



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



REPLY TO THE ATTENTION OF:

MEMORANDUM

SUBJECT: ACTION MEMORANDUM: Request for an Emergency and Time Critical Removal Action at the Seerley Road Fire Site, Indianapolis, Marion County, Indiana, (Site ID # C59J)

FROM: Jason Sewell, OSC
Emergency Response Branch 1, Section 1

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

TO: Richard C. Karl, Director
Superfund Division

I. PURPOSE

This memorandum requests and documents your approval to expend up to \$ 1,143,680 for emergency response actions and to conduct a time critical removal action at the Seerley Road Fire Site (the Site) located in Indianapolis, Marion County, Indiana. On October 20, 2015, the U.S. Environmental Protection Agency (EPA) On-Scene Coordinator (OSC) authorized up to \$50,000 to begin emergency removal actions to mitigate the threat of fire and explosion and release or threat of release of hazardous substances or pollutants or contaminants at the Site. On November 4, 2015, the Emergency Response Branch (ERB) 1 Branch Chief authorized an additional \$50,000 to continue emergency response actions to stabilize and secure the Site. On November 24, 2015, the ERB 1 Branch Chief authorized an additional \$50,000 for a total emergency response ceiling of \$150,000 to continue securing and monitoring the Site pending the initiation of removal actions. The proposed removal action herein will mitigate the threat to public health, welfare, and the environment posed by the release and threatened releases of hazardous substances, and/or pollutants or contaminants to the environment.

The proposed removal 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 Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. § 300.415. The uncontrolled conditions of the hazardous substances and/or pollutants or contaminants present at the Site require that this initial action to consolidate and secure hazardous substances be classified as an emergency removal action, and that actions to characterize and properly dispose of hazardous substances be

classified as a time critical removal action. The project will require approximately 30 working days to complete.

There are no nationally significant or precedent setting issues associated with the Seerley Road Fire Site and the Site is not on the National Priorities List (NPL).

II. SITE CONDITIONS AND BACKGROUND

Site Name: Seerley Road Fire Site
Site ID: C59J
CERCLIS ID: INN000506096
Category: Emergency Removal Action
RCRA ID: Pending

A. Site Description

1. Removal Site Evaluation

The following section provides background information on the Site. EPA initiated an emergency response action on October 20, 2015. EPA's initial actions included: monitoring ambient air and surface water runoff following a structure fire; construction of rain shelters, berming and trenching to prevent water from contacting water reactive hazardous substances; and establishing 24 hour site security to prevent unauthorized access to hazardous substances, pollutants or contaminants. Ongoing EPA actions include maintaining 24 hour a day site security and the daily monitoring of water reactive hazardous substances until time-critical removal actions may begin. For more information, see the Pollution Reports (POLREP) in the Administrative Record (AR) (AR Document Nos: 10 through 15).

The Site was the former private residence of Joel Williamson, Sr. and his wife. The Site is approximately 69 acres and includes: three old and dilapidated residences that are vacant and unfit for dwelling; several barns, garages and storage trailers; and four tillable farm fields. The fields are still actively row cropped but the rest of the property is generally unmaintained. The residential and barn yard areas are grown up with vegetation and brush. Solid wastes and scrap materials are stockpiled in storage buildings and surrounding brushy areas. Stockpiled materials include small cans, five gallon buckets, compressed gas cylinders and drums (Figures A-1, A-2, A-3).

In the 1960s and 1970s, Joel Williamson, Sr. was involved with the Williamson Polishing and Plating Company ("Williamson Polishing"), a polishing and plating business currently located on Dr. Andrew J. Brown Avenue in Indianapolis. Old plating equipment is stockpiled in a barn at the Site (Barn 1) (Figure B-1). Mr. Williamson also attended various auctions and he purchased equipment and other materials that were stockpiled at the Site. Among various materials at the Site, five - 35 gallon stainless steel drums (the five drums) have been stored in Barn 1 for several decades. Three of the five drums were overpacked within wood crates that were labeled

“potassium metal” and “keep water away.” The remaining two drums were not overpacked and were not labeled (Figure B-2).

The Site is currently owned by Joel I. Williamson, Jr., and Steven R. Williamson who are sons of Mr. and Mrs. Joel Williamson, Sr. On May 19, 2015, Joel I. Williamson, Jr. was cleaning in Barn 1 when he disturbed one of the five drums. The movement of the drum caused it to catch fire (AR Document No. 19). Joel I. Williamson, Jr. applied water to extinguish the fire but the water increased the intensity of the fire. Fire departments and the Marion County Public Health Department (MCPHD) responded to the fire which was subsequently extinguished. MCPHD noted the presence of the five drums and issued an Emergency Notice of Violation (NOV) for improper storage of a hazardous material (AR Document No 4). MCPHD notified the Indiana Department of Environmental Management (IDEM) of the five drums and requested assistance with waste compliance.

On May 20, 2015, Joel I. Williamson, Jr. hired Summit Contracting (Summit) to overpack the five drums to prevent further contact with water (humidity, precipitation). Summit removed all of the five drums from Barn 1 and staged them outside nearby. While moving the drums, an unknown material dripped from one of the drums and immediately caught fire. Summit overpacked three of the five drums in plastic / poly overpack drums and wrapped the two remaining drums in plastic within their original wood crates (Figure B-3) (AR Document No. 19).

On June 11, 2015, IDEM and MCPHD conducted a hazardous waste compliance inspection. The inspection report documented the presence of scrap metal, Styrofoam, old plating equipment and a few 30-gallon drums of unidentified material in Barn 1. Inspection of the entire building and its contents could not be performed due to physical obstructions and the amount of material being stored. According to Joel I. Williamson, Jr., the plating equipment came from Williamson Polishing over 30 years ago. As a result of the inspection, IDEM instructed Joel I. Williamson, Jr. to inventory the contents of the Site, characterize any potentially hazardous waste and dispose of the waste properly (AR Document No 6).

On June 17, 2015, MCPHD issued an Extension Letter documenting that the improper storage of a hazardous material violation had not been corrected, and adding the following two violations: improper storage of compressed gas cylinders and improper storage of a hazardous waste (AR Document No 5). As of July 23, 2015, none of the violations had been corrected and MCPHD issued a second Extension Letter (AR Document No 7).

On October 20, 2015, Barn 1 caught fire and burned completely. The fire involved materials stored within the barn, including: an out of use plating line, several drums of unknown materials, a stockpile of Styrofoam, and other unidentified items. The five drums were located adjacent to Barn 1 and were involved in the fire. The drums were severely scorched and damaged (Figure B-4). MCPHD reported the fire to IDEM and the National Response Center (NRC #1131287) (AR Document No 8), and requested immediate assistance from EPA's ERB for the stabilization and removal of wastes at the Site.

On October 20, 2015, the OSC responded to the Site and mobilized EPA Superfund Technical Assessment and Response Team (START) contractors to begin assessing ambient air and surface water runoff. The fire was mostly extinguished at the time of EPA and START arrival. No surface water runoff was observed from the Site. START conducted air monitoring downwind of the Site for combustible gases, oxygen, hydrogen sulfide, hydrogen cyanide, volatile organic compounds (VOCs), and particulates levels in the 10 micron and below range (PM10). Oxygen levels were normal and there were no detections of VOCs, combustible gases, hydrogen sulfide or hydrogen cyanide. START noted that PM10 readings ranged from 3 to 60 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) with a peak detection of $300 \mu\text{g}/\text{m}^3$. The OSC conferred with the Agency for Toxic Substances and Disease Registry (ATSDR) who established site specific screening levels for PM10 at $150 \mu\text{g}/\text{m}^3$ averaged over 24 hours or particulates in the 2.5 micron range and below (PM2.5) at $35 \mu\text{g}/\text{m}^3$ averaged over 24 hours. Although START detected a peak reading for PM10 at $300 \mu\text{g}/\text{m}^3$, the reading was instantaneous and did not persist above the 3 to $60 \mu\text{g}/\text{m}^3$ range. Therefore, PM10 levels in downwind areas were not found to exceed ATSDR screening levels (i.e., $150 \mu\text{g}/\text{m}^3$) (AR Document No. 10).

The OSC met with MCPHD, IDEM and Joel I. Williamson, Jr., who informed him that he had made no progress under the NOV (AR Document No. 4) in inventorying, characterizing, or removing hazardous substances at the Site, including the five drums of water reactive materials. According to Joel I. Williamson, Jr., the five drums were stored at the Site by his father Joel Williamson, Sr. decades ago.

On October 20, 2015, Joel I. Williamson, Jr. granted EPA access to begin stabilizing the Site and planning for disposal of hazardous substances, pollutants or contaminants (AR Document No 9). The OSC mobilized EPA Emergency and Rapid Response Services (ERRS) to begin planning for stabilization and removal actions.

The OSC, MCPHD, IDEM, START and ERRS conducted a site walk during which they observed and documented the five drums. The OSC designated the drums as Drum 1, 2, 3, 4 and 5 for tracking purposes (Figure B-5). All five drums were heavily scorched and damaged from heat.

- Drum 1 appeared to have a white salt forming at a leak near the base of the drum (Figure B-6). The breach on Drum 1 was not visible due to salt formation covering the breach.
- Drum 2 was laying on its side and a breach was visible through the bottom of the drum (Figure B-7). The breach on Drum 2 has the shape and appearance of a sharp tool, like an ax head.
- Drums 3 and 4 were scorched but showed no obvious signs of leaks, breaches or reactions.
- Drum 5 was located within a partially burned wood crate and unable to be visually assessed. One panel on the wood crate containing Drum 5 was marked "potassium metal" and "keep water away" (Figure B-8).

Given the potential hazards of potassium metal and the unknown materials found on Site, the five drums were not disturbed during the removal evaluation. Hazards of potassium metal include the potentials for: forming shock sensitive materials; generating explosive amounts of

hydrogen gas; fire from hydrogen gas; and formation of strong caustic vapors, liquids or solids as a result of contact with water (AR Document No. 3).

In addition to the five drums, the OSC observed: old plating vats and a plating line stored outdoors and in Barn 1 (Figures: B-18, B-19, B-20, B-21). The OSC also observed what appeared to be materials (Cake Piles 1 and 2) that were likely contained within drums prior to the October 20, 2015 fire at Barn 1 (Figure B-11). The OSC observed various other containers, including cans, buckets, drums and compressed gas cylinders. The OSC and START made plans to return for a full site assessment that would include further inventory of containers, evaluation of wastes, sampling collection, lab analysis, and a site assessment report.

On October 21, 2015, the OSC, START, ERRS, MCPHD, IDEM and the Wayne Township Fire/Hazmat team re-surveyed the five drums. Without the ability to safely sample the contents of the five drums, the Wayne Township Fire/Hazmat team collected a sample of the salt from Drum 1 (Sample Drum 1_102115) for assessment. START conducted field screening on the sample that included: analysis by X-Ray fluorescence for metals (to determine potassium or other metals), water reactivity test, and pH test by litmus paper.

Test:	Result:	Inference:
XRF	>10% potassium	Drum 1 likely contains potassium
XRF	5.72% calcium	Drum 1 may contain calcium
XRF	sodium not detected	Does not indicate sodium in Drum 1
Water	No visible reaction	Sample is not water reactive; Sample may be post-reacted salt
pH	13-14 standard units	High pH is consistent with potassium or sodium hydroxide salts or solutions

START submitted the Sample Drum 1_102115 to Envision Laboratories (Envision) for metals analysis by inductively coupled plasma mass spectrometry (ICP). The November 13, 2015 Envision lab results documented (AR Document No 18):

Metal:	Result:	Inference:
Potassium	15%	Drum 1 likely contains potassium
Calcium	14%	Drum 1 likely contains potassium
Sodium	3%	Drum 1 may contain sodium
Other metals	de Minimis percentages	

On October 21, 2015, ERRS erected a rain shelter and berms and trenches to prevent precipitation from contacting the five drums while they remained onsite. On October 23, 2015, ERRS erected a second rain shelter over the first shelter for a total of two layers of protection against precipitation.

On October 23, 2015, the OSC, START, ERRS, MCPHD, and IDEM conducted a visual survey of the five drums with two high-hazard environmental contractors who have demonstrated experience working with potassium metal and other reactive materials. MCPHD collected infrared (IR) pictures of the drums that were used to estimate the amount of material within Drums 1, 2, 3 and 4. Since Drum 5 was still located within an outer wooden overpack, the infrared image of Drum 5 could not be used for estimating the amount of material (AR Document No. 22).

Drum ID:	Estimated Volume:	Volume in Gallons:
Drum 1	66%	23.1
Drum 2	50%	17.5
Drum 3	90%	31.5
Drum 4	70%	24.5
Drum 5	90%*	31.5
	Estimated Total:	128.1 Gallons

*Drum 5 was assumed 'full', i.e./ 90% of 35 gallons.

Assuming the five drums contain potassium metal:

$$128.1 \text{ Gallons} \times 8.35^{**} \times 0.862^{***} = 922 \text{ Pounds of potassium}$$

**Specific weight of water in pounds per gallon

***Specific gravity of potassium

The high-hazard contractors advised the design of the five drums is consistent for use with potassium metal, sodium-potassium (NaK) alloy or possibly for other materials. Due to the lack of labeling on each drum and the possible degradation of the contents, the exact content or hazards of the drums cannot be known until sampling and analysis is performed. The high-hazard contractors pointed out the degraded condition of the drums due to age and damage by fire, and the breaches in at least two of the drums, and confirmed the presumption for instability and potentially unpredictable reactivity of the drums' content with water and/or air. The high-hazard contractors advised sampling and handling of the drums can result in fire or explosion and the generation of caustic vapors. Neither high-hazard contractor could be certain whether handling, sampling or removing the drums could be performed without resulting fire, explosion, water reactivity or generation of caustic vapors, liquids or solids.

During the October 23 site visit, wetted soil was discovered at the base of Drums 1 and 2 and the liquid had a pH of 14. ERRS hand excavated the wetted soil to prevent further migration of spilled materials. Excavated materials were placed in a black poly overpack drum and staged with the five drums (Figure B-9).

Drum temperatures were collected periodically beginning October 20, 2015, and daily beginning October 25, 2015, to monitor for the potential for (exothermic) water reactivity. MCPHD determined the temperatures of the five drums using a laser temperature gun and established that Drum 1 had the highest temperature at about 100 degrees Fahrenheit (°F) on October 20, 2015. After that, the temperatures declined over several days before equilibrating with ambient air temperatures. See POLREPs for specific drum temperatures.

On November 4, 2015, ERRS collected the daily drum temperatures and discovered the walls of the two rain shelters were being dissolved. Using pH paper, ERRS determined that strong caustic vapors were present in the air space of the tent. The OSC and START conducted further assessment using an IR camera and determined the drum temperatures were not generally elevated. The OSC noted additional salts had formed at the leak in Drum 1. It is likely that higher ambient temperatures and humidity on November 3 and 4 were causing formation of caustic vapors. Caustic vapors would have been concentrated by the enclosed tents. Using pH paper, corrosive gases were not detected outside of the tent.

The Wayne Township Fire/Hazmat team collected a sample of the newly reacted material at the leak of Drum 1 (Sample Drum 1_11415) and START delivered this sample to EPA's Environmental Response Team (ERT) laboratory in Edison, New Jersey, for metals analysis. ERT analyzed the sample by XRF, pH and ICP with the following results (AR Documents No 17):

Test:	Result:	Inference:
XRF	40% Potassium	Drum 1 likely contains potassium
pH	14 standard units	Elevated pH is consistent with Drum 1 contents reacting to form a hydroxide (potassium hydroxide, sodium hydroxide)
ICP	Potassium at 25.6% Sodium at 11.8% Calcium at 3,270 ppm	Drum 1 likely contains potassium Drum 1 may contain sodium* Drum 1 may not contain significant Amounts of calcium

*Sample Drum_11415 may have been contaminated with rock salt during sample collection. Because rock salt may contain sodium or calcium chlorides, the ERT's analysis cannot be relied upon to confirm or eliminate sodium or calcium in Sample Drum_11415.

On November 6, 2015, a Site visitor spoke with ERRS and claimed five gallon buckets of mercury used to be located at the Site. The OSC has been attempting to contact the complainant for more specific information. The search for mercury at the Site is still ongoing.

On November 10, 2015, the OSC assessed a small stainless steel reactor vessel ERRS had discovered at the Site. A stamped tag on the vessel stated 99% mercury, 1% lithium by weight (Figure B-10). It is not clear whether this vessel is related to the visitor's report made November 6, 2015. The vessel was sealed and did not indicate the amount of mercury or lithium that may have been inside the vessel. On November 16, 2015, IDEM and ERRS discovered the vessel was missing. An investigation is still ongoing by EPA, ERRS and IDEM for the whereabouts of the vessel which may have been stolen for the value of scrap stainless steel metal.

On December 3 and 4, 2015, the OSC and START conducted a site assessment that included the collection of soil, solid material and liquid samples lab analysis for: VOCs, semi-volatile organic compounds (SVOCs), polychlorinated biphenyl (PCB), heavy metals (RCRA Metals), and pH. START screened each sample in the field using pH paper, a Jerome mercury meter, XRF, photo ionization detector (PID), and flame ionization detector (FID). Field screening determined two cake piles located in Barn 1 had a pH of 14 standard units (Figures B-11). Samples were collected from the cake piles (SR-CP01-151204 and SR-CP02-151204) as well as the following items in Barn 1: two steel wastewater package plants (Figures B-13, B-14); a small liquid 'day' tank (B-15); a floor cleaning machine; a transformer/control panel (B-17); a plating vat (B-18); and a drum connected to the electroplating structure B-18). Soil samples were collected in a perimeter surrounding Barn 1. Liquid samples were collected from three additional plating vats located outside Barn 1, and soil samples were collected outside the drain ports on vats 2 and 3 (Figures B-19, B-20). See Table 1 for an itemized list of samples collected December 3 and 4, 2015 (AR Document No 21). A Site Assessment Report will be issued pending receipt of sample results; the report will be added to the administrative record upon receipt.

The OSC is exploring additional options for determining the contents of the five drums without directly sampling the materials. However, EPA anticipates ERRS will directly sample and evaluate the contents of each of the five drums during removal operations. EPA will review and approve any plans for how sampling and processing of wastes will be performed prior to any sampling operations.

2. Physical location

The Seerley Road Fire Site consists of two adjacent agricultural properties and has several street addresses, including: 5452, 5453 and 5459 Seerley Road, Indianapolis, Marion County, Indiana, 46241. The two properties are owned by Joel I. Williamson, Jr. and Steven R. Williamson who are sons of Mr. and Mrs. Joel Williamson, Sr. The only entrance to the Site is off Seerley Road approximately 0.25 miles west of the intersection of Seerley Road and Lynhurst Road. The coordinates for the entrance to the Site are: 39.716463 North, -86.255181 West. The coordinates of Barn 1 where the five drums are located are: 39.715886.North, -86.256444 West.

The OSC conducted an Environmental Justice (EJ) analysis for the Site using Region 5's EJ Screen Tool and determined there is a potential for EJ concerns at this location (AR Document No. 20).

3. Site characteristics

The Site consists of three residences, a barn yard area, several barns, detached garages, storage trailers, wooded areas and four tillable fields. The residences are unfit for dwelling and are vacant. The barn yard area is unmaintained and grown up with brushy vegetation. Numerous pieces of excavation equipment, automobiles, and manufacturing equipment are located around the Site; most of the equipment and vehicles are very old and are not in working order. Scrap materials and solid wastes are also stockpiled inside and outside of site buildings. Some buildings are so full of solid wastes, there are no avenues to enter the building to inventory and assess for the potential of hazardous substances.

With no one living or being at the Site 24 hours a day, no one has been present to discourage trespassing. The Indianapolis Metropolitan Police Department (IMPD) advised they have responded to the Site for vagrancy, trespassing and metal theft.

According to MCPHD and IDEM, Barn 1, which caught fire and burned completely on October 20, 2015, contained an old plating line, several drums of unknown materials, stacks of Styrofoam, and materials that could not be surveyed due to inaccessibility of the barn.

The Site is located in a mixed use area in the far southwest corner of Indianapolis. The population within a half mile is approximately 1,253 people. The Site is bordered by a residential trailer park adjacent to the northeast, commercial properties and Interstates 70 and 465 to the north and west, commercial properties to the south, and wooded and grassy fields to the east. Dense residential areas and school properties are located 0.5 miles to the north and east. The Indianapolis International Airport is located 1 mile to the west; the approach or departure pathway for several 'crosswind' runways travels directly over the Site. Several small ditches or waterways travel through or along the Site, including the Seerley Creek and Davis Creek (also known as Tributary Seerley Creek).

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

The release or threatened release into the environment of hazardous substances and/or pollutants or contaminants is occurring at the Site. Hazardous substances at the Site include wastes that exhibit the characteristic of reactivity as defined under 40 C.F.R. § 261.23 (EPA Hazardous Waste Number of D003) and/or the characteristic of corrosivity pursuant to 40 C.F.R. § 261.22 (EPA Hazardous Waste Number of D002):

- According to MCPHD, three of the five drums at the Site as of May 19, 2015, were labeled "potassium metal" and "keep water away." Due to damage caused to the drums from the October 20, 2015, fire, only one original drum label was intact. It is not clear which two of the remaining four drums had been labeled prior to the fire. Potassium metal meets the characteristic of reactivity (D003) under CERCLA. 40 C.F.R. §§ 261.23(a)(2). Potassium metal reacts violently with water to form flammable hydrogen gas; heat from the reaction can auto-ignite the gas and cause fires and explosions. Potassium metal can also form shock sensitive compounds and peroxide compounds overtime that can initiate or increase the intensity of fires (respectively).
- Drum 1 is breached and forming corrosive solids and liquids at the leak. Field screening with pH paper and lab testing conducted by EPA ERT (Sample Drum 1_11415) document the pH of the corrosive liquid at 14 standard units. A liquid waste meets the characteristic of corrosivity (D002) if the waste is liquid and has a pH of less than or equal to 2 or greater than or equal to 12.5. 40 C.F.R. § 261.22(a)(1).
- Drum 2 is breached and generates flash fire through the breach when disturbed and demonstrates characteristic for reactivity. 40 C.F.R. §§ 261.23(a)(7).
- Cake Piles 1 and 2 became exposed and unconfined when Barn 1 burned to the ground. Using litmus paper in the field, START determined the cake piles have a pH of 14 standard units. Strong corrosive wastes can readily corrode or dissolve flesh, metal or other materials. Lab results for Cake Piles 1 and 2 are pending.

Lab results for Sample Drum 1_1021015 and Sample Drum 1_111415 document the presence of potassium and sodium in the corrosive solid and liquid materials leaking from Drum 1. Thus, the corrosive solids and liquids are likely potassium hydroxide (KOH) and/or sodium hydroxide (NaOH), both of which are CERCLA hazardous substances. 40 C.F.R. § 302.4, Table 302.4.

Other cans, buckets, drums, compressed gas cylinders, old plating equipment, and wastewater package plants are also located at the property. Many metal containers are rusted and degraded. Complete inventory and characterization of wastes is still ongoing.

5. NPL status

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

6. Maps, pictures and other graphic representations

Figure A – Site Maps, Figure B – Photo Log, and Figure C – Tables are included as attachments.

B. Other Actions to Date

1. Previous actions

After township fire departments extinguished a flash fire involving the five drums in May 2015, the MCPHD issued a NOV (AR Document No. 4) to the Site owners for improper storage of a hazardous material. IDEM conducted a hazardous waste inspection and advised the Site owners to perform an inventory of solid wastes, perform a proper characterization for wastes, and properly dispose of wastes. The Site owners hired Summit to overpack the five drums to prevent additional exposure to water by precipitation and moisture/humidity. MCPHD conducted additional follow up visits and issued Extension Letters on two occasions which document non-compliance with the NOV (AR Document Nos. 5 and 7).

However, township fire departments were again called upon to extinguish a structure fire at Barn 1 in October 2015. This fire also involved the five drums and burned off the plastic overpacking and caused severe damage and scorching to the drums. MCPHD and IDEM responded and MCPHD requested EPA assistance. EPA was able to obtain access and mobilized ERRS and START contractors to securing and stabilizing the five drums while assessing the Site for other hazardous substances, pollutants or contaminants.

2. Current actions

This Action Memorandum will ratify EPA's emergency response actions and will approve time critical removal actions to complete characterization and proper offsite disposal. As of the date of this Action Memorandum, EPA and EPA contractors have:

- Established a Health and Safety Plan, an Air Monitoring Plan, and an Emergency Contingency Plan;

- Instituted 24 hour a day manned security;
- Erected rain shelters, trenching and berming to prevent water from contacting five drums;
- Hand-excavated corrosive liquid impacted soils around Drums 1 and 2, packaged and staged wastes pending disposal;
- Established a Site Assessment and Analysis Plan;
- Conducted field screening, assessment, sampling and analysis for hazardous substances, pollutants or contaminants;
- Researched safe handling and disposal options for water reactive wastes, including through commercial services and government agencies;
- Issued two requests for proposals (RFP) in a search for specialty high-hazard sub-contractor services;
- Reviewed responses to the RFPS and submitted comments to ERRS for evaluation.

C. State and Local Authorities' Roles

1. State and local actions to date

Township fire departments have responded to the two fires involving the five drums and public safety agencies will continue to respond to various emergencies at the Site as needed. EPA has arranged for IMPD to provide 24 hour manned security at the Site until further notice.

MCPHD issued a NOV (AR Document No. 4) and two Extension Letters to the Site owners compelling proper storage and disposal of wastes. MCPHD notified the NRC of the October 20, 2015 fire and requested IDEM and EPA assistance. MCPHD continues to coordinate with EPA for emergency planning and removal actions at the Site.

IDEM conducted a hazardous waste inspection at the Site and issued an inspection report instructing the owner to conduct proper waste inventory, characterization and disposal. IDEM is also coordinating with EPA for emergency planning and removal actions at the Site.

2. Potential for continued State/local response

Neither MCPHD, nor IDEM have the resources to perform removal actions at the Site.

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

The conditions at the Seerley Road Fire Site present a substantial threat to the public health or welfare, and the environment, and meet the criteria for an emergency removal action and 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;

The actual or potential exposure of human populations to hazardous substances or pollutants or

contaminants exists at the Site. Drums labeled “potassium metal” and “keep water away” are stored at the Site. Analysis of the materials (solid and liquid) leaking from Drum 1 (Sample Drum 1_102115 and Sample Drum 1_11415) documents the presence of potassium and sodium, which are both water reactive. Lab results document hazardous wastes at the Site, including: waste characteristic for reactivity (D003) such as the material in Drum 2 that catches fire whenever the drum is disturbed; and waste characteristic for corrosivity (D002) such as the waste leaking from Drum 1. Severe reactivity of water reactive wastes resulting in fire, explosion or offsite emissions of corrosive vapors could affect surrounding residential populations and transportation arteries.

Two recent fires occurred at the Site, within a short period of time, despite the attempts to stabilize the five drums. Fires involving potassium metal or sodium metal can produce potassium hydroxide or sodium hydroxide liquids or solids – two hazardous substances under CERCLA – that may be carried offsite through fire smoke and wind action or through water runoff. The National Institute for Occupational Safety and Health (NIOSH) has studied potassium hydroxide and determined human exposure can occur through inhalation, ingestion, skin and/or eye contact. Symptoms of exposure may include irritation to the eyes, skin and respiratory system resulting in coughing, sneezing, burns to the eyes or skin, and vomiting or diarrhea (AR Document No 3). Furthermore, the Agency for Toxic Substances and Disease Registry (ATSDR) has determined that very low levels of sodium hydroxide can produce irritation of the skin and eyes and exposure to the solid or concentrated liquid can cause severe burns in the eyes, skin, and gastrointestinal tract which may ultimately lead to death (AR Document No 2). Approximately 1,253 people live within a half mile of the Site and those persons may be exposed through direct contact with drummed wastes or by exposure to offsite migration in the event of fire.

The property is very large, unoccupied and has very little perimeter fencing. EPA has documented trespassing and metal theft at the Site. EPA noted that the breach in Drum 2 – which contents include an undetermined substance that generates flash fire when disturbed – has the shape of an ax head. Furthermore, the small stainless steel reactor vessel labeled mercury and lithium that was discovered on Site was stolen. Both substances are defined as hazardous under 40 C.F.R. § 302.4, and mercury is known for its toxicity. According to the ATSDR, exposure to mercury occurs from breathing contaminated air, ingesting contaminated water and food, and having dental and medical treatments. Mercury, at high levels, may damage the brain, kidneys, and developing fetus (AR Document 1). Thieves may dump the materials contained in a drum or a vessel in order to recycle the metal for profit. EPA remains concerned about the claim that a five-gallon bucket of mercury may have been stored at the Site. EPA is still conducting a search for mercury materials.

Actual or potential contamination of drinking water supplies or sensitive ecosystems;

Actual or potential contamination of sensitive ecosystems exists at the Site. Storm water runoff from the Site enters ditches and creeks such as the Davis Creek and the Seerley Creek, and the west fork of White River. Downstream of the Site, Seerley Creek is located through numerous residential and other properties before entering the White River. The Indiana Department of Natural Resources has designated the White River as a recreational Water Trail for canoeing and

other uses for outdoor recreation. White River is also a source of drinking water for the City of Indianapolis; however, the City's surface water intake is upstream of the confluence of White River and Seerley Creek and unaffected by runoff from the Site.

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

The threat of release of hazardous substances or pollutants or contaminants exists at the Site. Drums labeled "potassium metal" and "keep water away" are located at the Site. Two drums are breached and one drum is leaking a substance that is reacting to form corrosive solids and liquids. Given the instability and reactivity of the drums, the sampling and analysis of their contents remain difficult and some uncertainty persists. EPA is presently researching safe handling and disposal options for the water reactive wastes contained in the five drums.

Other containers including small cans, buckets, drums, electroplating vats and wastewater package plants are located at the Site and are still being assessed; however, EPA has documented degraded and opened containers for which the contents are not secured. Metal theft has been occurring at the Site; metal theft can lead to the dumping of materials in order to recycle the metal for profit.

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

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate is present at the Site. On October 23, 2015, EPA discovered soils being wetted by corrosive liquids leaking from Drums 1 and/or 2. The corrosive liquids had a pH of 14 which meets the hazardous characteristic for corrosivity (D002) under 40 C.F.R. § 261.22(a)(1). EPA removed some of the contaminated soils, but additional removal may be necessary.

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

Weather conditions may cause the migration or release of hazardous substances, pollutants or contaminants at the Site. Contact between the wastes at the Site with water, including precipitation, humidity, or storm water, could lead to fire or explosion and the generation of hazardous substances like potassium hydroxide or sodium hydroxide. Fire smoke could take potassium or sodium hydroxides offsite through smoke and wind action. Potassium or sodium hydroxides may also migrate through storm water runoff. Surface ditches, Davis Creek, and Seerley Creek are located in and along the Site.

Threat of fire or explosion;

The threat of fire or explosion exists at the Site. Drums labeled "potassium metal" and "keep water away" are located at the Site. The five drums have already caused two fires at the Site. On May 19, 2015, one of the Site owners bumped one of these drums and it caught fire. When the owner applied water to extinguish the fire, the fire intensity greatly increased. On October

20, 2015, Barn 1 completely burned down and the fire is currently under investigation. Potassium metal reacts with water to form flammable hydrogen gas; heat from the reaction can auto-ignite the gas and cause fires and explosions. Potassium metal can also form shock sensitive compounds and peroxide compounds overtime that can initiate or increase the intensity of fires (respectively).

Furthermore, the Site is not fenced and trespassing and metal theft have already occurred. EPA documented Drums 1 and 2 have been breached, the breach in Drum 2 has the shape of an ax head, and the Wayne Township Fire and Hazmat Department has determined that disturbing Drum 2 causes spontaneous fire. The drums are made of valuable stainless steel and it is possible the drum was intentionally breached in order to drain the container prior to recycling the metal container.

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

Beginning May 19, 2015, MCPHD became aware of the drums and attempted to engage the Site owners through the enforcement process to stabilize and dispose of the hazardous wastes located on Site. IDEM conducted a hazardous waste inspection and advised the owners to inventory, characterize and dispose of the hazardous wastes. The owners did not satisfy the requests of MCPHD or IDEM prior to the October 20, 2015 structure fire that involved the five drums of hazardous waste, an out of service electroplating line and other equipment. After making a report to the National Response Center, MCPHD requested EPA assistance with stabilizing and disposing of hazardous substances, pollutants or contaminants at the Site. MPCHD and IDEM do not have the resources to perform the emergency response, waste stabilization or waste disposal for the Site.

Other situations or factors that may pose threats to public health or welfare of the United States or the environment;

The Site is located in southwestern Indianapolis. A residential trailer park is located adjacent to the Site, approximately 400 feet from where drums of water reactive wastes are located. The nearest school property is approximately 0.4 miles north of the Site. The western site boundary is Interstate 70 which is approximately 700 feet from where the water reactive wastes are located. Interstate 465 and the Indianapolis International Airport are located 0.5 and 0.75 miles west of where water reactive wastes are located. A severe reaction of wastes resulting in fire, explosion or offsite emissions of corrosive vapors could affect surrounding residential populations and transportation arteries. In the event of offsite air emissions, public safety agencies may institute shelter-in-place or evacuation measures for offsite populations. However, mobile trailer homes generally exchange indoor and outdoor air freely and shelter-in-place would not be an option for mobile trailer homes in potentially affected offsite areas.

IV. ENDANGERMENT DETERMINATION

Given the Site conditions, the nature of the suspected hazardous substances and/or pollutants or contaminants on Site, and the potential exposure pathways described in Sections II and III above,

actual or threatened releases of hazardous substances and/or 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.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions Taken

1. Action description

Removal activities on Site will include:

- a) Develop and implement a Site Health and Safety Plan, Air Monitoring Plan, and Emergency Contingency Plan (as needed);
- b) Secure the Site to prevent unauthorized access to hazardous substances or pollutants or contaminants;
- c) Site assessment to identify hazardous substances, pollutants or contaminants at the Site;
- d) Waste characterization, processing and re-packaging to allow safe offsite transportation. Due to the hazards associated with disturbing the drums, EPA anticipates the drum sampling to be performed more as a part of drum stabilization and removal operations rather than as standalone operations. EPA reserves the right to alter drum sampling, processing or re-packaging procedures; however, sampling procedures are likely to include the following steps:
 - a. Drums may be spaced several yards apart and shielded by sand bags or other structures to reduce the potential for a fire or reaction event from involving more than one of the drums.
 - b. Each drum may be placed inside a bag or other device that will allow for controlling the atmosphere around the drum.
 - c. The moist, oxygen containing ambient air within the drum bag will be replaced with a dry, inert gas, such as nitrogen. The humidity free gas will reduce the potential for a water reaction that may generate flammable hydrogen gas. The oxygen-free inert gas will reduce the oxygen available for the possible combustion of hydrogen gas or other flammable materials.
 - d. Each drum will be punctured to allow for the collection of a sample of drum contents for evaluation. Drum puncturing may introduce risk for site workers, so drum puncturing may be conducted behind shielding and will be initiated by remote control.
 - e. Each drum sample will be evaluated to determine the appropriate steps for stabilizing and re-packaging the contents of each drum for safe off-site transportation and disposal.
 - f. For drums containing potassium metal, drums may be:

- i. Processed or re-packaged one at a time inside an onsite work trailer;
- ii. The trailer may be sealed and purged with a dry, inert gas such as nitrogen to reduce the potential for water reactivity, generation of flammable gases, and oxygen available to sustain fire while processing;
- iii. The drums may be submerged in an open top tank within the processing trailer. The open top tank would be full of water-free fluid, such as anhydrous mineral oil, in order to ensure displacement of moisture and oxygen;
- iv. The drums will be cut open and allowed to saturate with the fluid;
- v. The drum contents will be dug out of the drum by hand tools, divided into 5-10 pound 'charges' and re-located into 5 gallon plastic buckets of water-free fluid, like anhydrous mineral oil;
- vi. Two – 5 gallon buckets with potassium metal charges will be overpacked into one – 55 gallon steel drum and vermiculate to allow for the safe offsite transportation in compliance with U.S. DOT shipping regulations.
- g. For drums containing material other than potassium metal, the plans for sampling, processing or re-packaging and disposal are still under development. Any such plans will be reviewed, amended as necessary, and approved by EPA prior to beginning of operations.

e) Determination and implementation of proper disposal options;

f) Post Removal Site Controls – The removal action will be conducted in a manner not inconsistent with the 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. Elimination of all threats presented by hazardous substances and/or pollutants or contaminants in containers in the buildings is expected to minimize the need for post-removal Site control.

g) Off-Site Rule – All hazardous substances, pollutants and contaminants removed from the Site shall be sent to an EPA approved facility for treatment, storage and disposal according to 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.

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

Not Applicable.

4. Applicable or Relevant and Appropriate Requirements

All applicable, relevant, and appropriate requirements (ARARs) of Federal and State law will be complied with to the extent practicable considering the exigencies of the circumstances.

Federal
 RCRA Subtitle C regulations concerning on-site handling and characterization of hazardous wastes in preparation for disposal.

5. Project Schedule

The removal activities are expected to take 30 on-site working days to complete.

6. Disproportionate Funding

The response actions described in this memorandum directly address the actual or threatened release at the Site of hazardous substances and/or pollutants or contaminants, which may pose an imminent and substantial endangerment to public health, welfare, or the environment. EPA does not believe that these response actions will impose a disproportionate burden on the affected property.

B. Estimated Costs

The detailed cleanup contractor cost is presented in Attachment 2 and the Independent Government Cost Estimate is presented in Attachment 3. Estimated project costs are summarized below:

REMOVAL ACTION PROJECT CEILING ESTIMATE	
<u>Extramural Costs:</u>	
<u>Regional Removal Allowance Costs:</u>	
Total Cleanup Contractor Costs (This cost category includes estimates for ERRS, subcontractors, Notices to Proceed, and Interagency Agreements with Other Federal Agencies. Include a 10-20% contingency)	\$ 884,649
<u>Other Extramural Costs Not Funded from the Regional Allowance:</u>	
Total START, including multiplier costs	\$ 68,418
Subtotal Extramural Costs	\$ 953,067
Extramural Costs Contingency (20%) (20% of Subtotal, Extramural Costs rounded to nearest thousand)	\$ 190,613
TOTAL REMOVAL ACTION PROJECT CEILING	\$ 1,143,680

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

Drums of reactive wastes at the Site are unstable and may lead to fire, explosion and the generation of corrosive vapors, liquids and solids if action is delayed or not taken. The drums create unacceptable exposures to trespassers and surrounding populations may be affected by fire, explosion, or the offsite migration of substances.

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.

The total USEPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$1,984,818.¹

$$(\$1,143,680 + \$116,762) + (57.47\% \times \$1,260,442) = \$1,984,818$$

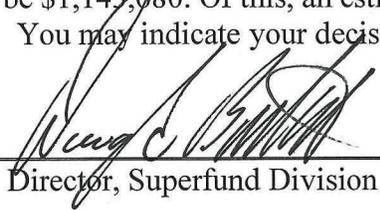
¹ Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do 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.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Seerley Road Fire Site, 5453 Seerley Road, Indianapolis, Marion County, Indiana. It was 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 2). Conditions at the Site meet the NCP Section 300.415(b)(2) criteria for a removal action and I recommend your approval of the proposed removal action.

The project ceiling previously approved was \$150,000. The total removal action project ceiling if approved will be \$1,143,680. Of this, an estimated \$1,075,262 may be used for cleanup contractor costs. You may indicate your decision by signing below.

APPROVE


Director, Superfund Division

DATE:

12/29/2015

DISAPPROVE _____

Director, Superfund Division

DATE: _____

Enforcement Addendum

Figures:

- A: Site Maps
- B: Photo Log
- C: Tables

Attachments

1. Detailed Cleanup Contractor Cost Estimate
2. Administrative Record Index
3. Independent Government Cost Estimate

cc: B. Schleiger, U.S. EPA, 5104A, (email: Brian Schleiger/DC/USEPA/US)
L. Nelson, U.S. DOI, **w/o Enf. Addendum**
(Email: lindy_nelson@ios.doi.gov)
Max Michael, Section Chief, Indiana DEM
(Email: mmichael@idem.in.gov)
Rex Osborn, Section Chief, Indiana DEM
(Email: rosborn@idem.in.gov)

BCC PAGE HAS BEEN REDACTED

**NOT RELEVANT TO SELECTION
OF REMOVAL ACTION**

ENFORCEMENT ADDENDUM

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ENFORCEMENT CONFIDENTIAL

NOT SUBJECT TO DISCOVERY

FOIA EXEMPT

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION

FIGURE A-1

**Seerley Road Fire Site
Indianapolis, Marion Co, Indiana**

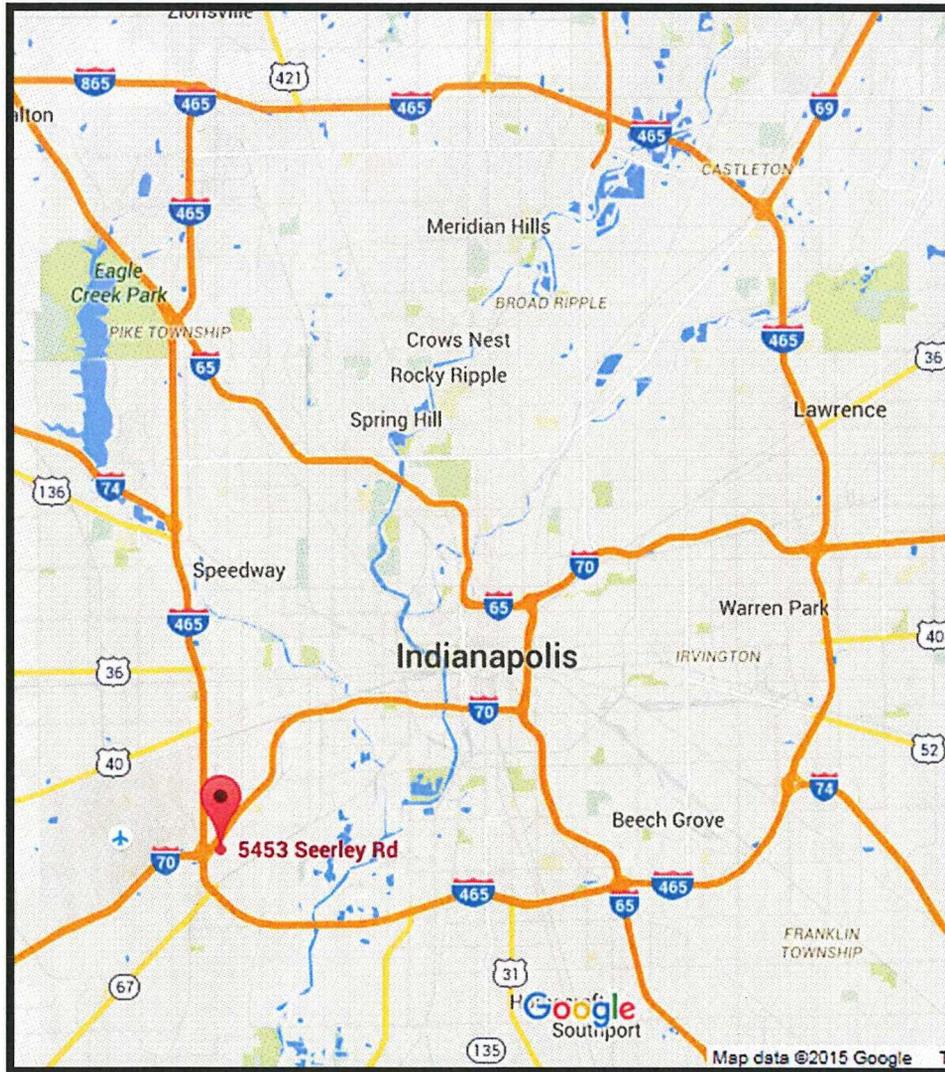


Figure A-2

Seerley Road Fire Site
5453 Seerley Road Parcel

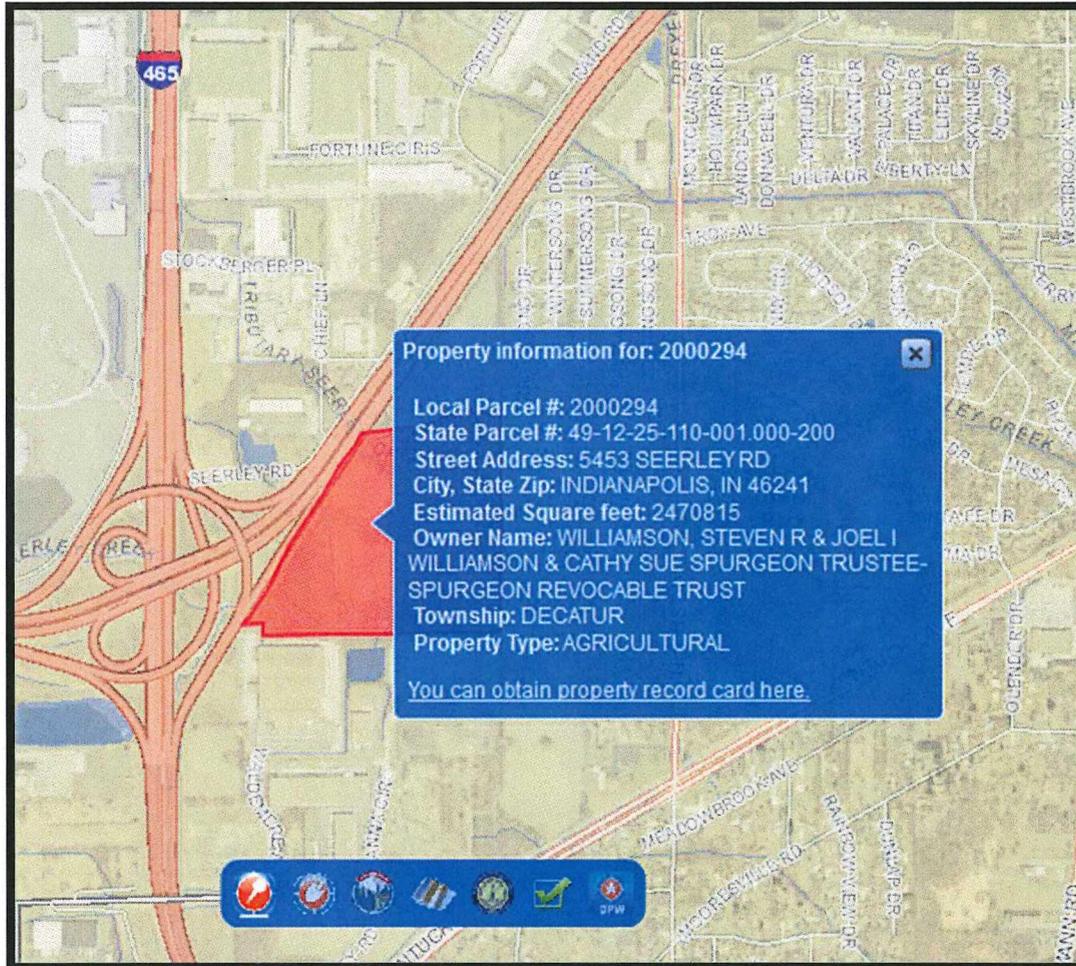


Figure A-3

Seerley Road Fire Site
5452 Seerley Road Parcel

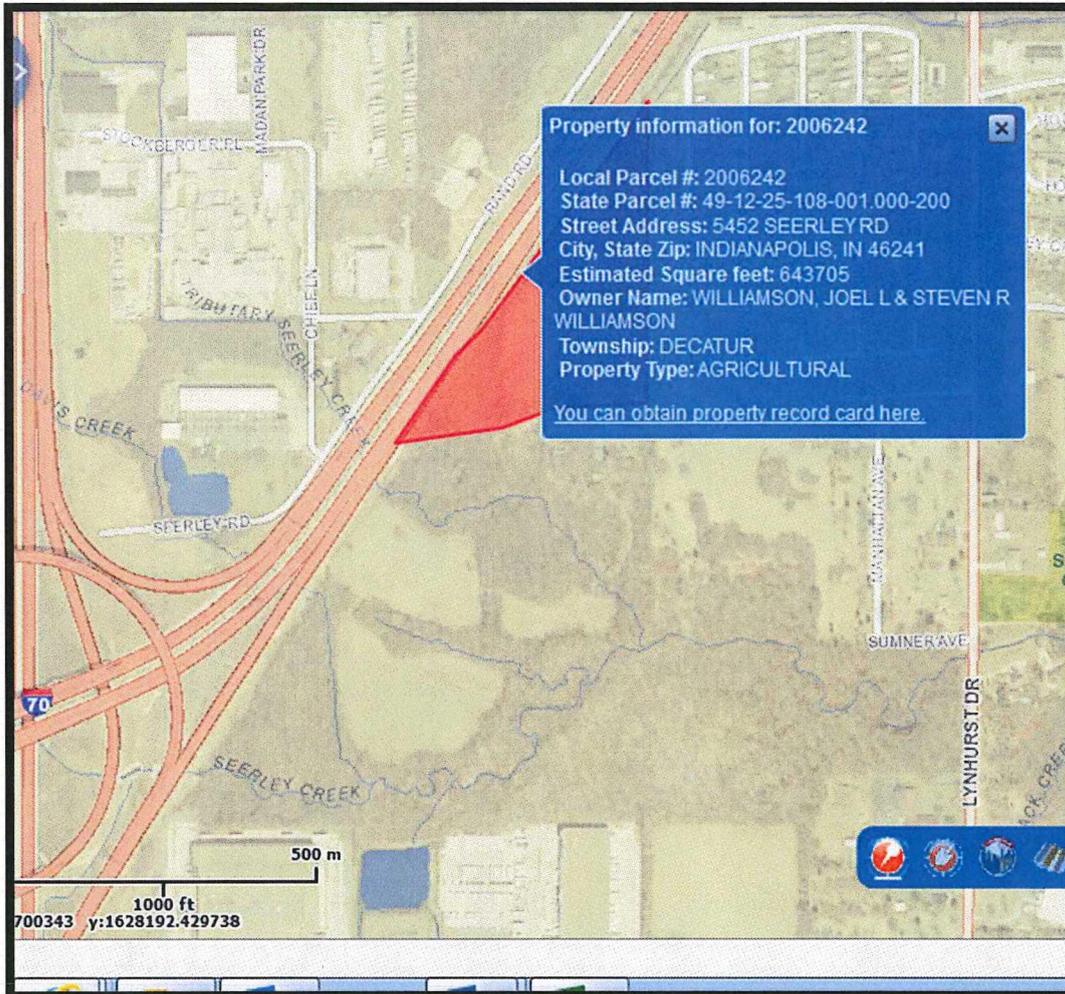


FIGURE B - PHOTO LOG

B-1 - Electroplating equipment in Barn 1



B-2 – Potassium metal drums in Barn 1



B-3 – Summit Contracting overpacked water reactive drums May 19, 2015



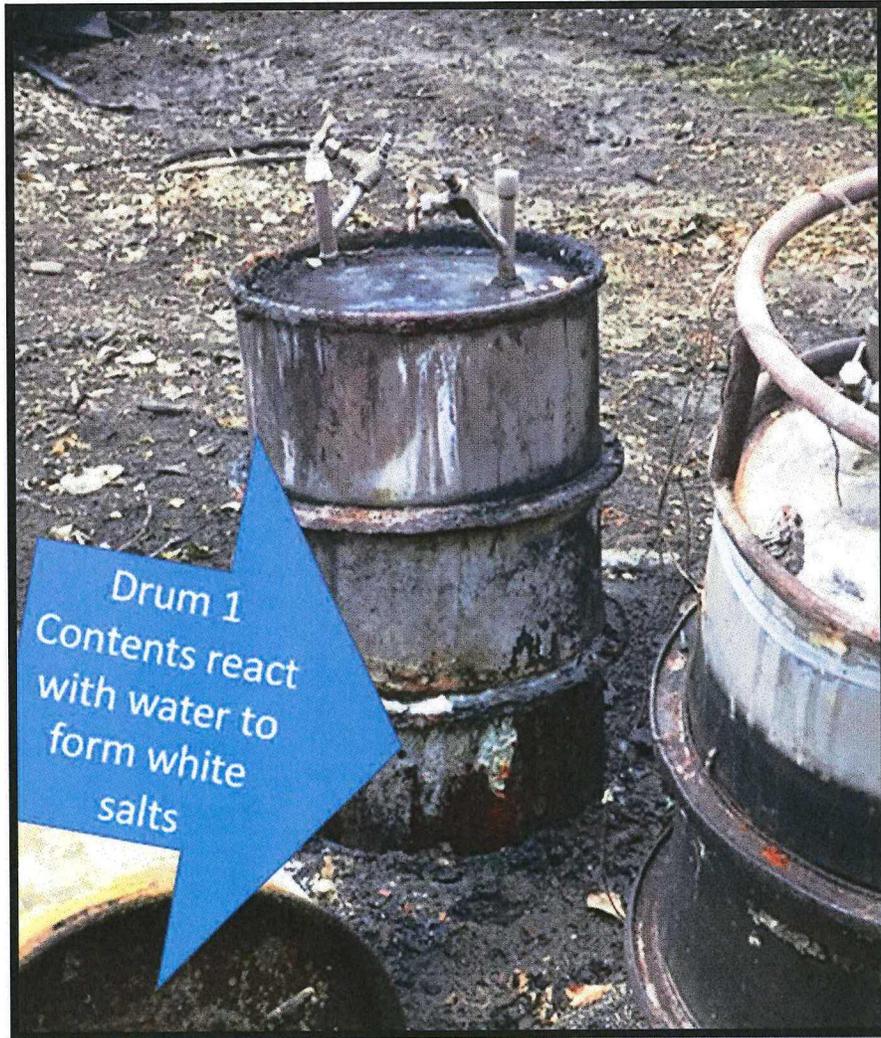
B-4 – Water reactive drums damaged and scorched by fire



B-5 – Drum Designations



B-6 – Breach and salt forming on Drum 1



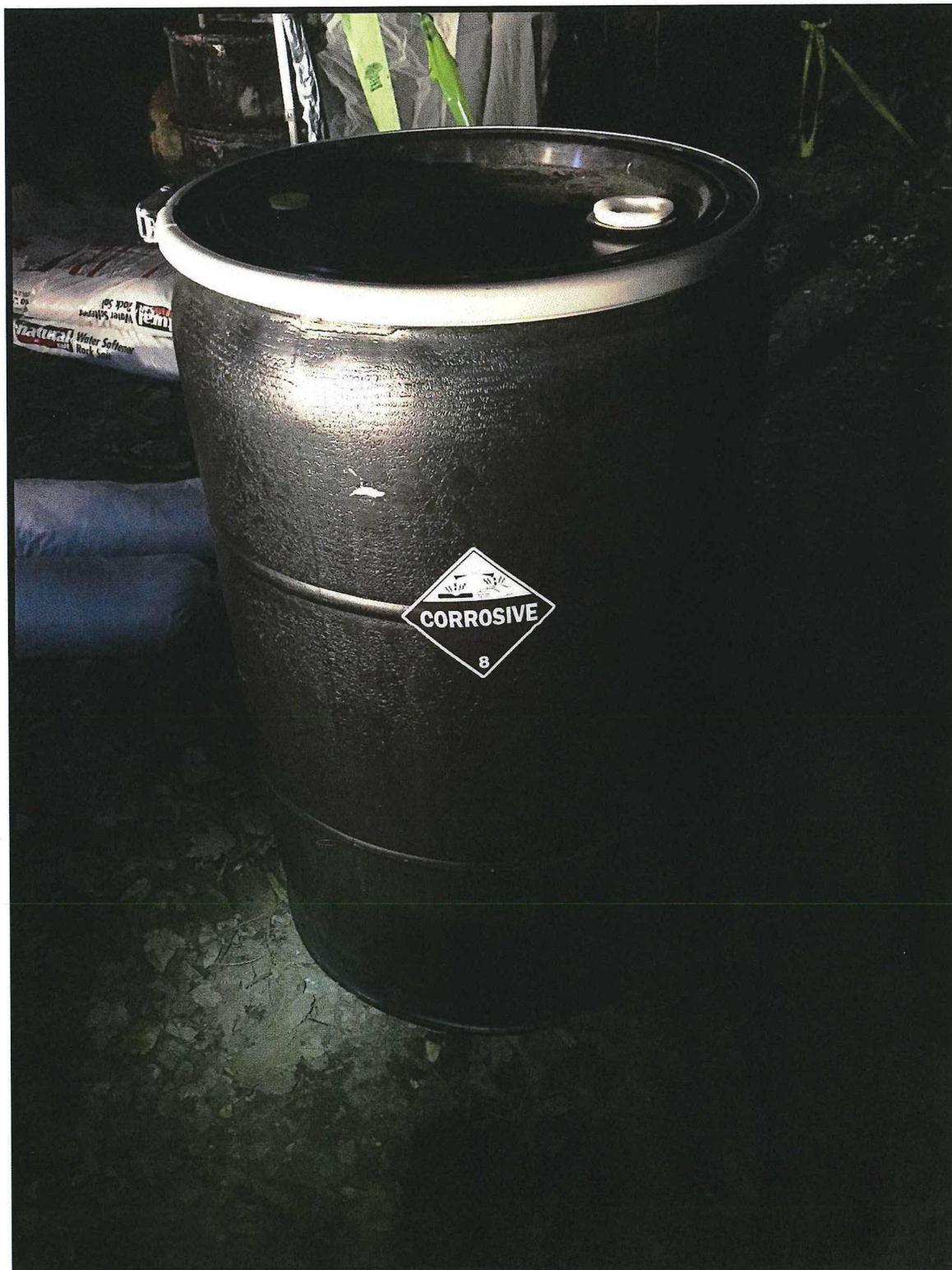
B-7 – Breach in Drum 2



B-8 – Labeling on Drum 5, “potassium metal” and “keep water away”



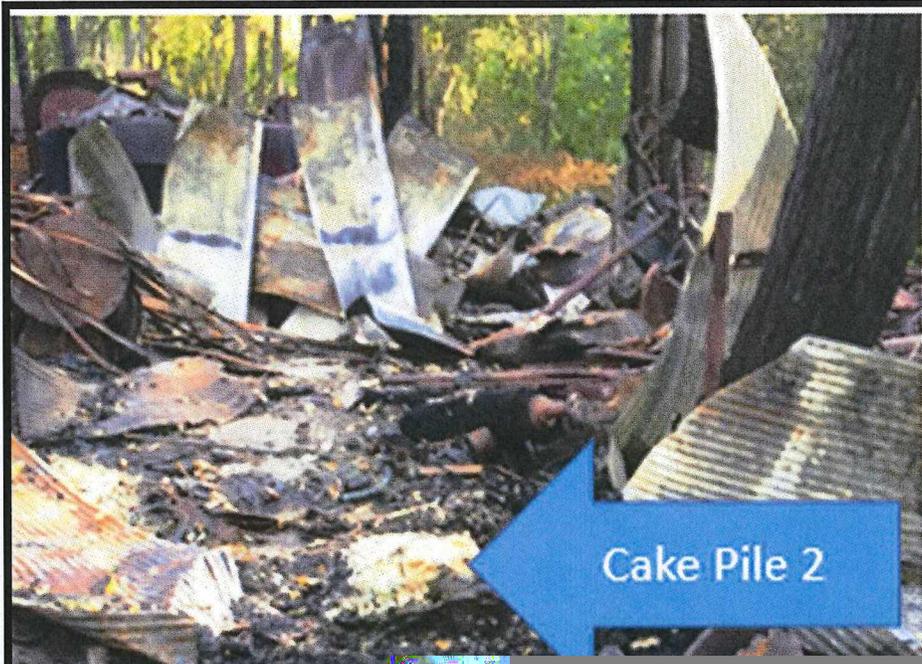
B-9 – Caustic liquids and contaminated soils were excavated for disposal



B-10 – Stainless steel vessel marked mercury and lithium by weight



B-11 – Cake Piles 1 and 2 in Barn 1



B-14 – Package Plant 2 in Barn 1



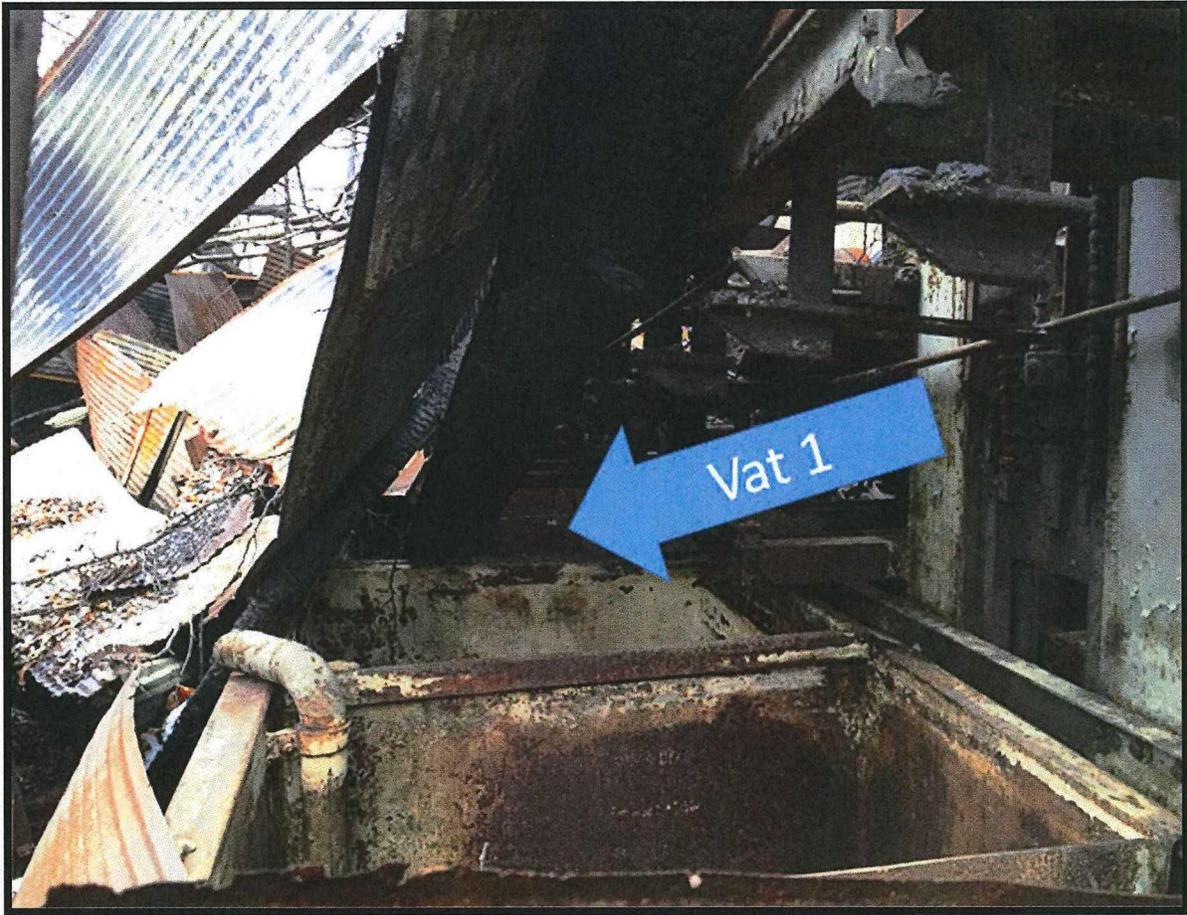
B-15 – Day Tank in Barn 1



B-17 – Electric control panel / transformer



B-18 – Electroplating Vat 1



B-19 – Vat 2



B-20 – Vat 3



B-21 – Vat 4



FIGURE C

TABLE 1 - Site Assessment Samples

December 3-4, 2015

Sample ID	Matrix	Description
SR-SL01-151203	Solid	Soil sample outside Barn 1
SR-SL02-151203	Solid	Soil sample outside Barn 1
SR-SL03-151203	Solid	Soil sample outside Barn 1
SR-SL04-151203	Solid	Soil sample outside Barn 1
SR-SL04-151203D	Solid	Duplicate sample for quality assurance
SR-SL04-151203MS/MSD	Solid	Duplicate sample for quality assurance
SR-Rinsate-151203	Liquid	Decon rinsate sample, quality assurance
SR-PP01-151203	Liquid	Package Plant 1
SR-PP02-151203	Solid	Package Plant 2
SR-DT01-151203	Solid	Dip Tank
SR-FM01-151203	Solid	Floor Machine
SR-CP01-151203	Solid	Electric Control Panel
SR-VT01-151203	Liquid	Vat 1 from electroplating line, Barn 1
SR-MX01-151204	Solid	Drum sample from electroplating line
SR-CP01-151204	Solid	Cake Pile 1, Barn 1
SR-CP02-151204	Solid	Cake Pile 2, Barn 1
SR-SL05-151204	Solid	Soil sample outside Vat 2 drain
SR-VT02-151204	Liquid	Plating Vat 2
SR-SL06-151204	Solid	Soil sample outside Vat 3 drain
SR-SL06-151204D	Solid	Duplicate sample for quality assurance
SR-VT03-151204	Liquid	Plating Vat 3
SR-VT03-151204D	Liquid	Duplicate sample for quality assurance
SR-VT03-151204MS/MSD	Liquid	Duplicate samples for quality assurance
SR-Rinsate-151204	Liquid	Decon rinsate sample, quality assurance

ATTACHMENT 1

DETAILED CLEANUP CONTRACTOR

AND

START ESTIMATE

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NOT RELEVANT TO SELECTION

OF REMOVAL ACTION

ATTACHMENT 2
U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR THE
SEERLEY ROAD FIRE SITE
INDIANAPOLIS, MARION COUNTY, INDIANA

ORIGINAL
DECEMBER, 2015

<u>NO.</u>	<u>SEMS ID</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	916277	4/1/99	ATSDR	Public	ToxFAQs Fact Sheet - Mercury - CAS #7439-97-6	
2	922684	4/1/02	ATSDR	File	ToxFAQs Fact Sheet - Sodium Hydroxide - CAS #1310-73-2	2
3	922685	2/13/15	Centers for Disease Control	File	NIOSH Pocket Guide Fact Sheet - Potassium Hydroxide	2
4	922675	5/19/15	Kaufman, E., Marion County Public Health Department	Trustees of Spurgeon Revocable Trust	Emergency Notice of Violation	1
5	922676	6/17/15	Kaufman, E., Marion County Public Health Department	Trustees of Spurgeon Revocable Trust	Letter re: Grant of Additional Time for Compliance	2
6	922678	7/10/15	Draschil, S., IDEM	Williamson, J., Spurgeon Revocable Trust	Hazardous Waste Inspection Report	17
7	922677	7/23/15	Kaufman, E., Marion County Public Health Department	Trustees of Spurgeon Revocable Trust	Letter re: Grant of Additional Time for Compliance	2
8	922679	10/20/15	National Response Center	File	Incident Report #1131287	4
9	922683	10/20/15	Williamson, J., Spurgeon Revocable Trust	U.S. EPA	Consent for Access to Property Form	1