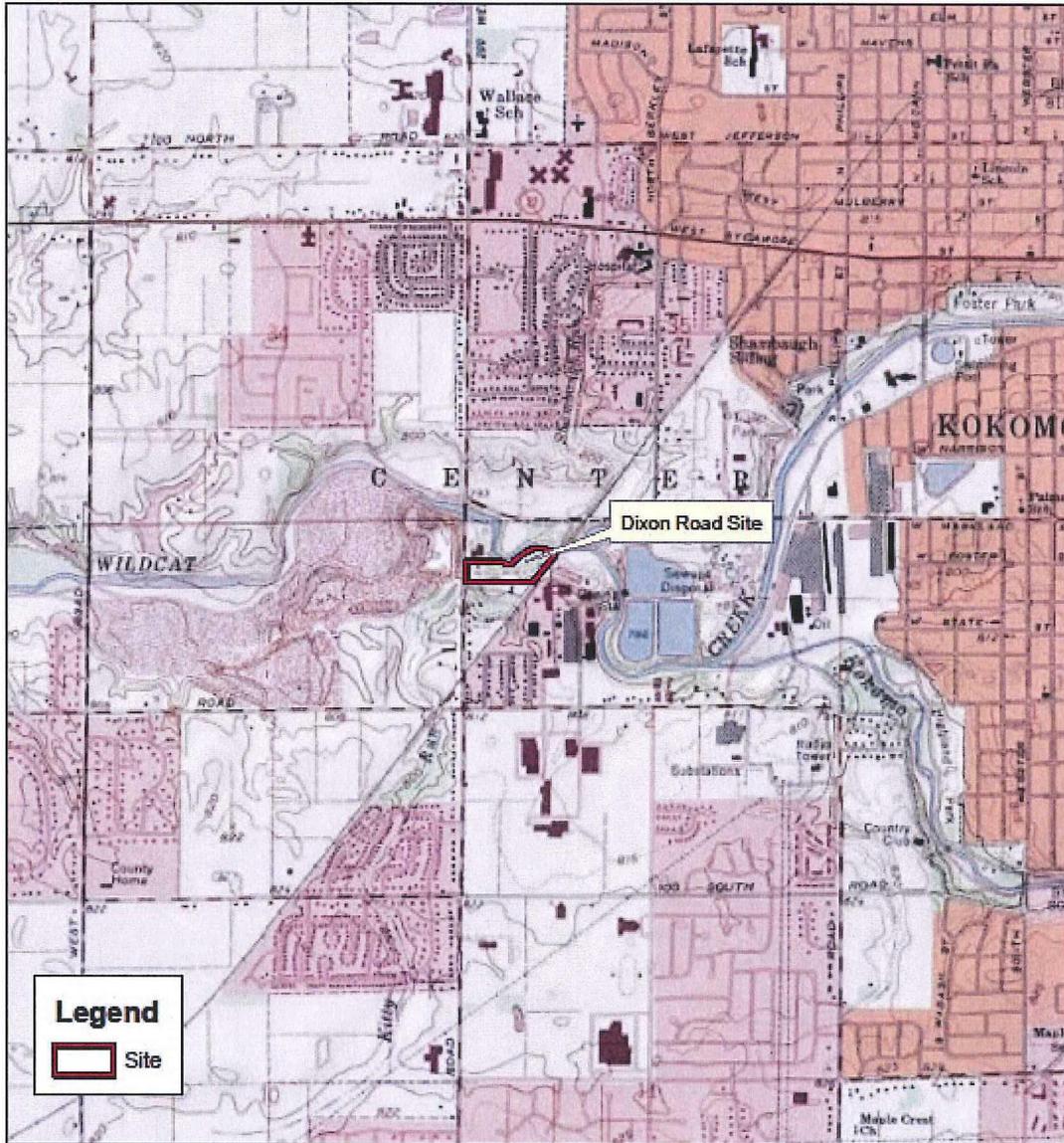
NOT SUBJECT TO DISCOVERY

FOIA EXEMPT

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION

FIGURE 1
SITE LOCATION MAP



**FIGURE 1
SITE LOCATION MAP
DIXON ROAD SITE
1114 S. DIXON ROAD
KOKOMO, HOWARD COUNTY, INDIANA**



This map presents land cover imagery for the world and detailed topographic maps for the United States. The map includes the National Park Service (NPS) Natural Earth physical map at 1:34m per pixel for the world at small scales, 1-hubed eTOPO 1:250,000-scale maps for the contiguous United States at medium scales, and National Geographic TOPOI 1:100,000 and 1:24,000-scale maps (1:250,000 and 1:80,000 in Alaska) for the United States at large scales. The TOPOI maps are seamless, scanned images of United States Geological Service (USGS) paper topographic maps.

1:24,000
0 1,000 2,000 Feet

FIGURE 2
SITE FEATURES MAP

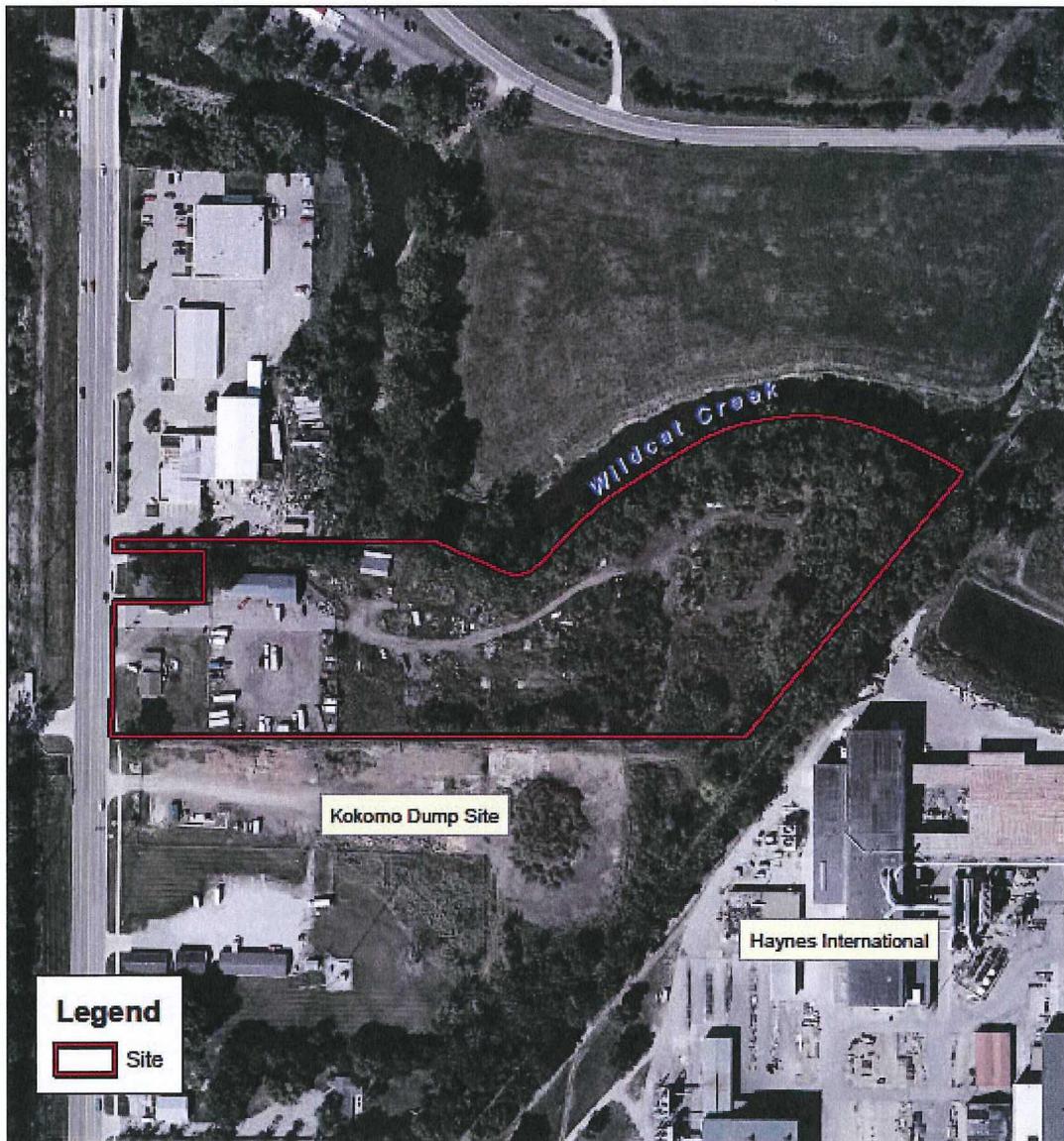


FIGURE 2
SITE LAYOUT MAP
DIXON ROAD SITE
1114 S. DIXON ROAD
KOKOMO, HOWARD COUNTY, INDIANA



(c) 2009 Microsoft Corporation
 and its data suppliers
<http://www.bing.com/maps>
 Samples locations were determined
 using EPA's Visual Sample Plan.

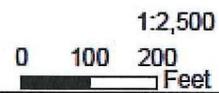
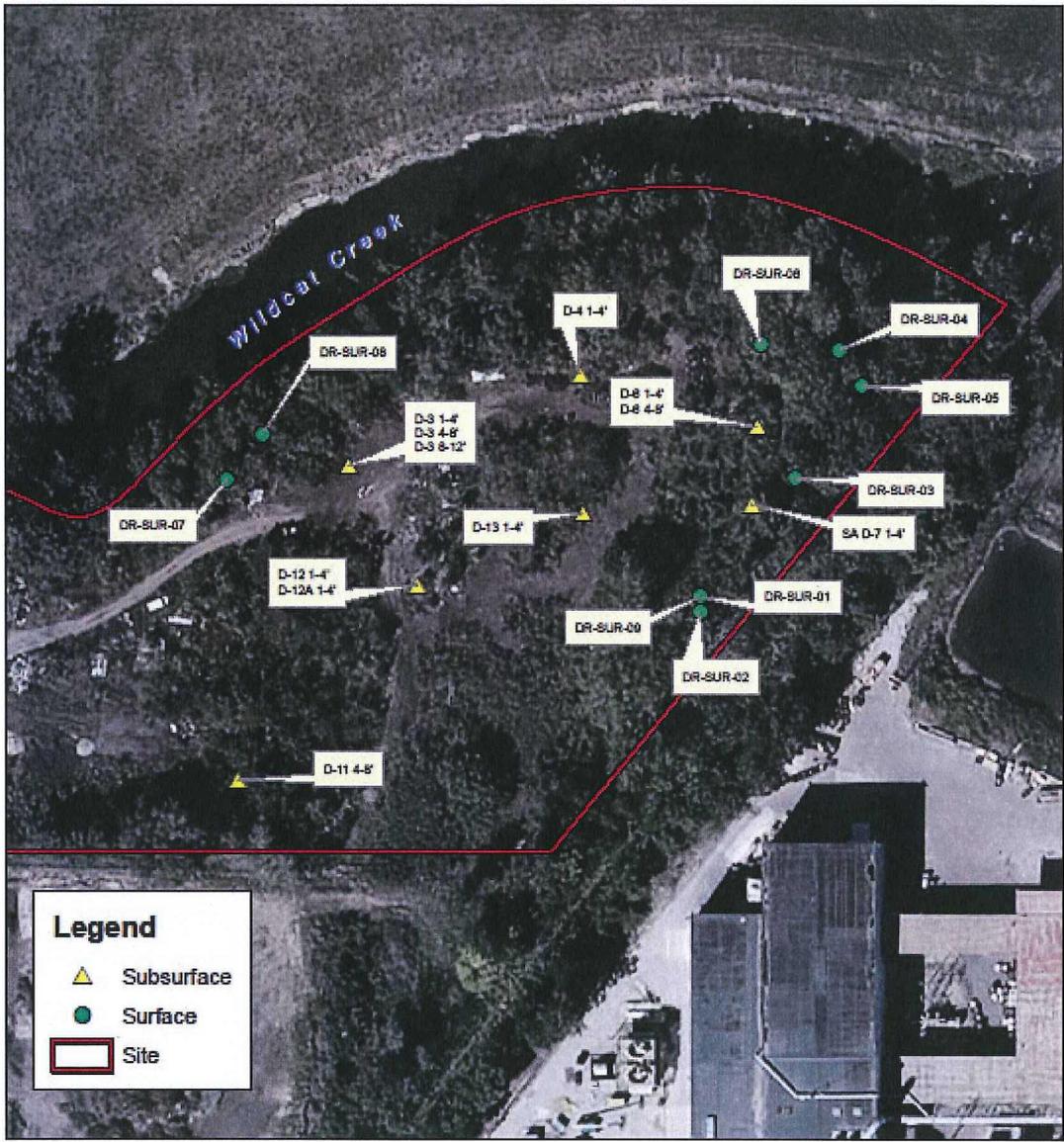


FIGURE 3

SAMPLE LOCATION MAP



Legend

-  Subsurface
-  Surface
-  Site

FIGURE 3
SAMPLE LOCATION MAP
DIXON ROAD SITE
1114 S. DIXON ROAD
KOKOMO, HOWARD COUNTY, INDIANA



(c) 2009 Microsoft Corporation and its data suppliers
<http://www.bing.com/maps>
 Samples locations were determined using EPA's Visual Sample Plan.

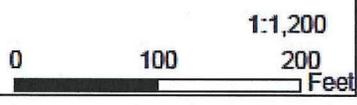


TABLE 1
SURFACE SOIL LABORATORY ANALYTICAL RESULTS
DIXON ROAD SITE

Analyte	EPA Screening Level ¹	IDEM Screening Level ²	Sample ID								
			DR-SUR-01	DR-SUR-02	DR-SUR-03	DR-SUR-04	DR-SUR-05	DR-SUR-06	DR-SUR-07	DR-SUR-08	DR-SUR-09
Polychlorinated Biphenyls (PCB)³ (mg/kg)⁴											
Aroclor 1248	100	7.4	8.6	2.1	2.3	1.6	3.7	5.7	0.22	19	9.7
Aroclor 1254	44	7.4	12	1.9	1.6	0.6	1.5	2.5	0.099	16	15
All other Aroclors			ND ⁵	ND							
Pesticides (ug/kg)⁶											
All Pesticides			ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals - mg/kg											
Arsenic	300	24	14	14	21	23	23	19	1.1	15	21
Barium	650,000	100,000	610	530	650	1,400	1,500	470	16,000	480	730
Cadmium	3,000	800	35	41	26	37	39	36	1.7	260	96
Chromium, total	No value	No value	210	420	160	380	450	210	5,500	370	140
Lead	800	800	2,000	1,400	16,000	3,700	3,500	3,600	32,000	10,000	3,000
Selenium	18,000	5,100	1.5 J ⁷	1.5 J	1.4 J	1.2 J	1.4 J	1.3 J	0.33 J	0.9 J	1.9 J
Silver	18,000	5,100	5.9	6	3.7	7.8	13	7.7	0.4 J	20	9.6
Mercury	120	3.1	0.97	0.81	0.44	0.047	0.087	0.42	13	0.74	0.87
Chromium, Hexavalent	630	56	0.63 U ⁸	0.59 U	0.54 U	0.78	4	0.62 U	1,100	0.62 U	5.6

TABLE 1
SURFACE SOIL LABORATORY ANALYTICAL RESULTS
DIXON ROAD SITE

Analyte	Regulatory Limit ⁹	Sample ID								
		DR-SUR-01	DR-SUR-02	DR-SUR-03	DR-SUR-04	DR-SUR-05	DR-SUR-06	DR-SUR-07	DR-SUR-08	DR-SUR-09
TCLP ¹⁰ Metals - mg/L ¹¹										
Arsenic	5	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Barium	100	0.81	1.2	0.27	1.2	0.41	0.93	1	0.88	0.98
Cadmium	1	0.33	0.15	0.12	0.083	0.13	0.19	0.016	2.3	0.2
Chromium	5	0.0081 J	0.0049 J	0.003 J	0.0051 J	0.035	0.0038 J	0.051	0.0037 J	0.0021 J
Lead	5	0.55	0.39	5.4	3.3	0.69	1.5	19	8	4.5
Selenium	1	0.0046 J	0.02 U	0.0042 J	0.02 U	0.005 J	0.0047	0.0048 J	0.0042 J	0.0062 J
Silver	5	0.00028 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Mercury	0.2	0.00016 J	0.00016 J	0.00014 J	0.00013 J	0.00013 J	0.0001 J	0.00019 J	0.00017 J	0.0012 J

Notes:

1. EPA screening levels from Removal Management Levels for industrial soil (June 2014).
2. IDEM screening levels from IDEM's Remediation Closure Guide for commercial/industrial direct contact soil exposure (2014).
3. PCB - Polychlorinated Biphenyls
4. mg/kg - milligrams per kilogram
5. ND - Not detected
6. ug/kg - micrograms per kilogram
7. J - Estimated value
8. U - Not detected
9. Regulatory limit established in 40 CFR 261.24.
10. TCLP - Toxicity Characteristic Leachate Procedure
11. mg/L - milligrams per liter
12. Shaded values indicate that concentrations exceed EPA screening levels or regulatory limits.
13. Bolded values indicate that concentrations exceed IDEM screening levels.

TABLE 2
SUBSURFACE SOIL LABORATORY ANALYTICAL RESULTS

Analyte	EPA Screening Level ¹	IDEM Screening Level ²	Sample ID/Depth										
			D3 1-4'	D3 4-8'	D3 8-12'	D4 1-4'	D6 1-4'	D6 4-8'	D7 1-4'	D11 4-8'	D12 1-4'	D12A 1-4'	D13 1-4'
Polychlorinated Biphenyls (PCB)³ (mg/kg)⁴													
Aroclor 1248	100	7.4	2.8	93	14	1.2	3.3	1.4	13	1.4	95	43	25
Aroclor 1254	44	7.4	1.2	28	4.1	0.53	1.9	0.59	9.1	1.2	23	12	15
All other Aroclors			ND ⁵	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides (ug/kg)⁶													
All Pesticides			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)													
Arsenic	300	24	21	17	25	22	27	16	21	23	22	23	18
Barium	650,000	100,000	700	460	440	910	600	730	570	270	520	460	640
Cadmium	3,000	800	46	92	23	30	25	23	30	6.6	71	75	34
Chromium	No value	No value	150	230	280	73	140	64	170	56	210	220	170
Lead	800	800	2,500	1,900	970	2,300	1,800	1,500	1,600	910	2,400	1,800	2,100
Selenium	18,000	5,100	1.3 J ⁷	1.2 J	0.9 J	1.3 J	1.6 J	1.2 J	1.3 J	2.1	1.4 J	1.4 J	1.4 J
Silver	18,000	5,100	5.9	27	20	11	8	4	5.7	0.75 J	16	18	6.6
Mercury	120	3.1	0.41	1.6	0.31	0.36	0.27	0.15	0.49	4.2	0.61	0.99	0.8
Chromium, Hexavalent	630	56	0.7 U ⁸	0.61 U	0.65 U	0.6 U	0.6 U	0.61 U	0.6 U	0.55 U	0.58 U	0.58 U	0.63 U
Semivolatile Organic Compounds (SVOC)⁹ (mg/kg)													
Bis(2-ethylhexyl)phthalate	16,000	1,200	NA ¹⁰	4.9 J	NA	NA	NA	NA	NA	1.5 J	NA	NA	NA
Di-n-butyl phthalate	250,000	62,000	NA	0.55 J	NA	NA	NA	NA	NA	0.21 J	NA	NA	NA
Pyrene	68,000	17,000	NA	0.41 J	NA	NA	NA	NA	NA	0.38	NA	NA	NA
2-Methylnaphthalene	9,100	2,200	NA	ND	NA	NA	NA	NA	NA	0.28 J	NA	NA	NA
Benzo(a)anthracene	290	21	NA	ND	NA	NA	NA	NA	NA	0.32 J	NA	NA	NA
Benzo(a)pyrene	29	2.1	NA	ND	NA	NA	NA	NA	NA	0.82	NA	NA	NA
Benzo(b)fluoranthene	290	21	NA	ND	NA	NA	NA	NA	NA	0.51	NA	NA	NA

**TABLE 2
SUBSURFACE SOIL LABORATORY ANALYTICAL RESULTS**

Analyte	Regulatory Limit ¹¹	Sample ID/Depth										
		D3 1-4'	D3 4-8'	D3 8-12'	D4 1-4'	D6 1-4'	D6 4-8'	D7 1-4'	D11 4-8'	D12 1-4'	D12A 1-4'	D13 1-4'
TCLP¹² Metals (mg/L)¹³												
Arsenic	5	0.01 U	0.01 U	0.008 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Barium	100	0.87	0.75	1	1.1	0.54	0.51	0.77	1.2	1.5	1	1.2
Cadmium	1	0.12	0.054	0.002 U	0.099	0.49	0.19	0.15	0.071	0.93	2.2	0.15
Chromium	5	0.0023 J	0.0018 J	0.00098 J	0.001 J	0.0009 J	0.003 J	0.0032 J	0.0032 J	0.0019 J	0.0043 J	0.0066 J
Lead	5	0.47	0.14	0.0082 J	1.8	0.34	0.87	0.33	0.13	1	1.2	0.61
Selenium	1	0.02 U	0.02 U	0.02 U	0.005 J	0.0062	0.0057 J	0.0063 J	0.0056 J	0.007 J	0.0067 J	0.02 U
Silver	5	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.00037 J	0.005 U
Mercury	0.2	0.00014 J	0.00022 J	0.00078 J	0.00014 J	0.00014 J	0.00014 J	0.00014 J	0.0002 J	0.00017 J	0.00015 J	0.0020 UJ
TCLP SVOC (ug/L)		NA	ND	NA	NA	NA	NA	NA	ND	NA	NA	NA

Notes:

1. EPA screening levels from Removal Management Levels for industrial soil (June 2014).
2. IDEM screening levels from IDEM's Remediation Closure Guide for commercial/industrial direct contact soil exposure (2014).
3. PCB - Polychlorinated Biphenyls
4. mg/kg - milligrams per kilogram
5. ND - Not detected
6. ug/kg - micrograms per kilogram
7. J - Estimated value
8. U - Not detected
9. SVOC - Semivolatile Organic Compounds
10. NA - Not analyzed
11. Regulatory limit established in 40 CFR 261.24.
12. TCLP - Toxicity Characteristic Leachate Procedure
13. mg/L - milligrams per liter
12. Shaded values indicate that concentrations exceed EPA screening levels or regulatory limits.
13. Bolded values indicate that concentrations exceed IDEM screening levels.

**ATTACHMENT I
SITE PHOTO LOG**



Number: 1
Photographer: Shelly Lam
Date: 12/3/2012
Description: Dixon Road Site with Kokomo Dump Site in background



Number: 2
Photographer: Shelly Lam
Date: 12/3/2012
Description: Drum exposed on banks of Wildcat Creek

Number: 3



Photographer:
Shelly Lam
Date: 12/3/2012
Description:
Waste discovered
on-site



Number: 4
Photographer:
Shelly Lam
Date: 12/3/2012
Description:
IDEM and START
examining waste
pile



Number: 5
Photographer: Shelly Lam
Date: 12/3/2012
Description: Surface waste pile



Number: 6
Photographer: Shelly Lam
Date: 12/3/2012
Description: 55- gallon drum on ground surface



Number: 7
Photographer: Shelly Lam
Date: 12/3/2012
Description: 55- gallon drum on ground surface



Number: 8
Photographer: Shelly Lam
Date: 12/3/2012
Description: Waste exposed above Wildcat Creek



Number: 9
Photographer: Shelly Lam
Date: 12/3/2012
Description: START collecting soil sample



Number: 10
Photographer: Shelly Lam
Date: 12/3/2012
Description: START examining soil boring

ATTACHMENT II

U.S. ENVIRONMENTAL PROTECTION AGENCY REMOVAL ACTION

ADMINISTRATIVE RECORD FOR DIXON ROAD SITE KOKOMO, HOWARD COUNTY, INDIANA APRIL 17, 2014

<u>NO.</u>	<u>SEMS ID</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	912281	01/01/76			Table Listing Howard County Dumps	1
2	904874	02/00/01	ATSDR	File	ToxFAQs Fact Sheet: Polychlorinated Biphenyls	2
3	907381	03/00/01	ATSDR	File	ToxFAQs Fact Sheet: Metallic Mercury	3
4	907375	08/00/07	ATSDR	File	ToxFAQs Fact Sheet: Lead, CAS #7439-92-1	2
5	912279	08/00/07	ATSDR	File	ToxFAQs Fact Sheet: Arsenic, CAS #7440-38-2	2
6	907376	09/00/08	ATSDR	File	ToxFAQs Fact Sheet: Cadmium, CAS #7440-43-9	2
7	907377	09/00/08	ATSDR	File	ToxFAQs Fact Sheet: Chromium, CAS #7440-47-3	2
8	907382	07/09/12	IDEM	File	Remediation Closure Guide	222
9	437114	08/13/12	Lam, S., U.S. EPA	Karl, R., U.S. EPA	Action Memorandum re: Determination of Threat to Public Health and the Environment and Selection of Time-Critical Removal Action at the Kokomo Dump Site (PORTIONS OF THIS DOCUMENT HAVE BEEN REDACTED)	27
10	907378	12/28/2012	Yeary, S., IDEM	Lam, S. U.S. EPA	IDEM E-mail re: Request for Further Assistance at Dixon Road Site	1
11	907379	02/19/13	Nardulli, S., OTIE	Lam, S. U.S. EPA	Site Assessment Report for Dixon Road Site	168

12	907380	03/28/13	Lam, S., U.S. EPA	Osborn, R., IDEM	Request for Applicable or Relevant and Appropriate Requirements for the Dixon Road Site	2
13	912280	04/04/13	Ramsey, R., IDEM	Lam, S., U.S. EPA	Letter re: Request for Applicable or Relevant and Appropriate Requirements for the Dixon Road Site	3
14		00/00/00	Lam, S., U.S. EPA	Karl, R., U.S. EPA	Action Memorandum re: Request for Approval and Funding for a Time-Critical Removal Action at Dixon Road Site (PENDING)	