



437308



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 W. JACKSON BLVD

CHICAGO, IL 60604

05 FEB 2013

MEMORANDUM

SUBJECT: ACTION MEMORANDUM - Request for Approval and Funding for a Time-Critical Removal Action at the Opossum Creek Drum Site, Moraine, Montgomery County, Ohio (Site ID # C5Q1)

FROM: Steve Renninger, OSC
Emergency Response Branch 1

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

TO: Richard C. Karl, Director
Superfund Division

I. PURPOSE

This Action 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 for the United States Environmental Protection Agency (EPA) to expend up to \$1,754,634 to conduct a time-critical removal action at the Opossum Creek Drum (OCD) Site (the Site) in Moraine, Montgomery County, Ohio.

The response 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, a former dump adjacent to Opossum Creek. The presence of hazardous substances existing at the Site has been documented in buried and partially buried drums and on-site soils, including heavy metal (lead and arsenic), toxic (TCLP lead) and ignitable waste streams.

The time-critical removal action proposed herein will mitigate the threats by properly identifying, consolidating, packaging, and ultimately removing and disposing off-site the abandoned hazardous substances, pollutants and contaminants at a CERCLA-approved disposal facility in accordance with EPA's Off-Site Rule (40 C.F.R. § 300.440). Additional Site activities will include Site security, perimeter air monitoring, grading and hydro-seeding.

This response action will be conducted in accordance with Section 104(a)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604(a)(1), and 40 C.F.R. § 300.415 (*Removal action*) 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. The project will require approximately 60 working days to complete.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: OHN000510858

Category: Time-Critical Removal Action

Historic records indicate that the Site is a former dump. The Site is currently vacant, with visual evidence of frequent trespassing on site.

A. Site Conditions and Background

1. Removal Site Evaluation

a) Site Background

In November 2012, representatives from Ohio EPA, Public Health – Dayton Montgomery County (PHDMC) and the Montgomery County Sheriff's (MCS) office conducted a site inspection of the Site. Hundreds of partially buried and corroded drums and containers containing dried ink waste was observed on the property owned by Lois Gilboy (Parcel J442041150004) and potentially on the parcels owned by the Forgotten Breed Motorcycle Club (Parcels J442041150009 and J442041150012). Multi-colored ink waste was observed mixed with on-site soils and within the abandoned and partially buried drums and containers. Some ink waste material was observed in direct contact with Opossum Creek. Ohio EPA personnel utilized a Thermo Scientific Niton XL3t X-ray Fluorescence (XRF) meter to conduct field screening of the multi-colored ink waste for heavy metals. Ohio EPA observed lead and arsenic concentrations as high as 173,200 parts per million (ppm) and 11,700 ppm, respectively.

In a document dated December 3, 2012, Ohio EPA formally requested assistance from EPA to determine if the Site meets the criteria for a removal action (Ohio EPA, December 2012).

In December 2012, the EPA obtained signed access agreements from Lois Gilboy and from the Forgotten Breed Motorcycle Club to grant EPA access to the properties. On December 5, 2012, EPA On-Scene Coordinator Steve Renninger, EPA's Superfund Technical Assessment and Response Team (START) contractor and Ohio EPA conducted a reconnaissance of the Site. EPA observed hundreds of buried and partially

buried and corroded drums on the former dump. Most of the drums were observed adjacent to and within 100-feet of Opossum Creek. EPA used a Thermo Scientific Niton XL3t XRF meter to conduct field screening of the multi-colored ink waste for heavy metals. EPA observed lead and arsenic concentrations as high as 88,200 ppm and 4,065 ppm, respectively.

On December 12, 2012, EPA conducted a site investigation (SI) of the former dump and observed and estimated approximately 1,000 partially buried and corroded 55-gallon drums and containers (having a volume of 5-gallons or less) are on Site. EPA used a GPS unit to survey the extent of the drum burial area. EPA observed multi-colored (yellow, red, blue, green and white) ink solids within the drums and mixed with on-site surficial soils. EPA also observed one drum containing paint waste having volatile organic compound (VOC) concentrations exceeding 3,000 ppm. EPA used a Thermo Scientific Niton XL3t XRF meter to conduct field screening of the multi-colored ink waste for heavy metals and documented lead and arsenic concentrations as high as 233,756 ppm and 15,637 ppm, respectively (Weston Solutions, January 2013). During the SI, the EPA documented visible ink waste within Opossum Creek, the Site was not fenced and frequent trespassing was observed.

b) Ohio EPA

Ohio EPA conducted an inspection of the Site in June, October, November and December 2012, and observed hundreds of the buried and partially buried drums and containers on Site. Ohio EPA observed multi-colored ink solid waste within and around the drums and used an XRF meter and observed elevated concentrations of lead and arsenic. Ohio EPA also observed visible ink waste within Opossum Creek.

In a document dated December 3, 2012, Ohio EPA formally requested assistance from EPA to determine if the Site meets the criteria for a removal action (Ohio EPA, December 2012).

c) Public Health – Dayton and Montgomery County

On November 2, 2012, PHDMC issued a Notice of Violation letter to the property owner, Lois Gilboy. The letter summarized the findings of an October 25, 2012 inspection conducted by PHDMC, MCS, and Ohio EPA. The October 25, 2012 inspection was a follow-up to a previous inspection on June 22, 2012. The purpose of the investigation was to determine violations of Ohio's Solid Waste Regulations as detailed in a guidance letter mailed to Lois Gilboy on June 18, 2012. The October inspection documented thousands of scrap tires dumped on the ground, burnt scrap tires and miscellaneous solid waste scattered throughout the property. The inspection also documented numerous barrels containing various colored substances believed to be ink or paint (Bureau of Special Services, November 2012).

In a letter dated December 19, 2012, PHDMC formally requested assistance from EPA to determine if the Site meets the criteria for a removal action (Division of Environmental Health, December 2012).

d) Montgomery County Sheriff's Office

In a MCS incident report (Incident Report No. 12-10524) dated October 25, 2012, a representative from the MCS's office conducted an inspection of the property owned by Lois Gilboy and the following was documented (Montgomery County Sheriff, October 2012):

- Approximately 80,000 scrap tires were located in various locations throughout the property.
- Approximately 100 metal drums containing dye or ink or paint from a printing company were observed.
- All of the metal drums displayed signs of corrosion.
- The colored substance, believed to be paint, was visible on the ground and the waterway in multiple locations.
- Several burn piles/areas were observed throughout the property. In these areas, scrap tires had been burned and the rims removed. It was determined by Ohio EPA that these burn areas had been conducted recently.
- MCS documented trespassing is occurring on the Site.

2. Physical Location

The OCD Site is located at 4101 Soldiers Home West Carrollton Road and is situated in a mixed residential and commercial area of Moraine, Montgomery County, Ohio 45418 (Figure A-1). The geographical coordinates for the Site are 39° 41' 17.9952" North latitude and -84° 16' 25.5072" West longitude. The Site is bordered to the north by the former dump, to the south and west by Opossum Creek and residential and wooded areas beyond, and to the east by residential homes and wooded areas beyond (Figure A-2). Commercial businesses are located within 500 feet east of the Site, and the closest residences are located within 300 feet west of the Site.

The area surrounding the OCD Site was screened for Environmental Justice (EJ) concerns using Region 5's EJ Assist Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT)). Census tracts with a score of 1, 2, or 3 are considered to be high-priority potential EJ areas of concern according to EPA Region 5. The OCD Site is in a census tract with a score of 4 (Attachment III). Therefore, Region 5 does not consider this Site to be a high-priority potential EJ area of concern. Please refer to the attached analysis for additional information.

3. Site Characteristics

The OCD Site is a former 20-acre dump that contains an estimated 1,000 buried and partially buried 55-gallon drums and containers (having a volume of 5-gallons or less). The 55-gallon drums and containers contain multi-colored ink waste solids and liquids. Sampling results from EPA's SI has documented heavy metal (lead and arsenic), toxic (TCLP lead) and ignitable wastestreams. The drum burial area covers approximately 28,100 square feet (SF) and is estimated at 5 feet deep. A map summarizing the potential limits of the drum burial area can be found in Figure A-3. The Site is currently vacant and has been repeatedly entered by unauthorized individuals. There is no perimeter fencing and the property is open to foot or vehicle traffic.

EPA performed a SI on December 12, 2012. The proposed time-critical removal will be the first removal action at the Site by EPA. No other entities are conducting or have conducted efforts to control contamination at the Site.

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

EPA confirmed the presence of a threat of release of hazardous substances, pollutants, or contaminants at the Site as defined by Section 101(14) of CERCLA, including the presence of heavy metal (lead and arsenic), toxic (TCLP lead) and ignitable hazardous waste in buried and partially buried drums and containers. EPA documented a drum disposal area covering approximately 28,100 SF. Numerous drums were corroded and had their contents spilled onto the ground. Multi-colored ink solids were observed mixed with on-site soils and adjacent to or within Opossum Creek.

A release or threat of release of hazardous substances, pollutants, or contaminants is present at the Site. The Site is abandoned, and is open to foot or vehicle traffic due to the lack of secured perimeter fencing. Drums and other containers at the Site are in poor condition and are leaking. Sampling during the SI showed the presence of drums and containers with contents that contain heavy metal, toxic and ignitable hazardous waste.

5. NPL status

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

6. Maps, pictures and other graphic representations

Figure A-1 Site Location Map

Figure A-2 Site Layout Map

Figure A-3 Drum Burial Location Map

Figure A-4 Photos

Attachment 1 - Environmental Justice (EJ) analysis are included as attachments.

B. Other Actions to Date

1. Previous actions

This Action Memo documents previous actions by Ohio EPA, PHDMC and MCS in the Background section (Section II.A.1).

2. Current actions

The Site has been documented to contain approximately 1,000 buried and partially buried 55-gallon drums and containers containing heavy metal, toxic and ignitable hazardous waste. The Site is currently vacant, not secured, and there is evidence of frequent trespassing. The possibility exists that illegal trespassing could continue which may result in a potential exposure to public health or welfare or the environment. There are currently no actions being conducted at the Site.

C. State and Local Authorities' Roles

In a letter dated December 3, 2012, Ohio EPA formally requested assistance from EPA to determine if the Site meets the criteria for a removal action (Ohio EPA, December 2012).

In a letter dated December 19, 2012, PHDMC formally requested assistance from EPA to determine if the Site meets the criteria for a removal action (Division of Environmental Health, December 2012).

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

The conditions at the OCD 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 C.F.R. § 300.415(b)(2). These criteria 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;

During the December 12, 2012 SI, EPA documented the presence on-site, abandoned chemical wastes including buried and partially buried 55-gallon drums and containers and on-site soils containing heavy metal (lead and arsenic), toxic (TCLP lead) and ignitable hazardous waste. Drums and containers were noted to be corroded and some had released their contents onto the ground. EPA also documented toxic (TCLP lead) hazardous waste adjacent to and within Opossum Creek.

The analytical result from solid waste sample S-2 documented a burn rate of 3.8 millimeters per second (mm/sec), which, according to 40 C.F.R. § 261.21, satisfies the

criteria for hazardous waste that is characteristic for ignitability (D001). According to Method 1030 (Ignitability of Solids), any burn rate for non-metallic samples that exceeds 2.2 mm/sec is considered to have a positive result for ignitability.

Analytical results from ink waste samples S-1 and S-5 through S-8 documented TCLP lead concentrations ranging from 5.6 to 24 milligrams per liter (mg/L). Analytical results from surficial soil sample S-10 documented a TCLP lead concentration of 7.4 mg/L. The TCLP lead concentrations from the six waste samples are greater than the TCLP lead regulatory level of 5.0 mg/L, which satisfies the 40 C.F.R § 261.24 criteria for hazardous waste that is toxic (D008).

During Ohio EPA's November 2012 site reconnaissance, Ohio EPA used an XRF and documented total lead concentrations in 11 solid waste samples ranging from 1,282 to 173,200 ppm. During EPA's December 2012 site reconnaissance, EPA used an XRF and documented total lead concentrations in 12 solid waste and surficial soil samples ranging from 423 to 79,800 ppm. During EPA's December 2012 SI, surficial soil samples S-9 and S-10 documented total lead concentrations of 5,100 and 5,600 milligrams per kilogram (mg/kg), respectively. In addition, EPA used an XRF and documented total lead concentrations in 20 solid waste and surficial soil samples ranging from 425 to 233,756 ppm. All 45 of these samples exceed the EPA residential lead Removal Management Level (RML) of 400 ppm.

The toxicological effects of lead have been studied by the Agency for Toxic Substances and Disease Registry (ATSDR). Toxicological information is provided below and referenced in the Administrative Record (Attachment II).

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. (ATSDR, August 2007).

During Ohio EPA's November 2012 site reconnaissance, Ohio EPA used an XRF and documented total arsenic concentrations in 9 solid waste samples ranging from 337 to 11,700 ppm. During EPA's December 2012 site reconnaissance, EPA used an XRF and documented total arsenic concentrations in 8 solid waste and surficial soil samples ranging from 249 to 4,065 ppm. During the December 2012 SI, EPA surficial soil sample S-9 documented a total arsenic concentration of 39 mg/kg. In addition, EPA used an XRF and documented total arsenic concentrations in 9 solid waste and surficial soil

samples ranging from 102 to 15,637 ppm. All 27 of these samples exceed the EPA residential arsenic RML of 22 ppm.

The toxicological effects of arsenic have been studied by ATSDR. Toxicological information is provided below and referenced in the Administrative Record (Attachment II).

Arsenic – Breathing high levels of inorganic arsenic can give you a sore throat or irritated lungs. 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 (ATSDR, August 2007).

Residential locations are located within 300 feet of the western perimeter of the Site. The Site is unoccupied, unfenced, and has been documented to have frequent trespassing.

There is widespread lead and arsenic contamination adjacent to and within Opossum Creek. Hazardous waste (ink waste) has been documented in solid waste samples within and leaking from drums and containers, mixed with surficial soil and documented along the banks of Opossum Creek having total lead concentrations exceeding the Region 5 lead RML of 400 ppm, with a high total lead concentration of 233,756 ppm and TCLP lead concentration as high as 24 mg/L. In addition, total arsenic has been documented on Site as high as 15,637 ppm, which exceeds the EPA arsenic RML of 22 ppm.

There is potential exposure to nearby human receptors, including residents in their homes from the hazardous substances, pollutants, or contaminants on-site. Future trespassers could cause an accidental or intentional release of hazardous material and their contact with hazardous materials is also possible. The close proximity of residential areas to the abandoned Site greatly increases the likelihood of human health and environmental impacts should such an occurrence or release take place. Potential exposure could occur through each of these migration pathways and cause imminent endangerment to human health and the environment.

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

During the EPA Site Investigation, the OSC observed and documented the presence of approximately 1,000 buried and partially buried 55-gallon drums and containers. Many of the drums and containers are corroded and have released its contents onto the ground. The OSC observed visible ink waste from the buried drums adjacent to and within Opossum Creek.

EPA samples confirmed the presence of heavy metal (lead and arsenic), toxic (TCLP lead) and ignitable hazardous waste at the OCD Site. Analytical results are provided in Table B-1. In addition, EPA and Ohio EPA used a Thermo Scientific Niton XL3t XRF unit to document elevated total lead and arsenic concentrations in ink solids and surficial soils throughout the Site. The XRF sampling results are provided in Table B-2.

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

During EPA's December 2012 SI, surficial soil samples S-9 and S-10 documented total lead concentrations of 5,100 and 5,600 milligrams per kilogram (mg/kg), respectively. In addition, EPA used an XRF and documented total lead concentrations in 20 solid waste and surficial soil samples ranging from 425 to 233,756 ppm. All 45 of these samples exceed the EPA residential lead Removal Management Level (RML) of 400 ppm.

Additionally, EPA used an XRF and documented total arsenic concentrations in 8 solid waste and surficial soil samples ranging from 249 to 4,065 ppm. During the December 2012 SI, EPA surficial soil sample S-9 documented a total arsenic concentration of 39 mg/kg and documented total arsenic concentrations in 9 solid waste and surficial soil samples ranging from 102 to 15,637 ppm.

Elevated levels of heavy metals including lead and arsenic have the potential to migrate vertically due to leaching or horizontally due to the proximity to Opossum Creek.

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

Southwestern Ohio receives a substantial amount of precipitation during spring, and winter temperatures are normally below freezing with regular snowfall. Weather conditions will contribute to the further deterioration of the already severely corroded drums and containers. Additionally, partially buried and buried drums are located in the floodplain of Opossum Creek. Spring flooding causes drums to deteriorate due to water infiltration and erosion. There is nothing to prevent freezing and thawing of the contents in the drums and containers. EPA observed ink waste solids with TCLP lead as high as 24 mg/L and total lead and total arsenic as high as 233,756 ppm and 15,637 ppm, respectively. EPA also observed yellow ink solids on the bank of Opossum Creek with a total lead concentration of 27,799 ppm. There is nothing to prevent rainwater or Creek water from entering the corroded drums and containers and causing the migration of heavy metal-contaminated ink solids into the environment and into Opossum Creek.

Threat of fire or explosion;

The analytical result from solid waste sample S-2 documented a burn rate of 3.8 mm/sec, which, according to 40 C.F.R. § 261.21, satisfies the criteria for hazardous waste that is characteristic for ignitability (D001). According to Method 1030 (Ignitability of Solids), any burn rate for non-metallic samples that exceeds 2.2 mm/sec is considered to have a

positive result for ignitability. This meets the criteria for ignitability for a RCRA characteristic waste. As such, the waste represents a threat of fire or explosion.

The availability of other appropriate Federal or state response mechanisms to respond to the release;

Ohio EPA does not have the resources to respond to this Site. In a letter dated December 3, 2012, Ohio EPA formally requested assistance from EPA to determine if the OCD Site met the criteria for a removal action (Ohio EPA, December 2012).

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 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

The response actions described in this memorandum directly address actual or potential releases of hazardous substances on Site, which may pose an imminent and substantial endangerment to public health, or welfare, or the environment. Removal activities on Site will include:

1. Develop and implement a Site-specific Health and Safety Plan, including an Air Monitoring Plan, and a Site Emergency Contingency Plan;
2. Develop and implement a Site Security Plan;
3. Characterize, remove, transport and dispose of all characterized or identified hazardous waste (uncontainerized waste, partially buried and subsurface drums and small containers) and associated heavy metals-contaminated soils and debris located at the Site in accordance with EPA's Off-Site Rule (40 CFR § 300.440);
4. Develop and implement an extent of contamination and post excavation sampling plan to verify cleanup;
5. If necessary, backfill excavated areas with clean material and topsoil. Seed area to prevent soil erosion; and

6. 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 removal action will be conducted in a manner not inconsistent with the National Contingency Plan (NCP). The OSC has initiated planning for provision of post-removal Site control consistent with the provisions of Section 300.415(l) of the NCP.

Off-Site Rule

All hazardous substances, pollutants, or contaminants removed off-Site pursuant to this removal action for treatment, storage, and disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by EPA, with the EPA Off-Site Rule, 40 C.F.R. § 300.440.

2. Contribution to remedial performance:

The proposed action will not impede future actions based on available information. At this time it is not known if long-term remedial actions will be needed for the Site.

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

Not Applicable

Applicable or relevant and appropriate requirements (ARARs)

All applicable and relevant and appropriate requirements (ARARs) of Federal and State law will be complied with to the extent practicable. The OSC submitted a letter dated December 21, 2012, to Randy Watterworth, Ohio EPA Southwest District Office, requesting state ARARs for the OCD Site. Any state ARARs identified in a timely manner will be complied with to the extent practicable.

Project Schedule

The removal activities are expected to take 60 on-site working days to complete.

Estimated Costs

The detailed cleanup contractor cost is presented in Attachment I and the Independent Government Cost Estimate is presented in Attachment IV. Estimated project costs are summarized below:

<u>Regional Removal Allowance Costs</u>	
Total Cleanup Contractor Costs (Includes a 20% contingency)	\$ 1,426,769
<u>Other Extramural Costs Not Funded from the Regional Allowance</u>	
Total START, including multiplier costs	\$ 99,000
Subtotal, Extramural Costs	\$ 1,525,769
Extramural Costs Contingency (15% of Subtotal, Extramural Costs)	\$ 228,865
TOTAL REMOVAL ACTION PROJECT CEILING	\$ 1,754,634

The response actions described in this memorandum directly address actual or threatened releases of hazardous substances, pollutants, or contaminants at the Site which may pose an imminent and substantial endangerment to public health and safety and the environment. These response actions do not impose a burden on the 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 Section 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 or delaying 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 Enforcement Confidential Addendum.

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$3,011,294.¹

$$(\$1,754,634 + \$108,675) + (61.61\% \times \$1,863,309) = \$3,011,294$$

IX. RECOMMENDATION

This decision document represents the selected removal action for the OCD Site, located in Moraine, Montgomery County, Ohio, 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 Section 300.415(b) criteria for a removal, and I recommend your approval of the proposed removal action.

The total removal action project ceiling, if approved, will be \$1,754,634. Of this, as much as \$1,655,634 comes from the Regional removal allowance.

APPROVE 
Director, Superfund Division

DATE: 2-5-13

DISAPPROVE _____
Director, Superfund Division

DATE: _____

Enforcement Addendum

Figures:

- A-1 Site Location Map
- A-2 Site Layout Map
- A-3 Drum Burial Map
- A-4 Photographic Documentation

Tables:

- B-1 Laboratory Analytical Results
- B-2 XRF Sampling Results

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.

Attachments:

- I. Detailed Cleanup Contractor Cost Estimate
- II. Administrative Record Index
- III. Region V EJ Analysis
- IV. Independent Government Cost Estimate

cc: S. Fielding, U.S. EPA 5202G
V. Darbv, U.S. Department of Interior, **w/o Enf. Attachment**
(email: Valencia_darbv@ios.doi.gov)
Scott Nally, Director, Ohio EPA, **w/o Enf. Addendum**
(email: Scott.Nally@epa.state.oh.us)
Mike DeWine, Ohio Attorney General, **w/o Enf. Addendum**
(email: Mike.DeWine@ohioattorneygeneral.gov)

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NOT RELEVANT TO SELECTION OF

REMOVAL ACTION

ENFORCEMENT ADDENDUM
OPOSSUM CREEK DRUM SITE
MORaine, MONTGOMERY COUNTY, OHIO
FEBRUARY 2013

ENFORCEMENT SENSITIVE - DO NOT RELEASE -
NOT SUBJECT TO DISCOVERY - FIOA EXEMPT

HAS BEEN REDACTED

THREE PAGES

ENFORCEMENT SENSITIVE

NOT APPLICABLE TO DISCOVERY

NOT RELEVANT TO SELECTION OF REMOVAL ACTION

FIGURE A-1
SITE LOCATION MAP

Image Source: National Geographic Society

Site
Location



0 1
Miles



Prepared For:
U.S. EPA REGION V

Contract No: EP-S5-06-04
TDD No.: S05-0001-1211-013
DCN: 2050-4H-BELK



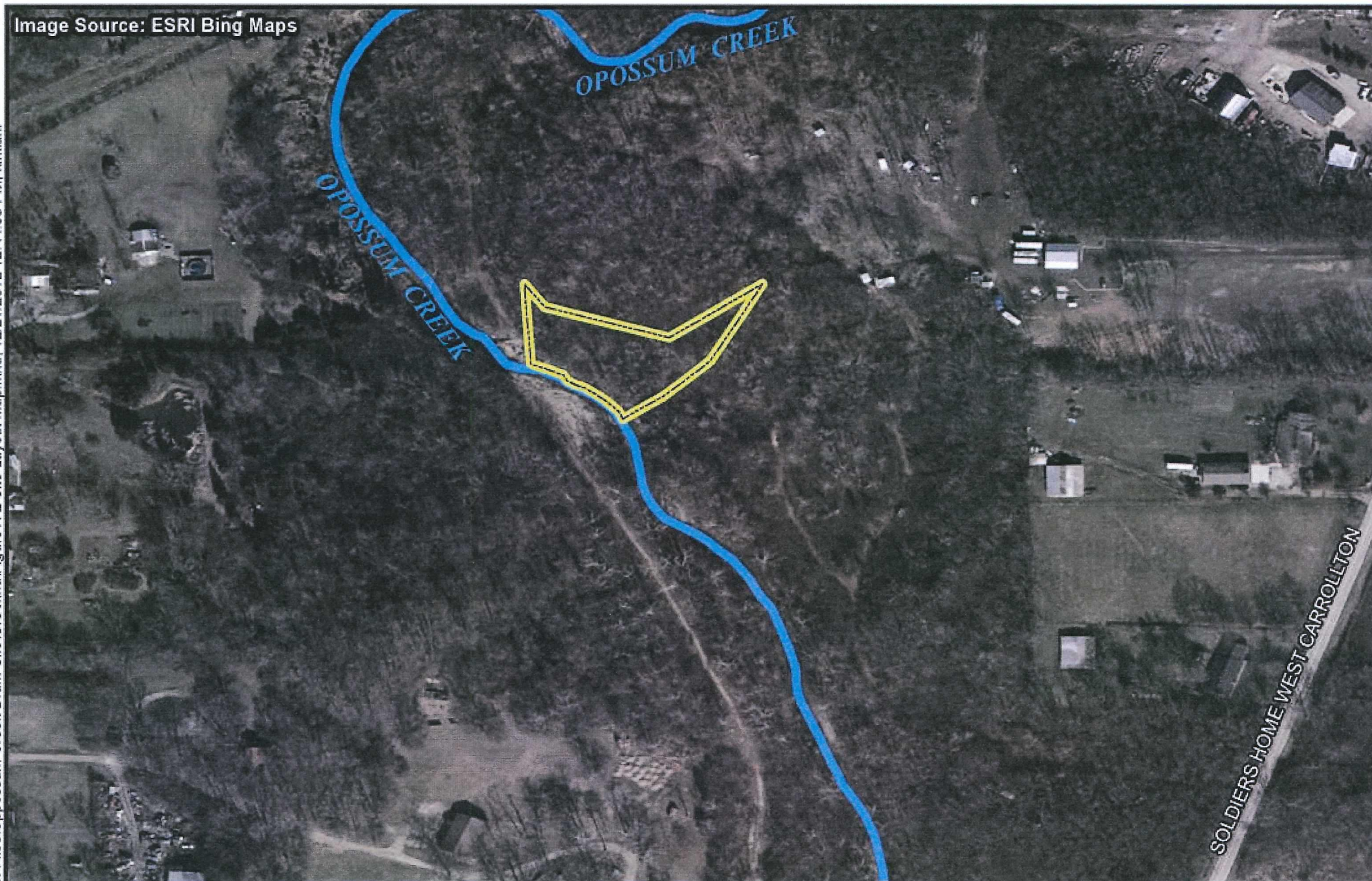
Prepared By:
WESTON
SOLUTIONS, INC.

4710-A Interstate Drive
Cincinnati, Ohio 45246



Figure A-1
Site Location Map
Opossum Creek Drum Site
Moraine, Montgomery County, Ohio

FIGURE A-2
SITE LAYOUT MAP

Image Source: ESRI Bing Maps



Legend

-  Drum Burial Area
-  Opossum Creek

0 250
Feet



Prepared For:
U.S. EPA REGION V

Contract No: EP-S5-06-04
TDD No.: S05-0001-1211-013
DCN: 2050-4H-BXXX



Prepared By:
**WESTON
SOLUTIONS, INC.**

4710-A Interstate Drive
Cincinnati, Ohio 45246

Figure A-2
Site Layout Map
Opossum Creek Drum Site
Moraine, Montgomery County, Ohio





FIGURE A-3

DRUM BURIAL MAP

Image Source: ESRI Bing Maps



Legend

-  Visible Drum
 Visible Small Container
 Drum Burial Area
 Opossum Creek
- 0 75 Feet



Prepared For:
U.S. EPA REGION V

Contract No: EP-S5-06-04
TDD No.: S05-0001-1211-013
DCN: 2050-4H-BXXX



Prepared By:
**WESTON
SOLUTIONS, INC.**

4710-A Interstate Drive
Cincinnati, Ohio 45246

Figure 2
Drum Burial Map
Opossum Creek Drum Site
Moraine, Montgomery County, Ohio

FIGURE A-4

PHOTOGRAPHIC DOCUMENTATION



Photo 1: Partially buried drums



Photo 2: Severely corroded drum



Photo 3: Multi-colored paint/ink waste inside drums



Photo 4: Buried and partially buried drums and containers



Photo 5: Partially buried drum



Photo 6: Abandoned partially buried drums



Photo 7: Abandoned drums



Photo 8: Proximity of abandoned drums to Opossum Creek and ink waste visibly observed in the waters of Opossum Creek



Photo 9: Partially buried drums



Photo 10: Severely corroded drums



Photo 11: Partially buried drums with Opossum Creek in background



Photo 12: Red-colored paint/ink waste. Sample S-1 having a total lead concentration of 93,400 ppm



Photo 13: Yellow and red-colored paint/ink waste in drums. Sample S-4 showing a total lead concentration of 233,800 ppm



Photo 14: Yellow-colored paint/ink waste in drum. Sample S-6 showing a total lead concentration of 104,100 ppm



Photo 15: Red-colored paint/ink solids in buried drum. Sample S-7 showed a total lead concentration of 60,500 ppm



Photo 16: Green-colored paint/ink solids in buried drum. Sample S-11 showed a total lead concentration of 61,900 ppm

TABLE B-1

**U.S. EPA ANALYTICAL RESULTS
OPOSSUM CREEK DRUM SITE**

Parameter	Regulatory Limit or EPA RML	Sample Designation				
		S-1	S-2	S-3	S-4	S-5
Ignitability (mm/sec)	2.2	NA	3.8	NA	NA	NA
TCLP 2-Butanone (MEK) (in mg/L)	200.0	NA	54	NA	NA	NA
PCBs (in mg/kg)	50.0	0.63	NA	ND	NA	NA
Total Lead (in mg/kg)*	400 (RML)	93,356	NA	27,799	233,756	147,389
Total Arsenic (in mg/kg)*	22 (RML)	4,471	NA	ND	15,637	ND
TCLP Lead (in mg/L)	5.0	16	NA	4.3	4.1	8.2
TCLP Arsenic (in mg/L)	5.0	ND	NA	ND	ND	ND
Sample Description		Red ink solid	White paint sludge	Yellow ink solid on the ground adjacent to Opossum Creek	Yellow ink solid	Yellow ink solid on the ground
Container Type		Drum	Drum	None	Drum	None

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

mm/sec – millimeters per second

NA = Not analyzed

ND = Not detected (reporting limit)

MEK – Methyl Ethyl Ketone

RML – Removal Management Level

TCLP = Toxicity Characteristic Leaching Procedure

*- Unless noted, the results were obtained using a

Thermo Scientific Niton XL3t XRF meter

Bolded and Shaded results indicate Regulatory Level
or RML exceedances

TABLE B-1

**U.S. EPA ANALYTICAL RESULTS
OPOSSUM CREEK DRUM SITE**

Parameter	Regulatory Limit or EPA RML	Sample Designation				
		S-6	S-7	S-8	S-9	S-10
Ignitability (mm/sec)	2.2	NA	NA	NA	NA	NA
TCLP 2-Butanone (MEK) (in mg/L)	200.0	NA	NA	NA	NA	NA
PCBs	50.0	NA	NA	NA	NA	NA
Total Lead (in mg/kg)*	400 (RML)	104,064	60,502	57,516	4,848 (XRF) 5,100 (Lab)	33,456 (XRF) 5,600 (Lab)
Total Arsenic (in mg/kg)*	22 (RML)	ND	4,956	2,538	301 (XRF) 39 (Lab)	1,965 (XRF) ND (Lab)
TCLP Lead (in mg/L)	5.0	5.6	24	20	1.5	7.4
TCLP Arsenic (in mg/L)	5.0	ND	ND	ND	ND	ND
Sample Description		Yellow ink solid on the ground	Red ink solid	Red ink solid on the ground	Red, Yellow and Blue ink solids mixed with surficial soil	Red, Yellow and Blue ink solids mixed with surficial soil
Container Type		None	Drum	None	None	None

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

mm/sec – millimeters per second

NA = Not analyzed

ND = Not detected (reporting limit)

MEK – Methyl Ethyl Ketone

RML – Removal Management Level

TCLP = Toxicity Characteristic Leaching Procedure

*- Unless noted, the results were obtained using a

Thermo Scientific Niton XL3t XRF meter

Bolded and Shaded results indicate Regulatory Level or RML exceedances

TABLE B-1

**U.S. EPA ANALYTICAL RESULTS
OPOSSUM CREEK DRUM SITE**

Parameter	Regulatory Limit or EPA RML	Sample Designation
		S-11
Ignitability (mm/sec)	2.2	NA
TCLP 2-Butanone (MEK) (in mg/L)	200.0	NA
PCBs	50.0	NA
Total Lead (in mg/kg)*	400 (RML)	61,931
Total Arsenic (in mg/kg)*	22 (RML)	1,264
TCLP Lead (in mg/L)	5.0	2.1
TCLP Arsenic (in mg/L)	5.0	ND
Sample Description		Green ink solid
Container type		Drum

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

mm/sec – millimeters per second

NA = Not analyzed

ND = Not detected (reporting
limit)

MEK – Methyl Ethyl Ketone

RML – Removal Management Level

TCLP = Toxicity Characteristic
Leaching Procedure*- Unless noted, the results were
obtained using a Thermo Scientific
Niton XL3t XRF meterBolded and Shaded results indicate
Regulatory Level or RML exceedances

TABLE B-2

**XRF SAMPLING RESULTS
OPOSSUM CREEK DRUM SITE**

Sample No.	Total Lead (ppm)	Total Arsenic (ppm)	Location	Description
1	14,200	582	Red ink solid	Ohio EPA Site Reconnaissance – November 2012
2	132	< 23	Blue ink solid	
3	12,000	1,208	Black goo	
4	1,282	< 62	Yellow ink solid	
5	116,500	7,389	Yellow ink solid	
6	173,200	11,700	Multi-colored ink solid	
7	26,400	< 421	Yellow and blue ink solid	
8	24	13	Black ink solid	
9	3,741	337	Black ink solid	
10	18	< 9	Blue ink solid	
11	53	< 25	White ink solid	
12	3,332	389	White ink solid	
13	31,100	1,845	Red ink solid by Opossum Creek	
14	62,500	4,786	Yellow ink solid along Opossum Creek	
15	68	< 33	Soil along Opossum Creek	
16	71,000	6,186	Green ink solid	
17	1,029	249	White ink solid	EPA Site Reconnaissance – December 7, 2012
18	69,500	3,828	Red ink solid	
19	79,800	ND	Yellow ink solid	
20	932	267	White ink solid	
21	54,400	ND	Green ink solid	
22	10,400	ND	Red ink solid	
23	40,000	1,272	Yellow ink solid next to Opossum Creek	
24	423	ND	Blue ink solid	
25	1,431	260	Blue and Yellow ink solids on surficial soil	
26	88,200	4,065	Red ink solid	
27	5,723	437	Black goo	
28	74,400	1,675	Yellow ink solid	
29	93,356	4,471	Red ink solid (S-1)	EPA Site Investigation – December 12, 2012
30	152	ND	White ink solid	
31	12,890	ND	Yellow ink solid	
32	27,799	ND	Yellow ink solid adjacent to water (S-3)	
33	233,756	15,637	Yellow in solid (S-4)	
34	147,390	ND	Yellow ink solid (S-5)	
35	104,064	ND	Yellow ink solid (S-6)	
36	60,502	4,956	Red ink solid (S-7)	
37	4,033	ND	Red ink solid	
38	57,516	2,538	Red ink solid (S-8)	
39	4,848	301	Multi-color ink in soil (S-9)	
40	33,456	1,965	Multi-color ink in soil (S-10)	

TABLE B-2

**XRF SAMPLING RESULTS
OPOSSUM CREEK DRUM SITE**

Sample No.	Total Lead (ppm)	Total Arsenic (ppm)	Location	Description
41	2,391	102	Blue ink solid	EPA Site Investigation – December 12, 2012
42	425	ND	Surficial soil	
43	15,792	414	Surficial oil	
44	61,931	1,264	Green ink solid (S-11)	

Notes:

ND = Not detected at XRF limit of detection

ppm = parts per million

Bolded and shaded results indicate results which exceed the total lead Removal Management Level (RML) of 400 ppm or the total arsenic RML of 22 ppm for residential properties

ATTACHMENT I
DETAILED CLEANUP CONTRACTOR COST ESTIMATE
INDEPENDENT GOVERNMENT CLEANUP CONTRACTOR
ESTIMATE

OPOSSUM CREEK DRUM SITE
MORaine, MONTGOMERY COUNTY, OHIO
FEBRUARY 2013

HAS BEEN REDACTED

ONE PAGE

ENFORCEMENT SENSITIVE

NOT APPLICABLE TO DISCOVERY

NOT RELEVANT TO SELECTION OF REMOVAL ACTION

ATTACHMENT II

U.S. ENVIRONMENTAL PROTECTION AGENCY

REMOVAL ACTION

ADMINISTRATIVE RECORD

FOR

OPOSSUM CREEK DRUM SITE

MORaine, MONTGOMERY COUNTY, OHIO

ORIGINAL

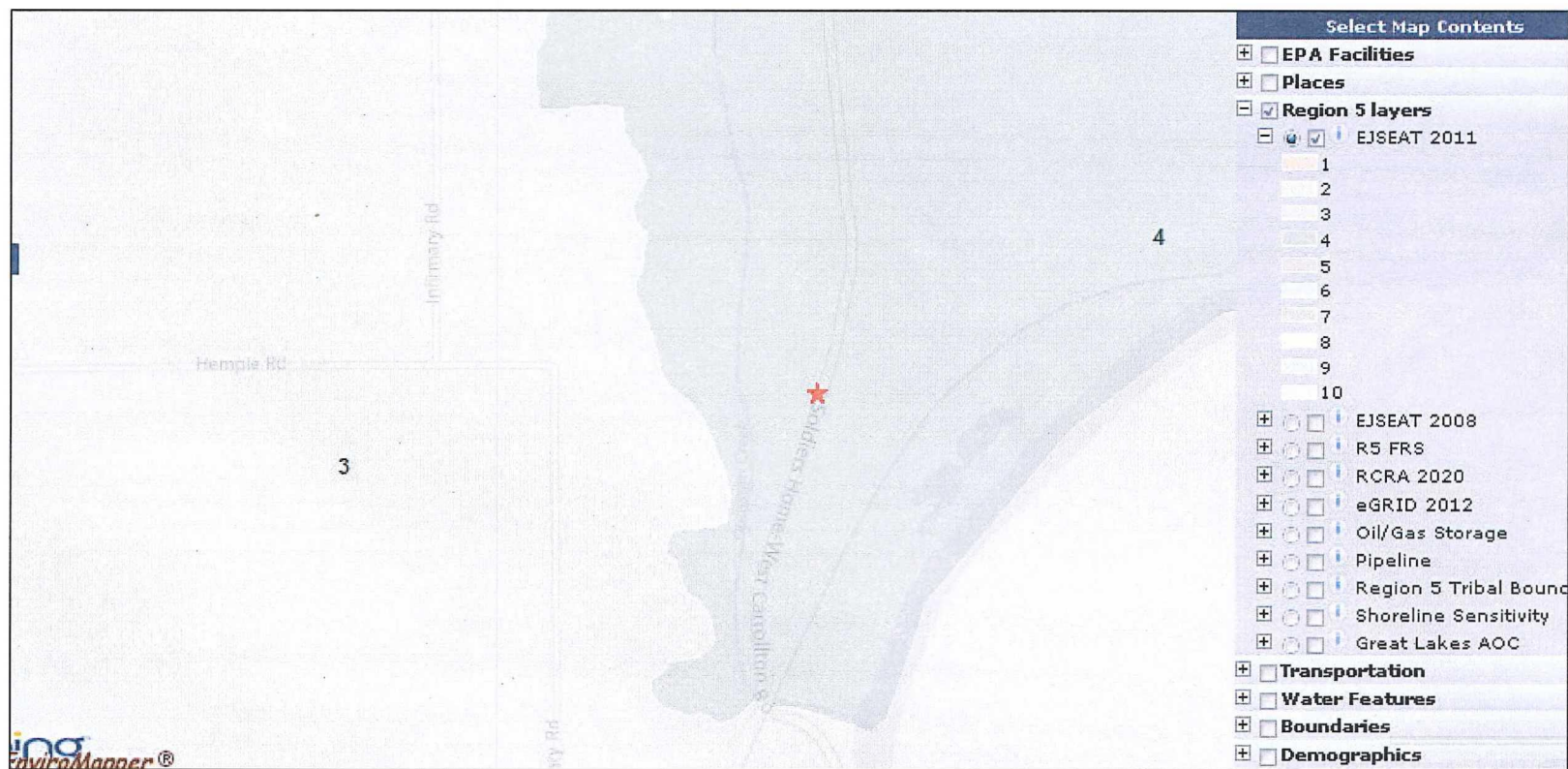
JANUARY 2013

<u>NO</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	8/00/07	ATSDR	U.S. EPA	ATSDR - Fact Sheet for exposure to lead	2
2	8/00/07	ATSDR	U.S. EPA	ATSDR - Fact Sheet for exposure to arsenic	2
3	10/25/12	Montgomery County Sheriff's Office	Ohio EPA	Administrative Information - Narrative of Call to a Response from the Montgomery County Sheriff's Office	5
4	11/02/12	Kautz, M., Bureau of Special Services	Gilboy, L.,	Letter re: Notice of Violation (Parcel ID #J442041150004 and Parcel ID #J442041150005) Soldiers Home West Carrollton Rd.	9
5	12/03/12	Watterworth, R., Ohio EPA	U.S. EPA	Removal Action Referral to U.S. EPA for the Opossum Creek Drum Site	8
6	12/19/12	Case, M., Division of Environmental Health	Renninger, S. U.S. EPA	Letter re: Public Health - Dayton & Montgomery County Requesting U.S EPA Assistance in Responding and Removing Environmental Hazards at the Opossum Creek Drum Site	1
7	12/21/12	Renninger, S., U.S. EPA	Watterworth, R., Ohio EPA	Letter re: U.S. EPA Request that Ohio EPA Identify any State ARARs for the Opossum Creek Drum Site	1
8	01/00/13	Weston Solutions, Inc.	U.S. EPA	Site Assessment Report for the Opossum Creek Drum Site (PENDING)	
9	01/00/13	Renninger, S., U.S. EPA	Karl, R., U.S. EPA	Action Memorandum: Opossum Creek Drum Site (PENDING)	

ATTACHMENT III
REGION 5 EJ ANALYSIS

The area surrounding the OCD Site was screened for Environmental Justice (EJ) concerns using Region 5's EJ Assist Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT)). Census tracts with a score of 1, 2, or 3 are considered to be high-priority potential EJ areas of concern according to EPA Region 5. The OCD Site is in a census tract with a score of 4 (Figure 1). Therefore, Region 5 does not consider this Site to be a high-priority potential EJ area of concern.

Figure 1
OCD Site Map Showing EJ SEAT Values For Surrounding Area



**ATTACHMENT IV
INDEPENDENT GOVERNMENT COST ESTIMATE**

**OPOSSUM CREEK DRUM SITE
MORaine, MONTGOMERY, OHIO
FEBRUARY 2013**

HAS BEEN REDACTED

FOUR PAGES

ENFORCEMENT SENSITIVE

NOT RELEVANT TO SELECTION OF REMOVAL ACTION