



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

US EPA RECORDS CENTER REGION 5



APR 11 2018

945742

MEMORANDUM

REPLY TO THE ATTENTION OF:

SUBJECT: Request for Approval and Funding for Emergency and Time-Critical Removal Actions at the Graveyard Auto Site, 1320 Emery Crossing, Clarksville, Clark County, Indiana (Site ID #C5MG)

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

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

TO: Douglas Ballotti, Director
Superfund Division

I. PURPOSE

This memorandum requests and documents your approval to expend up to \$1,529,546 to conduct emergency and time-critical removal actions at the Graveyard Auto Site (the Site) in Clarksville, Clark County, Indiana 47129. On December 20, 2018, Emergency Response Branch Chief Jason El-Zein verbally authorized \$25,000 in funding to conduct emergency response actions to mitigate an imminent and substantial threat of release.

The proposed response actions are necessary to mitigate threats to public health, welfare, and the environment posed by the presence of uncontrolled hazardous substances at the Site. The U.S. Environmental Protection Agency (EPA) documented the presence of hazardous substances at the Site, as defined by Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601(14).

Emergency and time-critical removal actions proposed herein are to segregate, stage, and secure drums, batteries, and other containers; remove contaminated surface soil; backfill excavated areas; restore vegetative cover; consolidate and package hazardous substances, pollutants and contaminants for transportation and off-site disposal in accordance with the EPA Off-Site Rule, 40 Code of Federal Regulations (CFR) § 300.440; implement post-removal site control measures; and take 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.

Response actions will be conducted in accordance with Section 104(a)(1) of CERCLA, 42 U.S.C. § 9604(a)(1), and 40 CFR § 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), to abate or eliminate the immediate threat posed to public health and/or the environment by the presence of the hazardous substances at the Site. The uncontrolled conditions of the hazardous substances present at the Site, and the potential threats they present require that this action be classified as emergency and time-critical removal actions. EPA's actions will require approximately 90 working days to complete.

There are no nationally significant, or precedent-setting, issues associated with the Site.

II. SITE CONDITIONS AND BACKGROUND

SEMS ID: INN000507951
RCRA ID: INR000146571
Category: Emergency and Time-Critical Removal Actions

A. Site Description

The Graveyard Auto Site is located at 1320 Emery Crossing in Clarksville, Clark County, Indiana 47129 (Figure 1). It is located on the east bank of Silver Creek, which is a tributary of the Ohio River. The Site totals 10.54 acres. Parcel 10-40-02-900-039.000-007 is 8.39 acres and parcel 10-40-02-900-022.000-007 is 2.15 acres. Part of parcel 10-40-02-900-022.000-007 is occupied by neighboring businesses to the south. The Site does not include the portion of the parcel occupied by these businesses.

The Site contains several dilapidated buildings, mobile homes, automobiles, automobile parts, and an assumed empty 25,000-gallon aboveground storage tank (AST) (Figure 2 and Photos 1-4). Numerous drums, batteries, and compressed gas cylinders were abandoned at the property (Photos 5-10). The Site is partially fenced and can be easily accessed by trespassers (Photos 12-14). There is damaged and missing fencing along the northern and eastern property borders and no fencing along the western property boundary.

1. Site Background

Historical information documents that the Site was undeveloped until approximately 1949. The Site was operated as a mobile home park from approximately 1955 to 1983 and from 1983 to 2018 was used as an automobile scrap yard.

Historical aerial photography shows that the Site was undeveloped in 1940. It was predominately wooded with a pond near the center of the property. By 1949, the Site had been improved with a road. An aerial photograph from 1955 shows a few buildings on the Site. In the 1968 aerial photograph and subsequent photographs, the pond appears to have been filled in. By 1972, additional buildings were located across the Site. Topographic maps from 1982 to 1992 labeled the Site as a "Trailer Park." By 1983, historical aerial photographs show that the mobile

homes had mostly been replaced with scrap automobiles. Polk City Directories from 1993-1998 list Graveyard Auto Salvage as the Site's occupant (Administrative Record [AR] #8).

EPA reviewed historical documentation from the Clark County Health Department (CCHD) and the Indiana Department of Environmental Management (IDEM) (AR #8).

CCHD received a complaint about the Site on March 30, 1993, alleging that open dumping was occurring. IDEM conducted an inspection on August 8, 1996, because of open dumping of solid waste. IDEM noted that roofing materials and automotive fluids had been dumped on the ground. On November 19, 1996, CCHD received a complaint that automotive fluids had been spilled on the ground and opening dumping was continuing to occur.

On July 4, 1998, IDEM responded to a fire involving approximately 100,000 tires at the Site. IDEM hired a contractor to extinguish the fire. Incident report 9807025 noted that IDEM planned to do a fund-lead removal at the Site, but it was delayed due to a judge's order.

On December 2, 1998, IDEM sent a letter to the property owner denying his application as a waste tire transporter. The request was denied because IDEM was pursuing cost recovery and enforcement for the tire fire and subsequent cleanup.

CCHD received a complaint on June 17, 2002, that the property owner was burying construction debris on the property. CCHD and IDEM visited the property on June 20, 2002 and discovered 300-400 tons of solid waste dumped on-site. On August 21, 2002, CCHD and IDEM revisited the Site and noted that the property owner had buried construction debris under topsoil.

On January 23, 2004, IDEM inspected the Site following a complaint alleging that Graveyard Auto was allowing waste to get into Silver Creek. IDEM noted waste on the creek bank, including abandoned tires, roofing materials, automobile, and batteries.

Between 2008 and 2010, CCHD received additional complaints about the Site including the presence of a holding tank and abandoned tires. CCHD noted in 2008 that the property appeared to have been vacated. IDEM attempted to inspect the Site in August 2014 but could not access the property since it was shut down, fenced, padlocked, and overgrown with vines and weeds (AR #5).

2. Removal Site Evaluation

The Town of Clarksville requested assistance from EPA on July 31, 2018 (AR #9 and 17). EPA conducted a Site Assessment from December 17-21, 2018. The assessment included drum and soil sampling. The assessment identified hazardous waste in drums and high concentrations of arsenic, iron, and lead in soil. EPA also conducted emergency response actions to overpack, stage, and secure abandoned drums, compressed gas cylinders, and batteries. Results are summarized below and documented in the Site Assessment Report (AR #16).

Drum Results

EPA inventoried 31 abandoned drums. EPA collected five samples from 18 drums representing different waste streams. Samples results above screening levels are summarized below. Thirteen drums were not sampled. One drum was Resource Conservation and Recovery Act (RCRA) empty. One drum contained rubber chips. Eleven drums contained cans of paint and paint thinners.

- Sample SOIL-1 had a toxicity characteristic leaching procedure (TCLP) lead result of 5.2 milligrams per liter (mg/L), which exceeded the regulatory level of 5.0 mg/L. This sample exhibited the characteristic of toxicity for lead (D008), per 40 CFR § 261.24.
- pH was measured at 14 standard units (SU) in sample SOIL-2. This sample met the criteria for corrosivity (D002) as established in 40 CFR § 261.22.
- Ignitability was measured at 80 degrees Fahrenheit (°F) in sample NL and at 120°F in sample OIL. A solid waste exhibits the characteristic of ignitability if it has a flashpoint less than 60 °Celsius (140 °F). These samples exhibited the characteristic of ignitability (D001) established in 40 CFR § 261.21.
- Sample NL contained cyanide at 22 micrograms per liter (µg/L) and sulfide at 46 mg/L. According to 40 CFR § 261.23, a solid waste exhibits the characteristic of reactivity (D003) if it is a cyanide- or sulfide-bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health of the environment. There are no test methods for reactivity. According to a July 1985 memo, EPA expects that generators will classify their high concentration sulfide- and cyanide-bearing wastes as hazardous (AR #1).
- Sample OIL contained high concentrations of total petroleum hydrocarbons (TPH), indicating these drums contain oil. The sample also contained lead at 32 milligrams per kilogram (mg/kg) and tetrachloroethene (PCE) at a concentration of 45 mg/kg.

Soil Results

EPA collected surface soil samples from multiple locations to a maximum depth of 2 feet below ground surface (bgs). Samples were analyzed for metals, volatile organic compounds (VOC), semivolatile organic compounds (SVOC), and polychlorinated biphenyls (PCB). Soil results were compared to EPA's Removal Management Levels (RML) for industrial surface soil (November 2018) and IDEM's industrial direct contact screening levels (IDCSL) (2018) for surface soil. Only metals exceeded screening levels; those results are discussed below. Those sample locations are shown in Figure 3.

Arsenic concentrations were as high as 99.2 mg/kg, which exceeded the IDCSL of 30 mg/kg. Iron was detected at a maximum concentration of 319,000 mg/kg, above the IDCSL of 100,000 mg/kg. Lead was detected above screening levels in 15 samples at a maximum concentration 34,600 mg/kg, which exceeded both the RML and IDCSL of 800 mg/kg.

Sample Location	Sample Depth (feet)	Arsenic (mg/kg)	Iron (mg/kg)	Lead (mg/kg)
RML		300	2,500,000	800
IDEM IDCSSL		<i>30</i>	<i>100,000</i>	<i>800</i>
1B	0-2	13	17,300	<i>2,710</i>
1E	0-2	14.8	21,800	<i>3,000</i>
2B	0-2	<i>49.5</i>	<i>240,000</i>	<i>1,200</i>
7A	0-2	13	15,200	<i>1,470</i>
7C	0-2	<i>39.6</i>	<i>161,000</i>	<i>1,940</i>
9B	0-2	27.9	25,200	<i>6,670</i>
10A	0-2	25.8	21,200	<i>9,500</i>
10F	0-2	<i>99.2</i>	37,400	<i>34,600</i>
11C	0-2	17.4	52,000	<i>901</i>
17E	0-2	14.2/19.9	28,500/61,400	<i>957/1,040</i>
20C	0-2	16.2	<i>106,000</i>	<i>2,870</i>
29E	0-2	8.6	27,500	<i>7,310</i>
31D	0-2	12.7	13,500	<i>1,090</i>
34D	0-2	<i>47.1/65.7</i>	<i>228,000/319,000</i>	<i>340/356</i>
35B	0-2	16.4	25,100	<i>2,070</i>

1. Bolded results exceeded the RML.
2. Italicized results exceeded the IDCSSL.

3. Physical Location

The Site is located at 1320 Emery Crossing in Clarksville, Clark County, Indiana 47129. The geographical coordinates for the Site are 38.300823° north latitude and 85.78931° west longitude. The Site is comprised of two parcels, totaling 10.54 acres. Part of one parcel is occupied by neighboring businesses to the south. The Site does not include the portion of the parcel occupied by these businesses.

The Site is located in a mixed-use area. The property is bounded by Browns Station Way to the north; a residence and S&S Marine to the east; Kenny's Imports and Wheeler's Auto Parts to the south; and Silver Creek to the west. The closest residential property is located along the Site's eastern property boundary (Photo #11 and Figure #2). Approximately 6,500 people live within one mile of the Site.

EPA conducted an Environmental Justice (EJ) analysis for the Site (see Attachment I). Screening of the surrounding area used Region 5's EJ Screen Tool. Region 5 has reviewed environmental and demographic data for the area surrounding the Graveyard Auto Site and determined there is low potential for EJ concerns at this location.

4. Site Characteristics

The Site operated as a mobile home park 1955 to 1983 and from 1983 to 2018 was used as an automobile salvage yard. It has since been abandoned. The Site contains several dilapidated buildings, mobile homes, automobiles, automobile parts, and a 25,000-gallon AST. Numerous drums, batteries, and compressed gas cylinders were abandoned at the property. The Site is partially fenced and can be easily accessed by trespassers. The OSC observed evidence of trespassing including graffiti (Photos 12-14).

EPA's conducted an emergency removal action in December 2018.

5. 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, at the Site including hazardous waste in drums and arsenic and lead in soil. EPA also identified high concentrations of pollutants or contaminants, such as iron, in surface soil.

Hazardous substances, pollutants, or contaminants are present in surface soil, drums, batteries, and other containers. Release mechanisms from these sources include spills, leaks, and direct discharge. Transport mechanisms include direct release; migration to subsurface soil and groundwater; runoff or erosion to Silver Creek; and uptake by plants or animals. Exposure routes consist of incidental soil ingestion; dermal absorption of contaminants from soil, particularly arsenic; inhalation of fugitive dust; and ingestion or direct contact with potentially-contaminated surface water and sediment in Silver Creek. Potential human receptors include nearby residents, trespassers, Site visitors, future Site workers, and recreational users of Silver Creek.

Surface soil, drums, batteries, and other containers have completed exposure pathways. These sources are proposed to be addressed by these emergency and time-critical removal actions. Sources with potentially complete exposure pathways, such as subsurface soil, surface water or sediment in Silver Creek will not be addressed as part of the proposed removal action. The OSC referred evaluation of contaminant migration to Silver Creek to EPA's Site Assessment program.

On February 7, 2019, EPA verbally confirmed with CCHD that there are no drinking water wells near the Site. As such, the drinking water exposure pathway is incomplete.

6. NPL status

The Site is not on the National Priorities List (NPL). It is not known if EPA will propose the Site for the NPL in the future.

7. Maps, pictures and other graphic representations

Photographs and maps are included as attachments to the Action Memorandum.

B. Other Actions to Date

1. Previous actions

This Action Memorandum documents previous actions in the Background Section.

2. Current actions

Emergency response actions were completed on March 8, 2019. In 2018, the Town of Clarksville and River Heritage Conservancy conducted a Phase I environmental assessment (AR #8). On November 5, 2018, the Town of Clarksville acquired the property through tax delinquency and abandonment proceedings (AR# 10-13). Additional information is provided in the Confidential Enforcement Addendum.

C. State and Local Authorities' Roles

On July 31, 2018, the Town of Clarksville requested EPA assistance in conducting a removal assessment at the Site (AR #9 and 17). The Town of Clarksville and IDEM do not have the resources to clean up the Site.

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

The conditions at the Graveyard Auto Site present a threat to the public health or welfare, and the environment, and meet the criteria for a time-critical removal action as provided for in the NCP, 40 CFR 300.415(b)(2). These criteria include, but are not limited to, the following:

40 CFR § 300.415(b)(2)(i) - Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

Hazardous substances, pollutants, and contaminants are present in abandoned drums and in surface soil. Hazardous substances represent an actual or potential exposure threat to nearby human populations. Sources in surface soil, drums, and other containers have completed pathways. These sources are proposed to be addressed as emergency and time-critical removal actions. Potential human receptors include residents living near the Site, trespassers, visitors, and future Site workers.

Analytical results from the Site Assessment indicate that hazardous substances, as defined by CERCLA § 101(14), are present at the Site and represent an actual or potential exposure threat to nearby human populations. Hazardous substances include arsenic and lead in surface soil, and PCE and cyanide in drums. Additionally, RCRA characteristic hazardous wastes are considered CERCLA hazardous substances. Corrosive, ignitable, reactive, and

toxic waste streams, as defined by 40 CFR § 261, exist in drums at the Site. Pollutants or contaminants, such as iron, are present in surface soil at the Site. Information on the toxicological effects of arsenic, cyanide, iron, lead, and PCE are discussed below and referenced in the Administrative Record (Attachment II).

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 #3).

Cyanide: Exposure to high levels of cyanide for a short time harms the brain and heart and can even cause coma and death. Workers who inhaled low levels of hydrogen cyanide over a period of years had breathing difficulties, chest pain, vomiting, blood changes, headaches, and enlargement of the thyroid gland. Some of the first indications of cyanide poisoning are rapid, deep breathing and shortness of breath, followed by convulsions (seizures) and loss of consciousness. These symptoms can occur rapidly, depending on the amount eaten. The health effects of large amounts of cyanide are similar, whether someone eats, drinks, or breathes it; cyanide uptake into the body through the skin is slower than these other means of exposure. Skin contact with hydrogen cyanide or cyanide salts can irritate and produce sores (AR #2).

Iron: High doses of iron can cause an upset stomach, constipation, nausea, abdominal pain, vomiting, and fainting. High doses of iron can also decrease zinc absorption. Extremely high doses of iron (in the hundreds or thousands of mg) can cause organ failure, coma, convulsions, and death (AR #7).

Lead: The effects of lead are the same whether it enters the body through breathing or swallowing. 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. There is no conclusive proof that lead causes cancer in humans. Kidney tumors have developed in rats and mice that had been given large doses of some kind of lead compounds. 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. IARC has determined that inorganic lead is probably carcinogenic to humans and that there is

insufficient information to determine whether organic lead compounds will cause cancer in humans (AR #4).

PCE: Breathing high levels of PCE for a brief period may cause dizziness or drowsiness, headache, and incoordination; higher levels may cause unconsciousness and even death. Exposure for longer periods to low levels of PCE may cause changes in mood, memory, attention, reaction time, and vision. Studies in animals exposed to PCE have shown liver and kidney effects, and changes in brain chemistry, but we do not know what these findings mean for humans. Breathing high levels of PCE for a brief period may cause dizziness or drowsiness, headache, and incoordination; higher levels may cause unconsciousness and even death. Exposure for longer periods to low levels of PCE may cause changes in mood, memory, attention, reaction time, and vision. Studies in animals exposed to PCE have shown liver and kidney effects, and changes in brain chemistry, but what these findings mean for humans is unknown. Studies in humans suggest that exposure to PCE might lead to a higher risk of getting bladder cancer, multiple myeloma, or non-Hodgkin's lymphoma, but the evidence is not very strong. In animals, PCE has been shown to cause cancers of the liver, kidney, and blood system. EPA considers PCE likely to be carcinogenic to humans by all routes of exposure. The IARC considers PCE probably carcinogenic to humans. DHHS considers PCE to be reasonable anticipated to be a human carcinogen (AR #6).

40 CFR § 300.415(b)(2)(ii) – Actual or potential contamination of drinking water supplies or sensitive ecosystems;

Contamination at the Site has the potential to affect sensitive ecosystems. Silver Creek forms the western boundary of the Site. The creek is a tributary of the Ohio River. The Falls of the Ohio State Park is located approximately 0.7 miles south of the Site, along the confluence of Silver Creek and the Ohio River. The Falls of the Ohio has been designated as a national natural landmark and national wildlife conservation area.

According to the Silver Creek Watershed Management Plan, several endangered species have been identified in the Silver Creek watershed. Endangered animals include the Barn Owl, Black-crowned Night Heron, Cabbage Butterfly, Cave Isopod, Gray Bat, Indiana Bat, Kirtland's Snake, and Southeastern Crowned Snake. Endangered plants include the Appalachian Quillwort, Bluntleaf Spurge, Hall's Bulrush, Schreber Aster, Small Swollen Bladderwort, Squarrose Goldenrod, and Wild Peavine. Several of these plant and animal species inhabit streams or areas near streams (AR #18).

40 CFR § 300.415(b)(2)(iii) - Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release;

EPA identified high levels of hazardous substances, pollutants, or contaminants in drums that pose a threat of release. The drums contained characteristic hazardous waste including ignitable, corrosive, reactive, and toxic waste streams. The drums were abandoned and in poor condition. Several drums were overturned or overflowing (see

Photos). Hazardous substances were released from the drums and, without EPA's emergency actions, there was potential for additional releases to occur.

40 CFR § 300.415(b)(2)(iv) – 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 substances, pollutants, or contaminants, including arsenic, iron, and lead, were detected in near-surface soils. There is potential for hazardous substances, pollutants, or contaminants to run off into the surface water and sediment of Silver Creek. Additionally, hazardous substances, pollutants, or contaminants could migrate through fugitive dust generation or tracking by trespassers and future Site workers.

40 CFR § 300.415(b)(2)(v) – 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. Additionally, heavy rains could cause runoff or overland flow of soil to Silver Creek, causing migration into surface water and sediment. Information from the Federal Emergency Management Agency's (FEMA) National Flood Hazard Layer shows that the Site is partially within the floodway of Silver Creek, while most of the Site is within a Special Flood Hazard Area (Figure 4). Flooding at the Site could cause hazardous substances, pollutants, or contaminants to migrate.

40 CFR § 300.415(b)(2)(vi) – Threat of fire or explosion;

Analytical results from the Site Assessment documented that some of the drums at the Site contain ignitable waste. These drums had flashpoints of 80°F and 120°F. At or above these temperatures, there is a threat of fire.

40 CFR § 300.415(b)(2)(vii) - The availability of other appropriate federal or State response mechanisms to respond to the release;

The Town of Clarksville and IDEM do 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, and the complete and potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

EPA proposes to undertake the actions described below to mitigate threats posed by the presence of hazardous substances, pollutants or contaminants at the Graveyard Auto Site. The actions will allow for future redevelopment and productive use of the property in accordance with Objective 1.3 of EPA's 2018-2022 Strategic Plan to revitalize land and prevent contamination. The Town of Clarksville has indicated that it has plans for the Site to become part of the Ohio River Greenway. Limited soil removal along with institutional controls will not present an unreasonable risk to the future use of the Site. Limited soil excavation will reduce the direct-contact threat and further deterioration of soil and surface water quality.

1. Develop and implement site-specific plans, including a health and safety plan, work plan, and air monitoring plan;
2. Segregate, stage, and secure drums, batteries, and other containers;
3. Remove contaminated surface soil from 0-2 feet below ground surface or "hot spots," which is estimated to be approximately 2,500 cubic yards of soil;
4. Backfill excavated areas with soil that is below industrial RMLs, as determined by laboratory analysis;
5. Reseed excavated areas to prevent erosion;
6. Consolidate and package hazardous substances, pollutants and contaminants for transportation and off-site disposal in accordance with the EPA Off-Site Rule, 40 CFR § 300.440;
7. Coordinate with the Town of Clarksville and IDEM to implement post-removal site control measures, including an environmental restrictive covenant (ERC); and
8. Take any other response actions to address any release or threatened release of a hazardous substance, pollutant or contaminant that the EPA OSC determines may pose an imminent and substantial endangerment to the public health or the environment.

The OSC will conduct removal actions in a manner not inconsistent with the NCP. The OSC will initiate planning for provision of post-removal site control consistent with the provisions of NCP § 300.415(l).

The threats posed by uncontrolled substances considered hazardous meet the criteria listed in NCP § 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.

The estimated costs to complete the activities outlined above are summarized below. These activities will require an estimated 90 on-site working days to complete.

Detailed cleanup contractor costs are presented in Attachment III.

2. Contribution to remedial performance

The proposed action should not impede future remedial performance.

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

Not Applicable

4. Applicable or relevant and appropriate requirements (ARAR)

On February 7, 2019, the OSC sent a letter requesting state and local ARARs to IDEM (AR #14). IDEM identified the following ARARs in a letter dated February 7, 2019 (AR #15). EPA will comply with ARARs identified in a timely manner to the extent practicable. However, as set forth at Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), actions conducted on-site are exempt from permitting requirements.

Action Specific:

- Pursuant to 326 Indiana Administrative Code (IAC) 6-4-2(4), visible fugitive dust must not cross an adjacent property line.
- Pursuant to 326 IAC 6-4-4, any vehicle driven on any public right of way must not allow its contents to escape and form fugitive dust.
- If this action will result in leaving contamination in place such that unrestricted land
 - use is not permitted (i.e., residential land use remediation objectives are not
 - achieved), an ERC should be recorded for the property per Indiana Code (IC) 13-25-4-24.

Chemical Specific:

- 329 IAC 3.1 regulates the management of hazardous wastes. Indiana rule 329 IAC 3.1-1-1 adopts RCRA regulations of 40 CFR Part 260 through 40 CFR Part 270. More specifically:
 - 40 CFR § 262.11 requires 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.
 - 40 CFR Part 261, Subpart B requires that all hazardous waste must be properly packaged, with labels, markings and placards prior to transport (see also 40 CFR §§ 262.30, 262.31, 262.32, and 263.33).
 - 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.
 - 40 CFR Part 261, Subpart B requires hazardous waste must be manifested as such for transport to a permitted treatment, storage, or disposal facility (TSDF) in accordance with 40 CFR Part 262, Subpart B.
 - Hazardous waste in containers shall be managed in accordance with the standards of 40 CFR Part 265, Subpart I.

- 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.
- 329 IAC 10 regulates the management of solid wastes.
 - 329 IAC 10-7.2-1 requires all wastes to undergo a waste determination, and if found to be nonhazardous, be disposed of in a permitted solid waste disposal facility.

In addition to the federal and state ARARs identified by IDEM, the OSC identified the following federal ARARs that may apply to the Site.

Location Specific:

- Endangered Species Act of 1973 (16 USC § 1531 *et seq.*), 50 CFR Part 200; 50 CFR Part 402; Fish and Wildlife Coordination Act (16 USC 661 *et seq.*); 33 CFR Parts 320-330 require actions to conserve endangered species or threatened species, including consultation with the Department of Interior.
- 40 CFR Part 6, Appendix A; 16 USC § 661 *et seq.*; 40 CFR § 6.302 involve actions to avoid adverse effects, minimize potential harm, and preserve and enhance wetlands, to the extent possible.

Action Specific:

- 40 CFR §§ 264.170-264.178 regulates the storage of RCRA hazardous waste not meeting small quantity generator criteria held for a temporary period greater than 90 days before treatment, disposal or storage elsewhere, in a container.
- 49 CFR Parts 171-180 establishes classification, packaging, and labeling requirements for shipments of hazardous waste.

5. Project schedule

The emergency and time-critical removal actions will require approximately 90 working days to complete.

B. Estimated Costs:

<u>Regional Removal Allowance Costs:</u>	
Total Cleanup Contractor Costs (Includes a 15% contingency)	\$1,240,376
<u>Other Extramural Costs Not Funded from the Regional Allowance</u>	
Total START, including multiplier costs	\$150,120
Subtotal, Extramural Costs	\$1,390,496

Extramural Costs Contingency (10% of Subtotal, Extramural Costs)	\$139,050
TOTAL REMOVAL ACTION PROJECT CEILING	\$1,529,546

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 and pollutants or contaminants documented on site, and the potential exposure pathways to nearby populations described in Sections II, III, IV, and V above, actual or threatened releases of hazardous substances and pollutants or contaminants 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, welfare, or the environment, increasing the potential that hazardous substances will be released, thereby threatening the adjacent population and the environment.

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.

Using the estimated extramural cost calculation (\$1,529,476), an estimate of EPA's direct intramural costs (\$71,400), and 55.39% as the regional indirect cost rate, the total estimated EPA costs for the removal are listed below. The total EPA costs of this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$2,487,710¹.

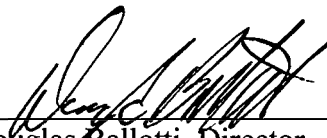
¹ Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States right to cost recovery.

$$(\$1,529,546 + \$71,400) + (55.39\% \times \$1,600,946) = \$2,487,710$$

IX. RECOMMENDATION

This decision document represents the selected removal actions for the Graveyard Auto Site located in Clarksville, Clark County, Indiana, developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based upon the Administrative Record for the Site (Attachment II).

Conditions at the Site meet the NCP § 300.415(b)(2) criteria for a time-critical removal action. The total project ceiling, if approved, will be \$1,529,546, of which, as much as \$1,379,426 may be used from the Regional removal allowance. I recommend your approval of the proposed removal action. You may indicate your decision by signing below.

APPROVE 

Douglas Ballotti, Director
Superfund Division

DATE: 4/11/19

DISAPPROVE _____
Douglas Ballotti, Director
Superfund Division

DATE: _____

Enforcement Addendum

Figures:

- 1 – Site Location Map
- 2 – Site Layout Map
- 3 – Sample Location Map
- 4 – Flood Zone Map

Photographs

Attachments:

- I. Environmental Justice Analysis
- II. Administrative Record Index
- III. Detailed Cleanup Contractor Estimate
- IV. Independent Government Cost Estimate

cc: Steve Ridenour, U.S. EPA, 5104A (**Ridenour.Steve@epa.gov**)
Lindy Nelson, U.S. DOI, w/o Enf. Addendum (**Lindy_Nelson@ios.doi.gov**)
Rex Osborn, IDEM w/o Enf. Addendum (**rosborn@idem.in.gov**)

BCC PAGE HAS BEEN REDACTED

**NOT RELEVANT TO SELECTION
OF REMOVAL ACTION**

ENFORCEMENT ADDENDUM

HAS BEEN REDACTED – THREE PAGES

ENFORCEMENT CONFIDENTIAL

NOT SUBJECT TO DISCOVERY

FOIA EXEMPT

NOT RELEVANT TO SELECTION

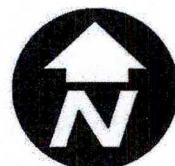
OF REMOVAL ACTION

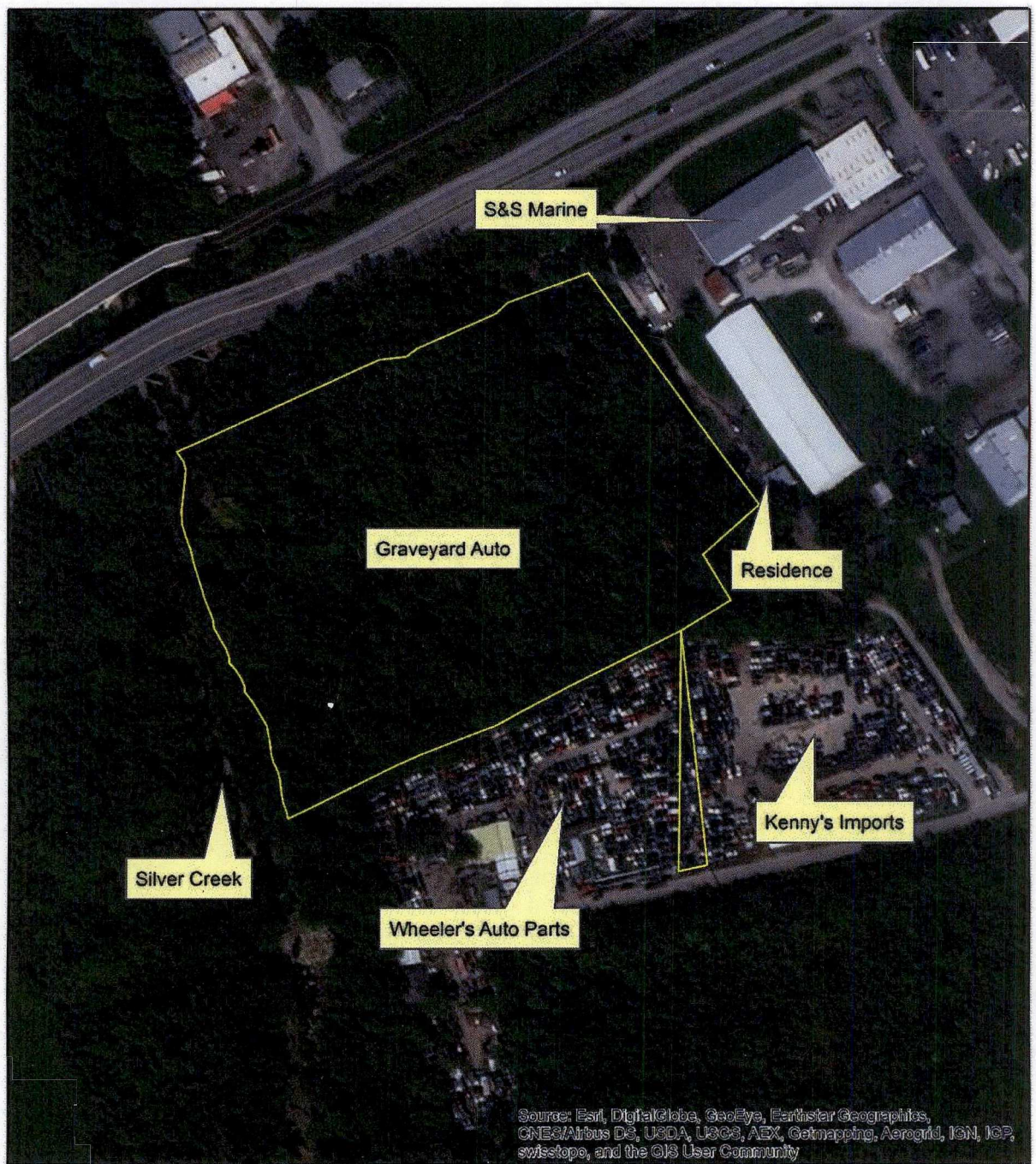
FIGURES



FIGURE 1
SITE LOCATION MAP
GRAVEYARD AUTO SITE
CLARKSVILLE, CLARK COUNTY, INDIANA

0 1,500 3,000
Feet
1:24,000

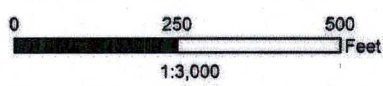




Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



FIGURE 2
SITE LAYOUT MAP
GRAVEYARD AUTO SITE
CLARKSVILLE, CLARK COUNTY, INDIANA



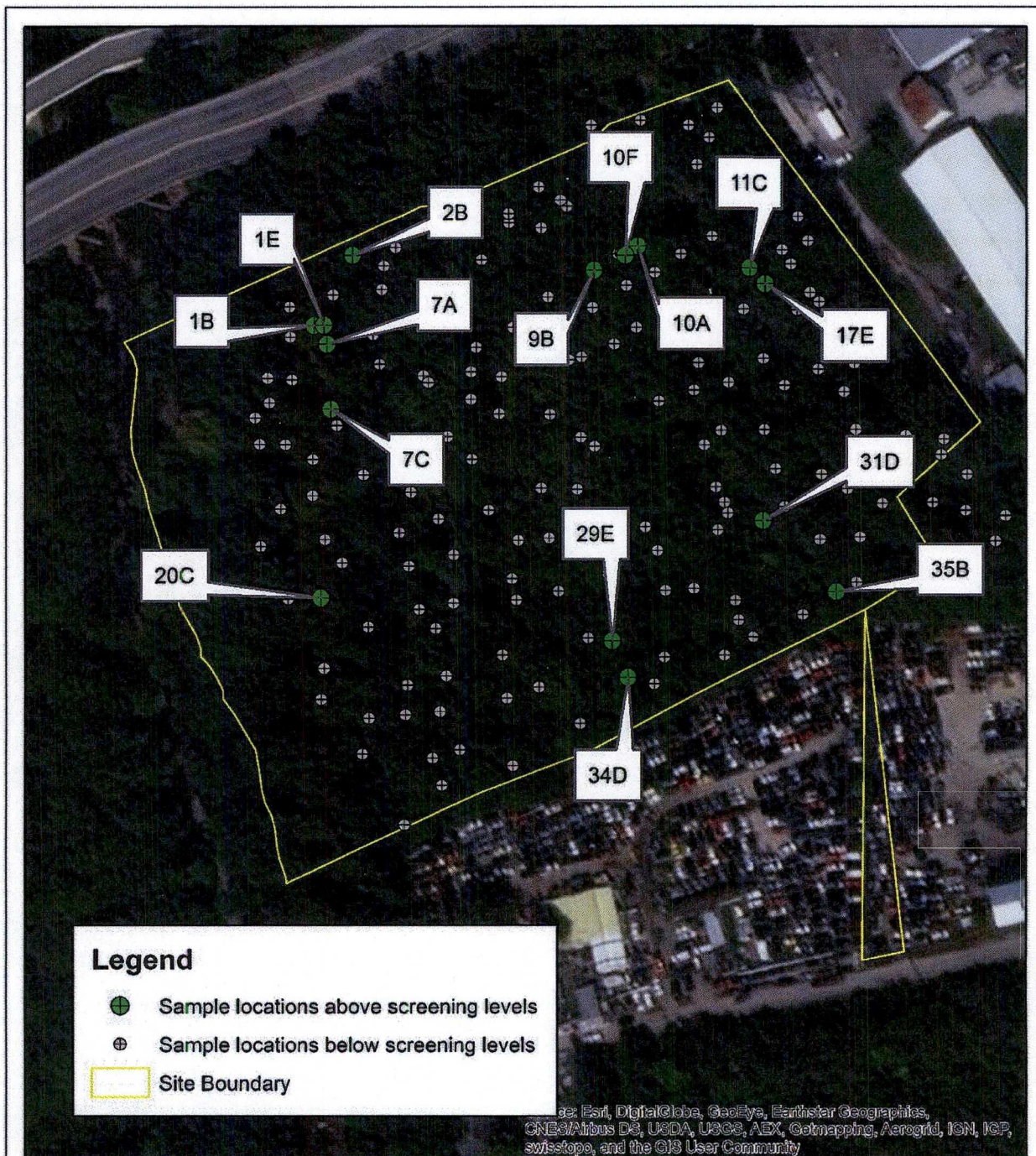
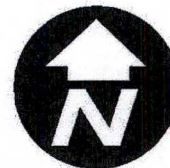
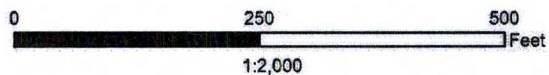


FIGURE 3
 SAMPLE LOCATION MAP
 GRAVEYARD AUTO SITE
 CLARKSVILLE, CLARK COUNTY, INDIANA



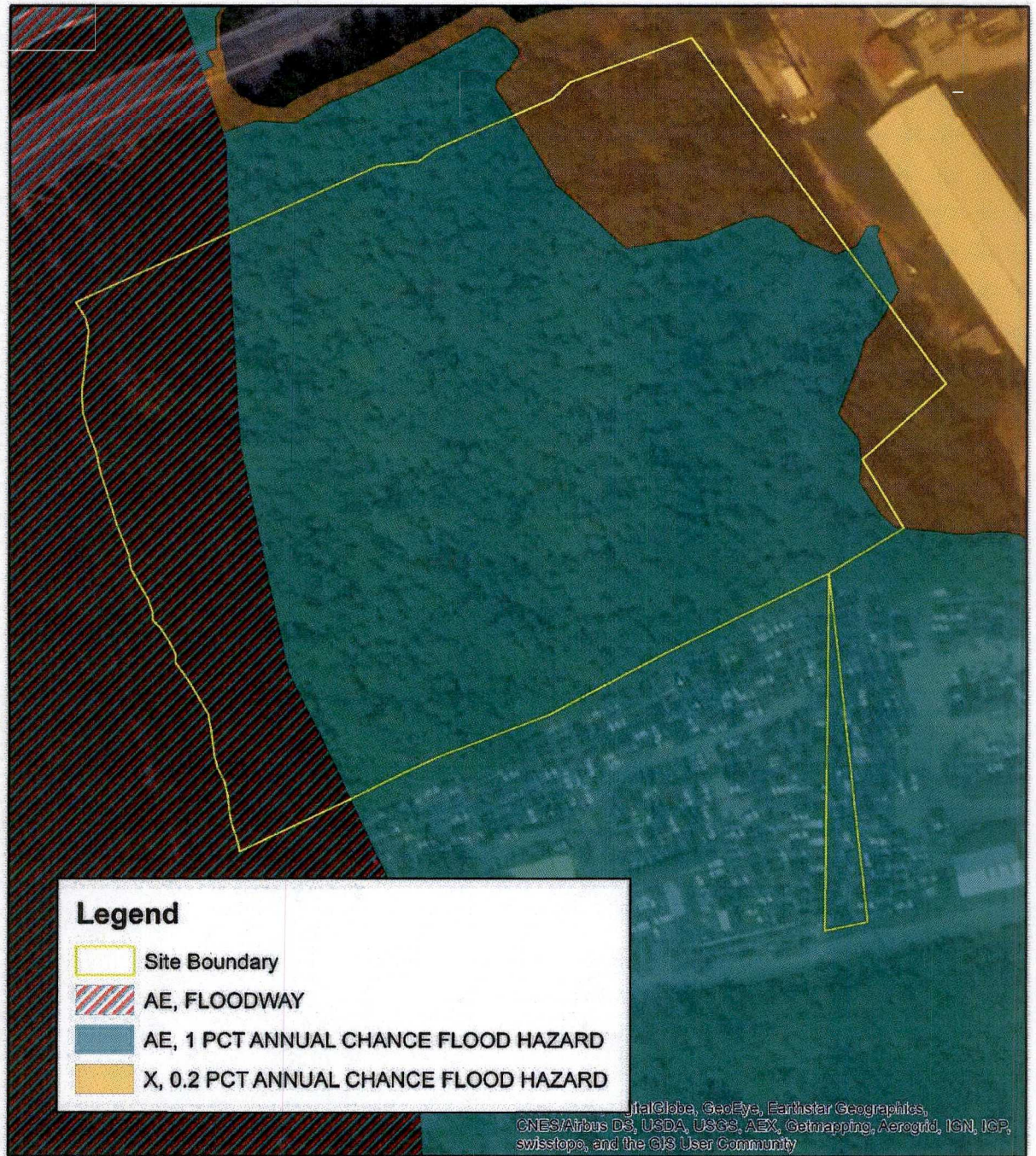


FIGURE 4
FLOOD ZONE MAP
GRAVEYARD AUTO SITE
CLARKSVILLE, CLARK COUNTY, INDIANA

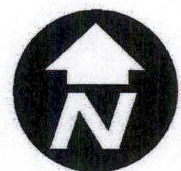
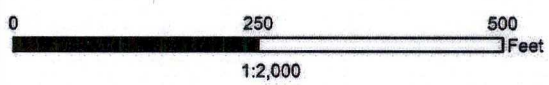




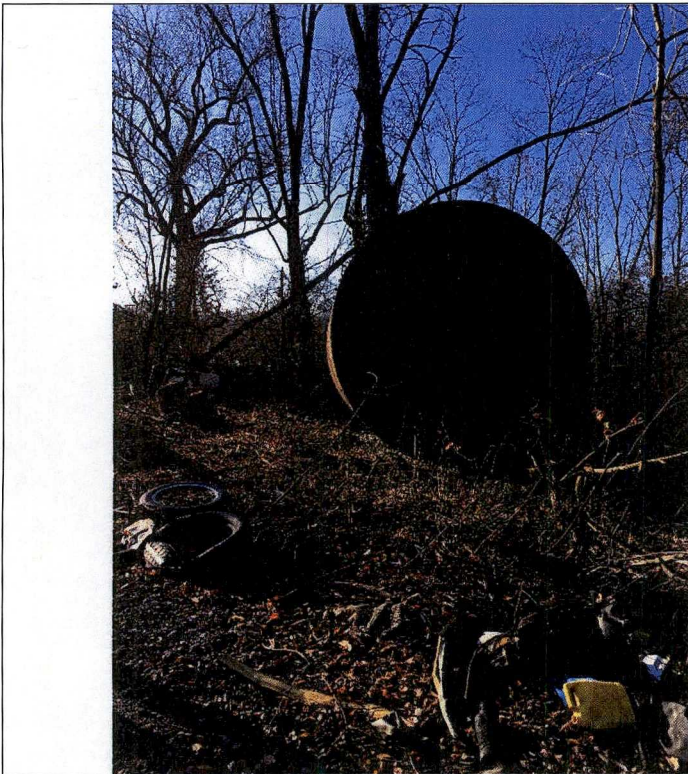
PHOTO LOG

	Number	1
	Description	Graveyard Auto Site, looking south
	Photographer	S. Lam
	Date	12/17/2018


	Number	2
	Description	Abandoned buildings, looking north
	Photographer	S. Lam
	Date	12/17/2018




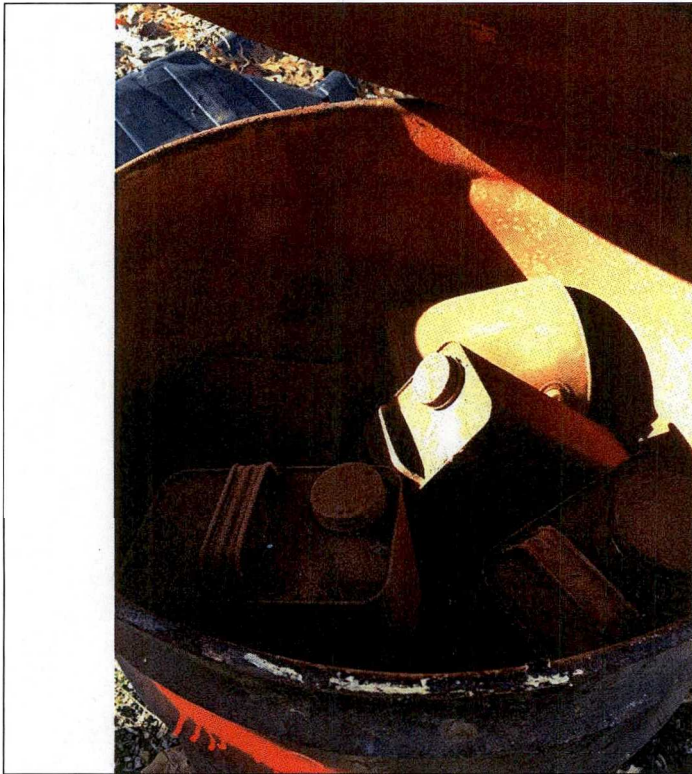
Number	3
Description	Abandoned mobile homes, looking north
Photographer	S. Lam
Date	12/17/2018



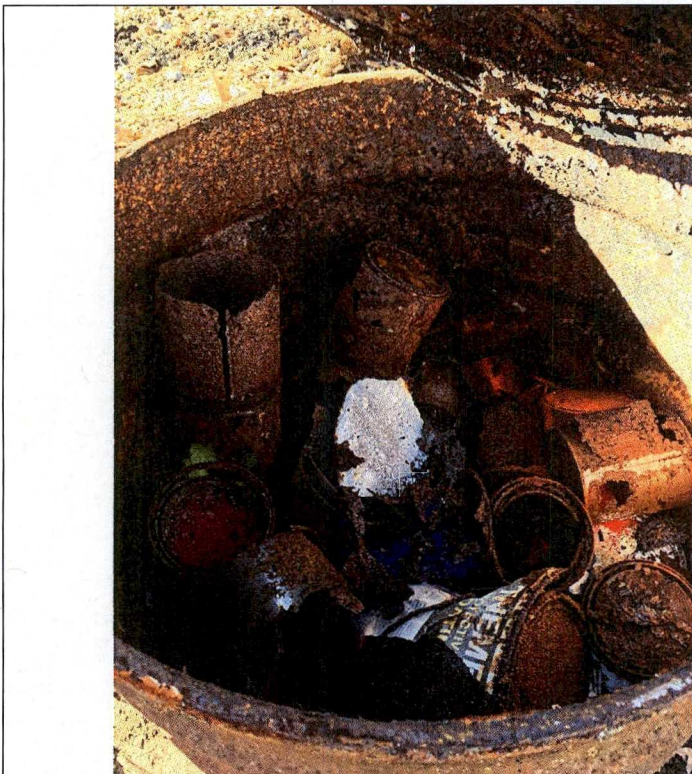
Number	4
Description	Aboveground storage tank, looking south
Photographer	S. Lam
Date	12/17/2018

	Number	5
	Description	Leaking abandoned drums, looking east
	Photographer	S. Lam
	Date	12/17/2018

	Number	6
	Description	Abandoned drums, looking east
	Photographer	S. Lam
	Date	12/19/2018



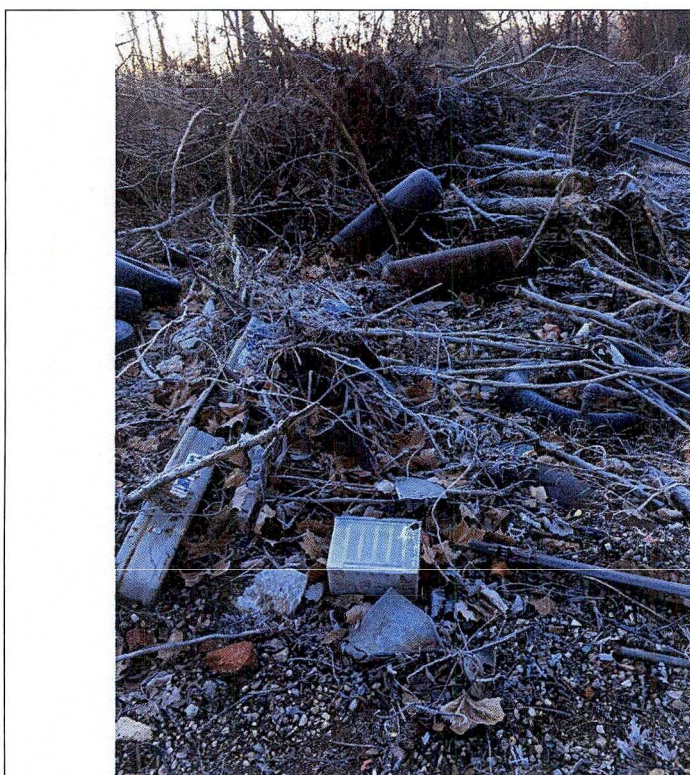
Number	7
Description	Drum of paint thinner
Photographer	S. Lam
Date	12/19/2018



Number	8
Description	Drum of paint containers
Photographer	S. Lam
Date	12/19/2018



Number	9
Description	Compressed gas cylinders, looking north
Photographer	S. Lam
Date	12/20/2018



Number	10
Description	Abandoned cylinders and battery, looking southeast
Photographer	S. Lam
Date	12/19/2018



Number	11
Description	Residence adjacent to Site, looking east
Photographer	S. Lam
Date	12/17/2018



Number	12
Description	Graffiti on abandoned RV, looking northeast
Photographer	S. Lam
Date	12/17/2018



Number	13
Description	Graffiti on building, looking north. Note "18" possibly indicating that the graffiti dates to 2018.
Photographer	S. Lam
Date	12/17/2018



Number	14
Description	Graffiti inside mobile home, looking north
Photographer	S. Lam
Date	12/17/2018

ATTACHMENT I

**U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION**

**ENVIRONMENTAL JUSTICE ANALYSIS
FOR
GRAVEYARD AUTO SITE
CLARKSVILLE, CLARK COUNTY, INDIANA**

Save as PDF

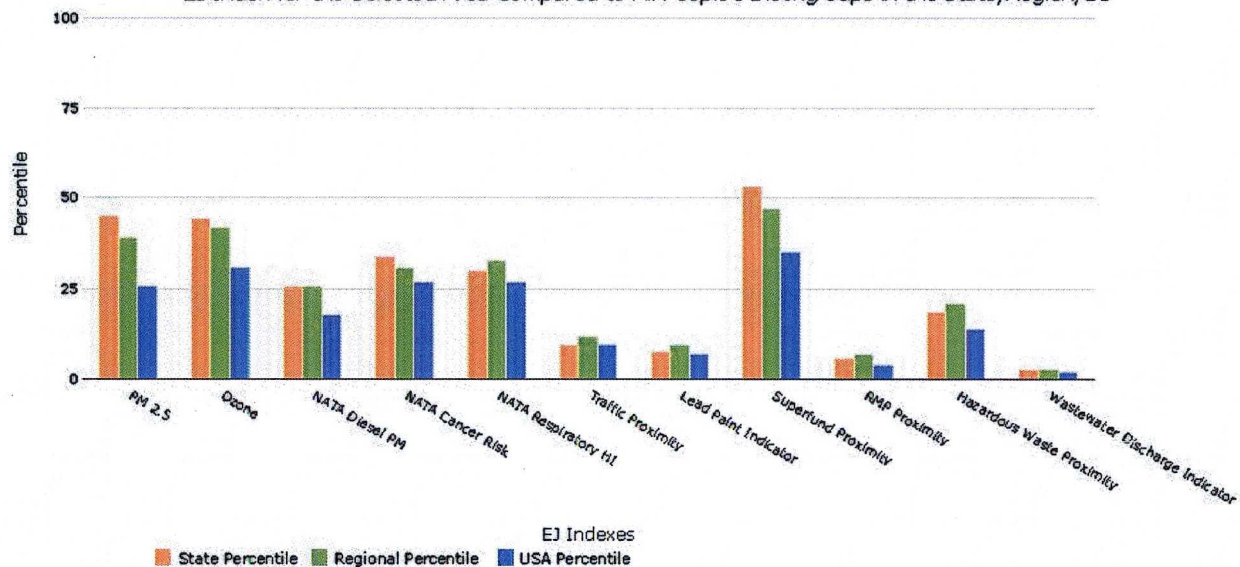


EJSCREEN Report (Version 2018)
 1 mile Ring Centered at 38.299919,-85.788860
 INDIANA, EPA Region 5
 Approximate Population: 6,553
 Input Area (sq. miles): 3.14

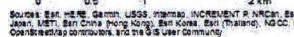


Selected Variables	Percentile in State	Percentile in EPA Region	Percentile in USA
EJ Indexes			
EJ Index for Particulate Matter (PM 2.5)	45	39	26
EJ Index for Ozone	44	42	31
EJ Index for NATA* Diesel PM	26	26	18
EJ Index for NATA* Air Toxics Cancer Risk	34	31	27
EJ Index for NATA* Respiratory Hazard Index	30	33	27
EJ Index for Traffic Proximity and Volume	10	12	10
EJ Index for Lead Paint Indicator	8	10	7
EJ Index for Superfund Proximity	53	47	35
EJ Index for RMP Proximity	6	7	4
EJ Index for Hazardous Waste Proximity	19	21	14
EJ Index for Wastewater Discharge Indicator	3	3	2

EJ Index for the Selected Area Compared to All People's Blockgroups in the State/Region/US



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.



Selected Variables	Value	State Average	Percentile in State	EPA Region Average	Percentile in EPA Region	USA Average	Percentile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in $\mu\text{g}/\text{m}^3$)	12.2	11.8	72	10.8	83	9.53	92
Ozone (ppb)	46.1	42.9	99	42.6	94	42.5	82
NATA* Diesel PM ($\mu\text{g}/\text{m}^3$)	1.19	0.835	81	0.932	70-80th	0.938	70-80th
NATA* Air Toxics Cancer Risk (risk per MM)	46	34	95	34	90-95th	40	70-80th
NATA* Respiratory Hazard Index	1.9	1.4	86	1.7	60-70th	1.8	60-70th
Traffic Proximity and Volume (daily traffic count/distance to road)	460	250	86	370	81	600	76
Lead Paint Indicator (% pre-1980s housing)	0.69	0.35	85	0.38	80	0.29	87
Superfund Proximity (site count/km distance)	0.033	0.16	26	0.12	34	0.12	37
RMP Proximity (facility count/km distance)	1.9	0.8	88	0.81	88	0.72	90
Hazardous Waste Proximity (facility count/km distance)	1.2	1.1	69	1.5	63	4.3	67
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.67	0.3	94	4.2	96	30	95
Demographic Indicators							
Demographic Index	20%	27%	44	28%	45	36%	29
Minority Population	11%	20%	48	25%	43	38%	24
Low Income Population	28%	34%	45	32%	50	34%	46
Linguistically Isolated Population	0%	2%	64	2%	58	4%	44
Population with Less Than High School Education	11%	12%	55	10%	63	13%	53
Population under Age 5	6%	6%	50	6%	53	6%	51
Population over Age 64	15%	14%	60	15%	58	14%	61

2/3

**ATTACHMENT II
U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION**

**ADMINISTRATIVE RECORD
FOR THE
GRAVEYARD AUTO SITE
CLARKSVILLE, CLARK COUNTY, INDIANA**

**ORIGINAL
MARCH 2019
SEMS ID:**

<u>NO.</u>	<u>SEMS ID</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	944573	3/25/98	Love, D., U.S. EPA	Johnson, B., & Bussard, D., U.S. EPA	Memo Re: Withdrawal of Cyanide and Sulfide Reactivity Guidance	9
2	930028	7/1/06	ATSDR	Public	Tox FAQs Fact Sheet - Cyanide - CAS # 74-90-8, 143-33-9, 151-50- 8, 592-01-8, 544-92-3, 506-61-6, 460-19-5, 506-77-4	2
3	939020	8/4/07	ATSDR	Public	Tox FAQs Fact Sheet - Arsenic - CAS # 7440-38-2	2
4	941046	8/1/07	ATSDR	Public	Tox FAQs Fact Sheet - Lead - CAS # 7439-92-1	2
5	944568	8/5/14	Guntle, P., IDEM	Graveyard Auto	Memo Re: Tempo Complaint #47488 - 1320 Emery Crossing Road, Clarksville, IN	2
6	941963	10/1/14	ATSDR	Public	Tox FAQs Fact Sheet - Tetrachloroethylene - CAS # 127- 18-4	2
7	944572	2/17/16	National Institute of Health	Public	Iron Fact Sheet for Consumers	3
8	944576	6/11/18	SME	File	Phase I Environmental Site Assessment (ESA) Report	260
9	944570	7/31/18	Fisher, D., Clarksville, City of	Augustyn, J., & Brown, J., U.S. EPA	Email Re: Removal Referral - Abandoned Graveyard Auto, Inc. Site	1

<u>NO.</u>	<u>SEMS ID</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
10	945739	8/9/18	Lawson, C., IN Secretary of State	File	Business Information- Graveyard Auto Salvage Incorporated Business ID 1989051418	1
11	945736	8/31/18	Fifer, C., G.	File	State of Indiana- Lia Pendens Notice re: Clark County Tax Sale Property Case NO. 10C01-1709- TS-000194	7
12	945737	11/5/18	Payne, Z., Clark County Recorder	File	State of Indiana- Clark County Tax Deed Graveyard Auto Inc. Parcel NO. 10-40-02-900- 022.000-007 Alternate Parcel NO. 040-51-0241 with County Seal	1
13	945738	11/5/18	Payne, Z., Clark County Recorder	File	State of Indiana- Clark County Tax Deed Graveyard Auto Inc. Parcel NO. 10-40-02-900- 022.000-007 Alternate Parcel NO. 040-51-0241 without County Seal	1
14	944569	2/7/19	Lam, S., U.S. EPA	Osborn, R., IDEM	Letter Re: Request for Applicable or Relevant and Appropriate Requirements (ARARs) for the Graveyard Auto Site	2
15	944571	2/7/19	Huxhold Fliss, J., IDEM	Lam, S., U.S. EPA	Letter Re: Applicable or Relevant and Appropriate Requirements (ARARs) for Removal Action	4
16	944600	3/18/19	Erny, T., Tetra Tech	Lam, S., U.S. EPA	Site Assessment Report - Revision 1	427
17	944574	Undated	Fisher, D., Clarksville, City of	Augustyn, J., & Brown, J., & Lam, S., U.S. EPA	Letter Re: Requesting the USEPA's Assistance in Conducting a Removal Assessment	1
18	944575	Undated	Silver Creek	File	Watershed Management Plan	194
19	-	-	Lam, S., U.S. EPA	Ballotti, D., U.S. EPA	Action Memorandum re: Request for Approval of an Emergency Removal Action at the Graveyard Auto Site	-

ATTACHMENT III
DETAILED CLEANUP CONTRACTOR
AND
START ESTIMATE
HAS BEEN REDACTED – ONE PAGE

NOT RELEVANT TO SELECTION
OF REMOVAL ACTION

ATTACHMENT IV

INDEPENDENT GOVERNMENT COST ESTIMATE

HAS BEEN REDACTED – FOUR PAGES

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION