



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

US EPA RECORDS CENTER REGION 5



495085

MEMORANDUM

REPLY TO THE ATTENTION OF:

SUBJECT: ACTION MEMORANDUM – Request for Approval and Funding for
Emergency and Time-Critical Removal Actions at the Williamson
Polishing & Plating Site, Indianapolis, Marion County, Indiana (Site ID
#C5DL)

FROM: Shelly Lam, OSC
Emergency Response Branch 1

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

TO: Douglas Ballotti, Acting Director
Superfund Division

I. PURPOSE

This memorandum requests and documents your approval to expend up to \$1,884,139 to conduct emergency and time-critical removal actions at the Williamson Polishing & Plating Site (the Site) in Indianapolis, Marion County, Indiana. On October 31, 2016, Emergency Response Branch Chief, Jason El-Zein, verbally authorized \$25,000 in funding to conduct emergency response actions to mitigate an imminent and substantial threat of release.

The 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. The U.S. Environmental Protection Agency (EPA) documented the presence of hazardous substances at the Site, as defined by Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Emergency response actions included securing the site building and the waste inside. The time-critical removal action proposed herein is to prepare site plans, including a Work Plan, site-specific Health and Safety Plan (HASP), and Emergency Contingency Plan; establish site security and an incident command post; inventory and perform hazard characterization on substances contained in vats, tanks, pits, drums, and other containers; perform sampling and analysis; dismantle and decontaminate process equipment and building components associated with the former plating operations; and transport and dispose off-site any hazardous substances, pollutants and contaminants at a CERCLA-approved disposal facility in accordance with EPA's Off-Site Rule (40 Code of Federal Regulations [CFR] § 300.440).

Response actions will be conducted in accordance with Section 104(a)(1) of CERCLA, 42 U.S. Code (USC) § 9604(a)(1) and Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR§ 300.415, to abate or eliminate the immediate threat posed to public health and/or the environment by the presence of the hazardous substances at the Site. The uncontrolled conditions of the hazardous substances present at the Site and the potential threats they present require that this action be classified as a time-critical removal action. EPA's actions will require approximately 110 working days to complete.

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

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: INN000506618

RCRA ID: IND006032023

Category: Emergency and Time-Critical Removal Action

A. Site Description

Williamson Polishing & Plating (Figure 1) was a plating shop in the Martindale-Brightwood neighborhood of Indianapolis, Indiana. The business began operating in 1937, incorporated in 1953, and operated at the Site until June 2016. The facility conducted job shop polishing and electroplating services by plating brass, cadmium, copper, chrome, nickel, silver, tin, zinc, bronze, and nickel finishes on various substrates for its customers (Administrative Record [AR] #12). The Site is vacant but contains a 14,651 square foot building (Figure 2 and Photo 1) with plating process equipment.

On October 3, 2016, the Marion County Public Health Department (MCPHD) received a complaint regarding abandoned chemicals at the Site (AR #13). MCPHD conducted an exterior inspection on October 5, 2016, and found violations, including improper storage of a hazardous material (AR #14). On October 13, 2016, MCPHD, the Indiana Department of Environmental Management (IDEM), Indianapolis Fire Department, and EPA conducted an inspection of the facility's interior and found abandoned waste in drums, plating vats, tanks, and small containers. Following the inspection, MCPHD filed a report with the National Response Center (NRC) (AR #16), and requested assistance from EPA (AR #15). In the request for assistance, MCPHD noted that "(t)here is a threat to public health and the environment in the event of trespassing or a fire due to the large volume of hazardous waste abandoned at the Site. There was evidence of trespassing and theft of electrical wiring this morning."

1. Removal Site Evaluation

On-Scene Coordinator (OSC) Lam conducted reconnaissance with MCPHD on October 13, 2016, and documented waste in drums, tanks, plating vats, pits, and other containers inside the former plating shop (Photos 2-9). Many containers are unlabeled and in poor condition. Labeled containers included toxic, corrosive, oxidizing, and reactive materials. EPA located the facility's Safety Data Sheets (SDS) and a facility map, which

indicated that the facility used cadmium, nickel, silver, zinc, chromic acid, nitric acid, sulfuric acid, formic acid, sodium chromate, potassium cyanide, sodium cyanide, sodium hydroxide, potassium hydroxide, ammonia, etc.

EPA, MCPHD, and the Superfund Technical Assessment and Response Team (START) contractor conducted a site assessment on October 31 and November 1, 2016. EPA collected a limited number of samples for laboratory analysis. With one exception, the samples were characteristic for hazardous waste, including ignitability (D001), corrosivity (D002), reactivity (D003), and toxicity (D006 and D007) per the Resource Conservation and Recovery Act (RCRA), 40 CFR § 261. A summary of sample results are below. The laboratory report is part of the administrative record (AR #24).

- Cadmium was detected in sample WPP-A4-161031 at a concentration of 10,900 milligrams per liter (mg/L), above the toxicity regulatory level of 1 mg/L. Additionally, chromium was detected in this sample at 23.9 mg/L, above the regulatory level of 5 mg/L. This sample exhibited the characteristic of toxicity for cadmium (D006) and chromium (D007), per §261.24.
- pH was measured at 11.5 standard units (SU) in sample WPP-A7-161031. This sample did not meet the criteria for corrosivity.
- In sample WPP-A22-161031, pH was detected at 13.0 SU. This sample exhibited the characteristic of corrosivity established in §261.22. A solid waste exhibits the characteristic of corrosivity if it is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5.
- pH was detected at 0.82 SU in sample WPP-B32-161031. This sample met the characteristic of corrosivity.
- In sample WPP-B33-161031, pH was detected at 0.7 SU. This sample exhibited the characteristic of corrosivity.
- Flashpoint was measured at 61 degrees Fahrenheit (°F) in sample WPP-FLAM-161031. A solid waste exhibits the characteristic of ignitability if it has a flashpoint less than 60 °Celsius (140 °F). This sample exhibited the characteristic of ignitability.
- Cyanide was detected in sample WPP-CN-161031 at a concentration of 7,300 milligrams per kilogram (mg/kg). A solid waste exhibits the characteristic of reactivity if it is a cyanide-bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment. This sample exhibited the characteristic of reactivity.

2. Physical Location

The Site is located at 2080 Dr. Andrew J Brown Avenue in Indianapolis, Marion County, Indiana, 46202. The facility is in the Martindale-Brightwood neighborhood, northeast of downtown Indianapolis. The geographical coordinates for the Site are 39.795778° north latitude and 86.1358925° west longitude.

The area around the Site includes a mixture of properties including industrial, commercial, residential, community centers, playgrounds, parks, and schools. Residential properties are located as close as 200 feet from the Site (Photo 10). JTV Hill Park is 0.25 miles

south of the Site. A school is located approximately 0.17 miles northwest of the Site. Approximately 32,000 people live within one mile of the Site.

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

3. Site Characteristics

Williamson Polishing & Plating Co. Inc. abandoned the Site in June 2016. They previously operated a plating shop at the Site. The plating shop operated in a 14,651 square foot building. Plating process equipment, plating chemicals, and waste were abandoned at the Site when the business closed. The property was sold at a tax sale; but title did not transfer, so Williamson Polishing & Plating Co., Inc. and Betty Williamson remain the current owners of record.

EPA's proposed time-critical removal action will be the first removal at the Site.

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

A release or threat of release of hazardous substances, pollutants, or contaminants is present at the Site. EPA confirmed the presence of hazardous substances as defined by Section 101(14) of CERCLA including sodium hydroxide, potassium hydroxide, chromic acid, potassium cyanide, sodium cyanide, sodium chromate, sulfuric acid, formic acid, nitric acid, cadmium, copper, nickel, silver, zinc, and characteristic hazardous waste including ignitable, corrosive, reactive, and toxic waste; and pollutants and contaminants as defined by Section 101(33) of CERCLA. EPA inventoried approximately four super sacks, four pits, 116 plating vats, 30 tanks, 160 55-gallon drums, 10 35-gallon drums, 47 20-gallon drums, 206 5-gallon containers, and numerous other containers. Some of the drums and other containers were in poor condition, leaking or without lids.

Exposure could occur from dermal contact with material in drums, vats, containers, or from leaking and spillage of hazardous substances onto the floor or other surfaces; incidental ingestion of material following dermal contact; inhalation of volatile materials in open containers; inhalation via fugitive dust generation; and inhalation of toxic vapors released into the air via fire. Potential human receptors include nearby residents, trespassers, emergency response workers, and future site workers. There was evidence of trespassing at the Site (Photos 11 and 12). Residential properties are located within 200 feet of the Site.

5. National Priorities List (NPL) status

The Site is not on the NPL and is not expected to be scored for the NPL.

6. Maps, pictures and other graphic representations

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

B. Other Actions to Date

1. Previous actions

This Action Memorandum documents previous actions in the Background Section.

2. Current actions

MCPHD temporarily secured the Site on October 13 and 14, 2016. During the site assessment on October 31, 2016, EPA and MCPHD noticed that trespassing, vandalism, and metal scrapping had occurred since October 14th. EPA conducted emergency response actions to board up the Site to prevent future trespassing (AR #23) on October 31 and November 1, 2016.

C. State and Local Authorities' Roles

Eric Kaufman of MCPHD sent an email on October 13, 2016 requesting assistance from EPA (AR #15). MCPHD and IDEM do not have the resources to mitigate the threat of release.

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

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

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

Hazardous substances, pollutants, and contaminants are present in drums, vats, tanks, and other containers. Hazardous substances represent an actual or potential exposure threat to nearby human populations. Possible exposure routes for hazardous substances include dermal contact with material in drums, vats, containers, or from leaking and spillage of hazardous substances onto the floor or other surfaces; incidental ingestion of material following dermal contact; inhalation of volatile materials in open containers; inhalation via fugitive dust generation; and inhalation of toxic vapors released into the air via fire. Potential human receptors include trespassers, emergency response workers, and nearby residents. There was evidence of trespassing at the Site. Residential properties are located within 200 feet of the Site.

Labeled materials included hydrogen peroxide, potassium cyanide, sodium cyanide, sulfuric acid, and nitric acid. EPA located the facility's SDS and a facility map, which

indicated that the facility used cadmium, nickel, silver, zinc, chromic acid, nitric acid, sulfuric acid, formic acid, sodium chromate, potassium cyanide, sodium cyanide, sodium hydroxide, potassium hydroxide, ammonia, etc.

Analytical results from the Site Assessment indicate that hazardous substances, as defined by CERCLA § 101(14), pollutants, and contaminants are present at the Site and represent an actual or potential exposure threat to nearby human populations. These included toxic, ignitable, corrosive, and reactive hazardous waste.

Information on toxicological effects of these hazardous substances, pollutants, and contaminants is listed below and referenced in the Administrative Record (Attachment II).

Ammonia: Exposure to high levels of ammonia in air may be irritating to skin, eyes, throat, and lungs and cause coughing and burns. Lung damage and death may occur after exposure to very high concentrations of ammonia. Some people with asthma may be more sensitive to breathing ammonia than others. Swallowing concentrated solutions of ammonia can cause burns in the mouth, throat, and stomach. Splashing ammonia into the eyes can cause burns and even blindness (AR #5).

Cadmium: Breathing high levels of cadmium can severely damage the lungs. Eating food or drinking water with very high levels severely irritates the stomach, leading to vomiting and diarrhea. Long-term exposure to lower levels of cadmium in air, food, or water leads to a buildup of cadmium in the kidneys and possible kidney disease. Other long-term effects are lung damage and fragile bones. The Department of Health and Human Services (DHHS) has determined that cadmium and cadmium compounds are known human carcinogens (AR #11).

Chromium: Breathing high levels of chromium(VI) can cause irritation to the lining of the nose, nose ulcers, runny nose, and breathing problems, such as asthma, cough, shortness of breath, or wheezing. The concentrations of chromium in air that can cause these effects may be different for different types of chromium compounds, with effects occurring at much lower concentrations for chromium(VI) compared to chromium(III). The main health problems seen in animals following ingestion of chromium(VI) compounds are irritation and ulcers in the stomach and small intestine and anemia. Sperm damage and damage to the male reproductive system have also been seen in laboratory animals exposed to chromium(VI). DHHS, the International Agency for Research on Cancer (IARC), and the EPA have determined that chromium(VI) compounds are known human carcinogens. In workers, inhalation of chromium(VI) has been shown to cause lung cancer. Chromium(VI) also causes lung cancer in animals (AR #10).

Copper: High levels of copper can be harmful. Breathing high levels of copper can cause irritation of the nose and throat. Ingesting high levels of copper can cause nausea, vomiting, and diarrhea. Very-high doses of copper can cause damage to the liver and kidneys, and can even cause death (AR #6).

Cyanide: Exposure to high levels of cyanide for a short time harms the brain and heart and can even cause coma and death. Workers who inhaled low levels of hydrogen cyanide

over a period of years had breathing difficulties, chest pain, vomiting, blood changes, headaches, and enlargement of the thyroid gland (AR #9).

Formic acid: Formic acid causes skin and eye burns. Its vapors are irritating and painful to breath. Vapor exposure may cause nausea and vomiting (AR #17).

Hydrogen peroxide: Hydrogen peroxide can be toxic if ingested, inhaled, or by contact with the skin or eyes. Inhalation of vapors from concentrated (higher than 10%) solutions may result in severe pulmonary irritation. Ingestion of dilute solutions of hydrogen peroxide may result in vomiting, mild gastrointestinal irritation, gastric distension, and on rare occasions, gastrointestinal erosions or embolism (blockage of blood vessels by air bubbles). Ingestion of solutions of 10-20% strength produces similar symptoms, but exposed tissues may also be burned. Ingestion of even more concentrated solutions, in addition to the above, may also induce rapid loss of consciousness followed by respiratory paralysis. Eye exposure to 3% hydrogen peroxide may result in pain and irritation, but severe injury is rare. More concentrated solution may result in ulceration or perforation of the cornea. Skin contact can cause irritation and temporary bleaching of the skin and hair. Contact with concentrated solutions may cause severe skin burns with blisters (AR #3).

Nickel: The most common harmful health effect of nickel in humans is an allergic reaction. Approximately 10-20% of the population is sensitive to nickel. People working in nickel refineries or nickel-processing plants have experienced chronic bronchitis and reduced lung function. These persons breathed amounts of nickel much higher than levels found normally in the environment. Workers who drank water containing high amounts of nickel had stomach ache and suffered adverse effects to their blood and kidneys. Damage to the lung and nasal cavity has been observed in rats and mice breathing nickel compounds. Eating or drinking large amounts of nickel has caused lung disease in dogs and rats and has affected the stomach, blood, liver, kidneys, and immune system in rats and mice, as well as their reproduction and development. Cancers of the lung and nasal sinus have resulted when workers breathed dust containing high levels of nickel compounds while working in nickel refineries or nickel processing plants. DHHS has determined that nickel metal may reasonably be anticipated to be a carcinogen and that nickel compounds are known human carcinogens. The IARC has determined that some nickel compounds are carcinogenic to humans and that metallic nickel may possibly be carcinogenic to humans. The EPA has determined that nickel refinery dust and nickel subsulfide are human carcinogens (AR #7).

Nitric acid: Nitric acid is toxic. Inhalation, ingestion or contact (skin, eyes) with vapors, dusts or substance may cause severe injury, burns or death. Reaction with water or moist air may release toxic, corrosive or flammable gases. Reaction with water may generate much heat that will increase the concentration of fumes in the air. Fire will produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution (AR #18).

Potassium hydroxide: Potassium hydroxide causes severe burns of eyes, skin, and mucous membranes (AR #19).

Silver: Exposure to high levels of silver for a long period of time may result in a condition called argyria, a blue-gray discoloration of the skin and other body tissues. Lower-level exposures to silver may also cause silver to be deposited in the skin and other parts of the body; however, this is not known to be harmful. Argyria is a permanent effect, but it appears to be a cosmetic problem that may not be otherwise harmful to health. Exposure to high levels of silver in the air has resulted in breathing problems, lung and throat irritation, and stomach pains. Skin contact with silver can cause mild allergic reactions such as rash, swelling, and inflammation in some people. Animal studies have shown that swallowing silver results in the deposit of silver in the skin. One study in mice found that the animals exposed to silver in drinking water were less active than unexposed animals (AR #2).

Sodium chromate: Inhalation of sodium chromate causes irritation and may ulcerate mucous membranes. Continued irritation of the nose may lead to perforation of the septum. Ingestion causes severe circulatory collapse and toxic nephritis, and may be fatal. Contact with eyes causes severe irritation and possible conjunctivitis. Sodium chromate irritates skin and can cause ulcers; if skin is broken, prolonged contact may cause "chrome sores" (slow-healing, hard-rimmed ulcers), which leave the area vulnerable to infection as a secondary effect (AR #20).

Sodium hydroxide: Sodium hydroxide is very corrosive and can cause severe burns in all tissues that come in contact with it. Inhalation of low levels of sodium hydroxide as dusts, mists or aerosols may cause irritation of the nose, throat, and respiratory airways. Inhalation of higher levels can produce swelling or spasms of the upper airway leading to obstruction and loss of measurable pulse; inflammation of the lungs and accumulation of fluid in the lungs may also occur. Ingestion of solid or liquid sodium hydroxide can cause spontaneous vomiting, chest and abdominal pain, and difficulty swallowing. Corrosive injury to the mouth, throat, esophagus, and stomach is very rapid and may result in perforation, hemorrhage, and narrowing of the gastrointestinal tract. Case reports indicate that death results from shock, infection of the corroded tissues, lung damage, or loss of measurable pulse. Skin contact with sodium hydroxide can cause severe burns with deep ulcerations. Pain and irritation are evident within 3 minutes, but contact with dilute solutions may not cause symptoms for several hours. Contact with the eye may produce pain and irritation, and in severe cases, clouding of the eye and blindness. Long-term exposure to sodium hydroxide in the air may lead to ulceration of the nasal passages and chronic skin irritation (AR #4).

Sulfuric acid: Contact with sulfuric acid will burn skin, and breathing sulfuric acid can result in tooth erosion and respiratory tract irritation. Drinking sulfuric acid will burn the mouth, throat, and stomach; it can result in death. Sulfuric acid in the eyes will cause the eyes to water and burn. People who have breathed large quantities of sulfuric acid at work have shown an increase in cancers of the larynx. The IARC has determined that occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to humans (AR #1).

Zinc: Large doses of zinc taken by mouth even for a short time can cause stomach cramps, nausea, and vomiting. Taken longer, it can cause anemia and decrease the levels of your good

cholesterol. It is not known if high levels of zinc affect reproduction in humans. Rats that were fed large amounts of zinc became infertile. Inhaling large amounts of zinc (as dusts or fumes) can cause a specific short-term disease called metal fume fever. Putting low levels of zinc acetate and zinc chloride on the skin of rabbits, guinea pigs, and mice caused skin irritation. Skin irritation will probably occur in people (AR #8).

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

EPA inventoried approximately four super sacks, four pits, 116 plating vats, 30 tanks, 160 55-gallon drums, 10 35-gallon drums, 47 20-gallon drums, 206 5-gallon containers, and numerous other containers. Labeled materials included cadmium, chrome, nickel, hydrogen peroxide, potassium cyanide, sodium cyanide, sulfuric acid, and nitric acid. Unlabeled materials were present in vats, tanks, pits, drums and small containers.

Laboratory results documented that sampled materials were characteristic for hazardous waste, including ignitable, corrosive, reactive, and toxic waste. Some of the drums and other containers were in poor condition, leaking or without lids (see Photos). There is a very high potential of a release of hazardous substances from the drums and other bulk storage containers, particularly with evidence of trespassing at the Site.

300.415(b)(2)(v) - Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;

The Site building is in poor condition. The roof is old and leaking, and several windows were open to the atmosphere. Nitric acid, sulfuric acid, and zinc, all documented at the Site, are water reactive. These chemicals react violently with water producing heat, fumes, and spattering. Heavy rain could cause water infiltration into the building, increasing the risk of water reacting with nitric acid, sulfuric acid, and/or zinc, thereby causing an increased threat of fire. As such, weather conditions could cause hazardous substances, pollutants, or contaminants to be released.

300.415(b)(2)(vi) - Threat of fire or explosion;

Analytical results from the Site Assessment indicate that one sample had flashpoint at 61 ° F, which meets the criteria for ignitability for RCRA characteristic waste at 40 C.F.R. § 262.21. Many other small containers, which were not sampled, had "flammable" labels.

There is evidence that trespassers have entered the Site to scavenge metal. Should metal scrapping occur in the future, trespassers most likely would use torches or saws to remove metal, and the sparks from that equipment could start a fire. Other threats of fire or explosion exist at or near the Site. Nitric acid, sulfuric acid, and nickel are water reactive. They react violently with water producing heat, fumes, and spattering. Additionally, on October 31, 2016, EPA observed a small brush fire set in an alley approximately 100 feet from the Site. Stray embers from similar nearby fires could cause the Site building to ignite.

The Site is without a fire suppression system. If a fire occurred, it could result in the release of toxic vapors, including hydrogen cyanide gas, which is generated by sodium or potassium cyanide decomposing on contact with acids, which are stored in close proximity at the Site. Sodium and potassium cyanide also react violently with strong oxidants, such as hydrogen peroxide, causing an explosion hazard.

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

On October 13, 2016, MCPHD requested assistance from EPA. Neither MCPHD nor IDEM has the resources to immediately mitigate the threat of release.

IV. ENDANGERMENT DETERMINATION

Given the site conditions, the nature of the known and suspected hazardous substances on site, and the potential exposure pathways described in Sections II and III 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

A. Proposed Actions

1. Proposed action description

On October 31 and November 1, 2016, EPA conducted emergency response actions to mitigate the threat of release. Actions consisted of securing the Site and the waste inside.

The OSC proposes to undertake the following actions to mitigate threats posed by the presence of hazardous substances at the Williamson Polishing & Plating Site:

1. Develop and implement a site-specific HASP, including an Air Monitoring Plan, and a Site Emergency Contingency Plan;
2. Develop and implement a Site Security Plan;
3. Develop and implement a work plan to address the scope of work described below;
4. Inventory and perform hazard characterization on all substances contained in drums, vats, tanks, and other containers;
5. Perform sampling and analysis;
6. Dismantle and decontaminate process equipment, vats, tanks, piping, and building components associated with plating;

7. Consolidate and package hazardous substances, pollutants and contaminants for transportation and off-site disposal in accordance with the EPA Off-Site Rule, 40 C.F.R. § 300.440; and
8. Take any other response actions to address any release or threatened release of a hazardous substance, pollutant or contaminant that the EPA OSC determines may pose an imminent and substantial endangerment to the public health or the environment.

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

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

The estimated costs to complete the activities outlined above are summarized below. These activities will require an estimated 110 on-site working days to complete.

Detailed cleanup contractor costs are presented in Attachment III.

2. Contribution to remedial performance

The proposed action should not impede future remedial performance.

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

Not Applicable

4. Applicable or relevant and appropriate requirements (ARARs)

On October 25, 2016, the OSC sent a letter requesting state and local ARARs to IDEM (AR #21). IDEM identified the following ARARs in a letter dated October 28, 2016 (AR #22). EPA will comply with ARARs identified in a timely manner to the extent practicable. However, as set forth at Section 121(e) of CERCLA, actions conducted on-site are exempt from permitting requirements.

Action Specific:

1. Pursuant to 326 Indiana Administrative Code (IAC) 6-4-2(4), visible fugitive dust must not cross an adjacent property line.
2. Pursuant to 326 IAC 6-4-4, any vehicle driven on any public right of way must not allow its contents to escape and form fugitive dust.

Chemical Specific:

1. 329 IAC 3.1 regulates the management of hazardous wastes. Indiana rule 329 IAC 3.1-1-1 adopts RCRA regulations of 40 CFR 260 through 40 CFR 270. More specifically:
 - 40 CFR 262.11 requires a proper hazardous waste determination must be made on all wastes generated from removal actions including substances in containers, drums, pits, waste piles and tanks along with any decontamination washes or rinsates.
 - 40 CFR 261, Subpart B requires that all hazardous waste must be properly packaged, with labels, markings and placards prior to transport (see also 40 CFR 262.30, 262.31, 262.32, and 263.33).
 - 40 CFR 262.34 requires that hazardous waste containers shall not be accumulated on-site for greater than 90 days without a hazardous waste permit for storage.
 - 40 CFR 261, Subpart B requires hazardous waste must be manifested as such for transport to a permitted treatment, storage, or disposal facility (TSDF) in accordance with 40 CFR 262, Subpart B.
 - Hazardous waste in containers shall be managed in accordance with the standards of 40 CFR 265, Subpart I.
 - For all hazardous waste related equipment, structures and pads, remove or decontaminate all hazardous waste residues, contaminated containment components, contaminated soils, and structures and equipment contaminated with waste and manage them as hazardous waste unless 40 CFR 261.3(d) applies.
2. 329 IAC 10 regulates the management of solid wastes.
 - 329 IAC 10-7.2-1 requires all wastes to undergo a waste determination, and if found to be nonhazardous, be disposed of in a permitted solid waste disposal facility.

The OSC identified the following federal ARARs:

1. Hazardous substances, pollutants or contaminants removed off-site pursuant to this emergency response action for treatment, storage and disposal shall be treated, stored, or disposed at a facility in compliance, as determined by EPA, with the EPA Off-Site Rule, 40 C.F.R. § 300.440.
2. Subtitle D of RCRA, Section 1008 and Section 4001, *et seq.*, 42 USC § 691, *et seq.*, regulates the management of nonhazardous solid waste.
3. 49 U.S.C. § 5101 *et seq.* regulates the transportation of hazardous waste and hazardous substances by aircraft, railcars, vessels, and motor vehicles to or from a site.
4. 29 CFR § 1910 promulgates occupational safety and health standards for hazardous waste operations and emergency response. It regulates cleanup operations at uncontrolled hazardous waste sites.
5. **Project Schedule**

The time-critical removal actions will require approximately 110 working days to complete.

B. Removal Project Ceiling Estimate – Extramural Costs:

<u>Regional Removal Allowance Costs:</u>	
Total Cleanup Contractor Costs (Includes a 20% contingency)	\$1,484,182
<u>Other Extramural Costs Not Funded from the Regional Allowance</u>	
Total START, including multiplier costs	\$154,200
Subtotal, Extramural Costs	\$1,638,382
Extramural Costs Contingency (15% of Subtotal, Extramural Costs)	\$245,757
TOTAL REMOVAL ACTION PROJECT CEILING	\$1,884,139

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

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

Given the site conditions, the nature of the hazardous substances and pollutants or contaminants documented on site, and the potential exposure pathways to nearby populations described in 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 Confidential Enforcement Addendum.

The total EPA costs of this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$3,179,500¹.


$$(\$1,884,139 + \$79,000) + (61.96\% \times \$1,963,139) = \$3,179,500$$

IX. RECOMMENDATION

This decision document represents the selected removal actions for the Williamson Polishing & Plating Site located in Indianapolis, Marion County, Indiana, developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based upon the Administrative Record for the site.

Conditions at the Site meet the NCP § 300.415(b)(2) criteria for emergency and time-critical removal actions. The total project ceiling, if approved, will be \$1,884,139, of which, as much as \$1,729,939 may be used from the Regional removal allowance. I recommend your approval of the proposed removal action. You may indicate your decision by signing below.

APPROVE


for Douglas Ballotti, Acting Director
Superfund Division

DATE: 11-29-16

DISAPPROVE

Douglas Ballotti, Acting Director
Superfund Division

DATE: _____

Enforcement Addendum

Figures:

- 1 – Site Location Map
- 2 – Site Layout Map

Photographs

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

cc: Brian Schlieger, U.S. EPA, 5104A/B517F (**Schlieger.Brian@epa.gov**)
Lindy Nelson, U.S. DOI, **w/o Enf. Addendum** (**Lindy_Nelson@ios.doi.gov**)
Rex Osborn, IDEM **w/o Enf. Addendum** (**rosborn@idem.in.gov**)

BCC PAGE HAS BEEN REDACTED

**NOT RELEVANT TO SELECTION
OF REMOVAL ACTION**

ENFORCEMENT ADDENDUM

HAS BEEN REDACTED – FIVE PAGES

ENFORCEMENT CONFIDENTIAL

NOT SUBJECT TO DISCOVERY

FOIA EXEMPT

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION

FIGURES

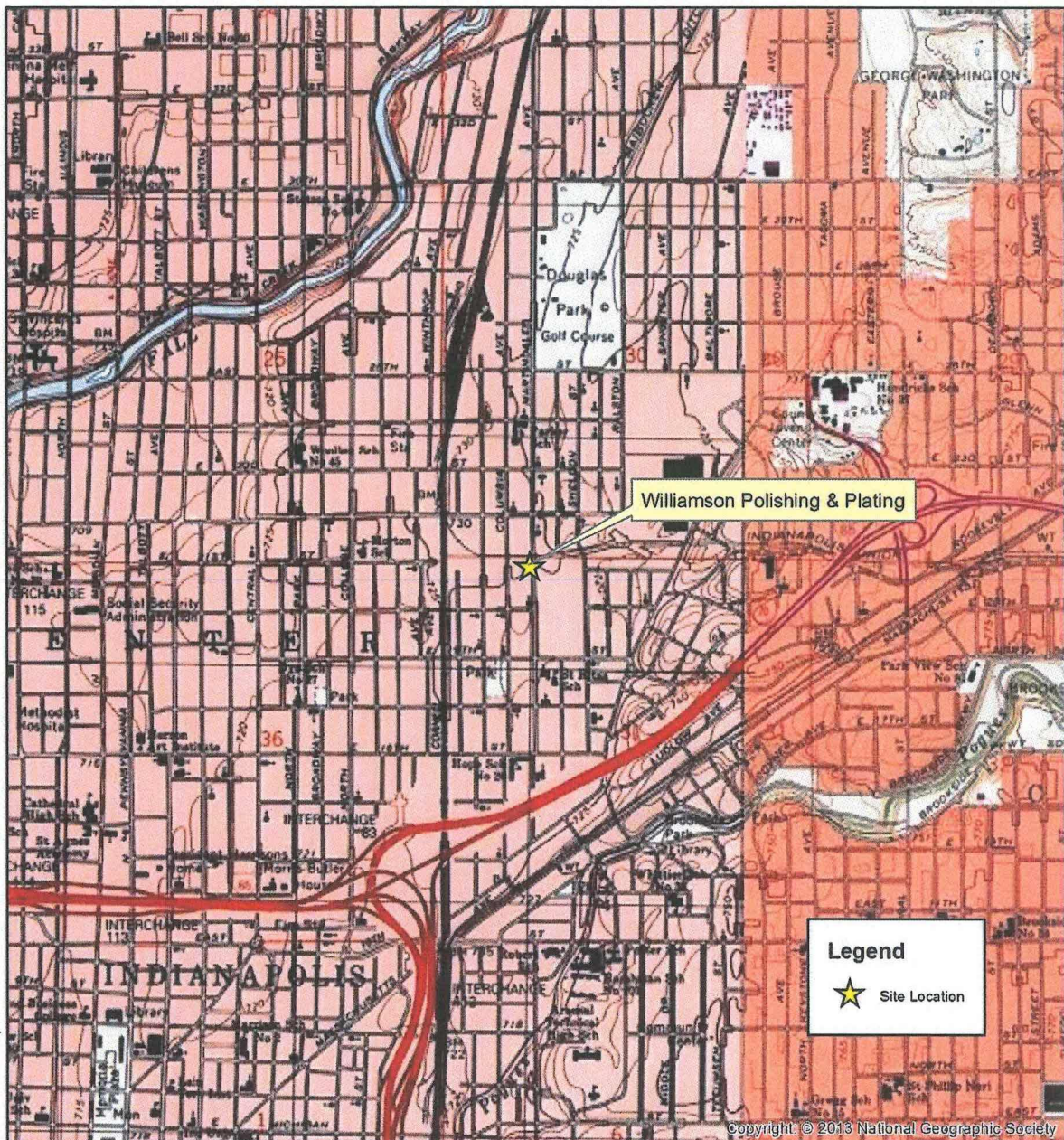


FIGURE 1
SITE LOCATION MAP
WILLIAMSON POLISHING & PLATING
INDIANAPOLIS, MARION COUNTY, INDIANA



October 27, 2016

0 0.5 1 Miles

1:24,000

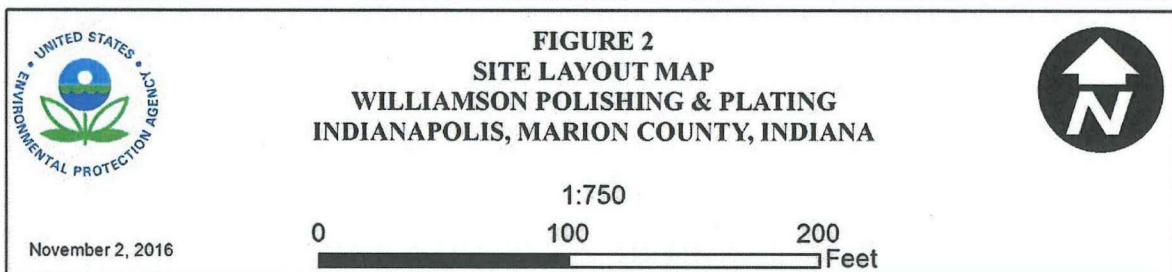
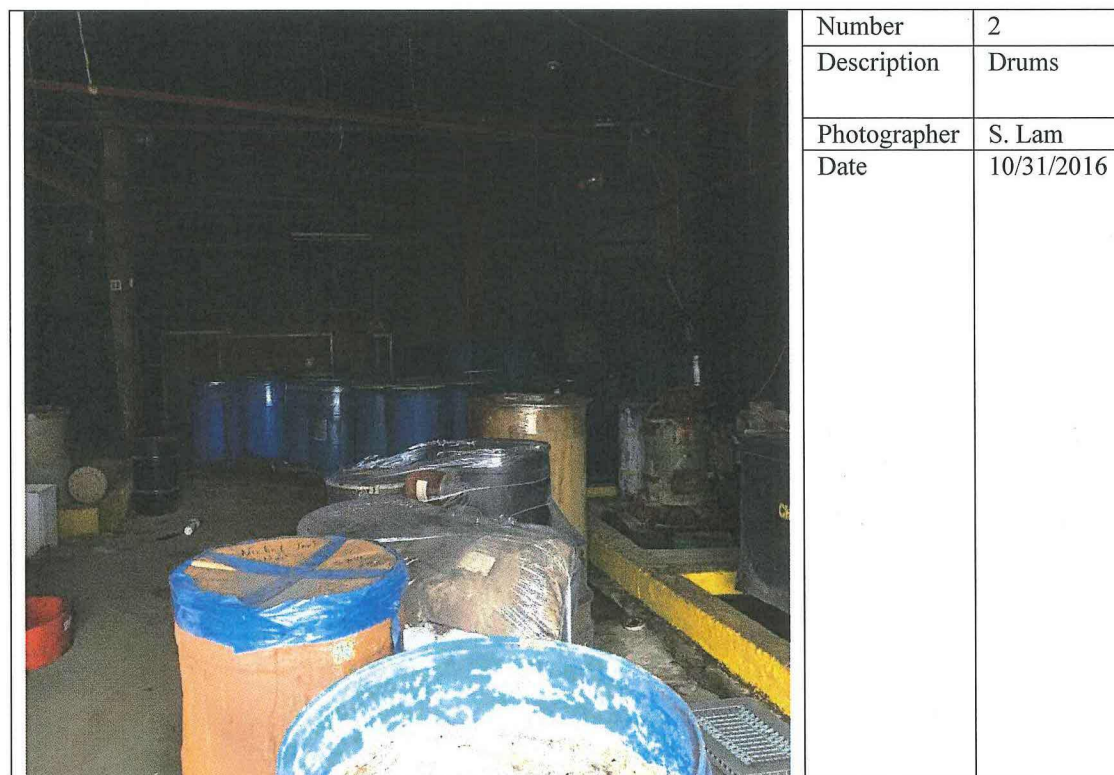
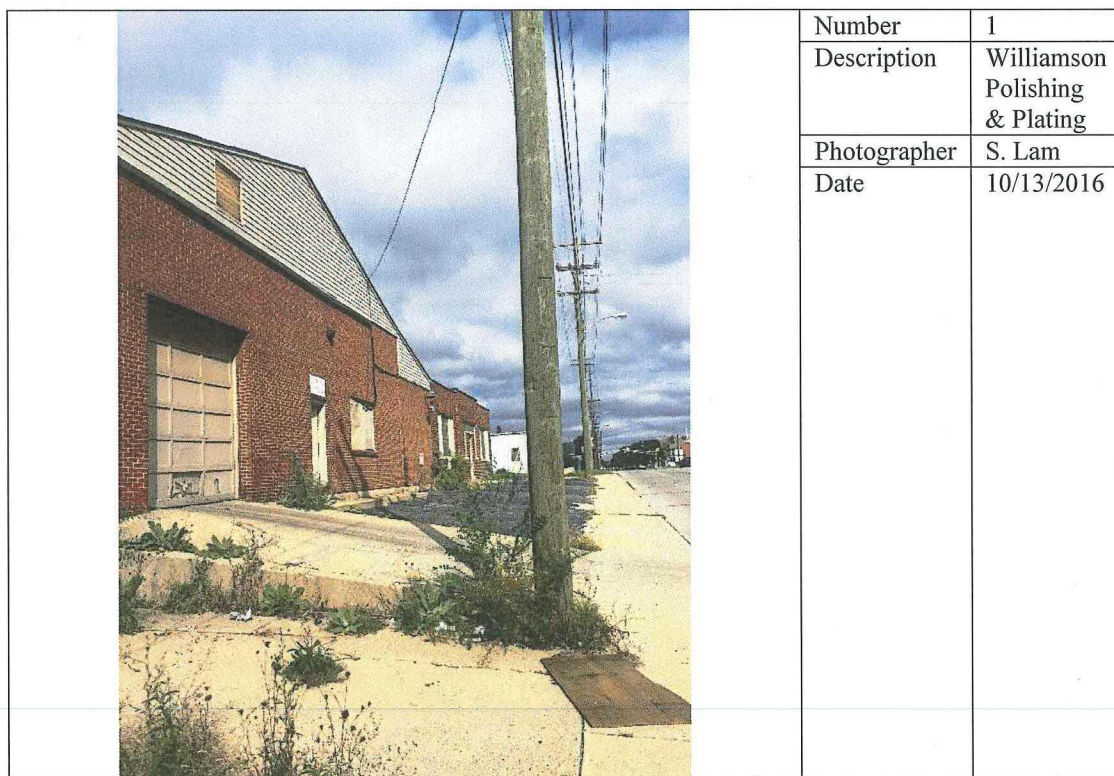


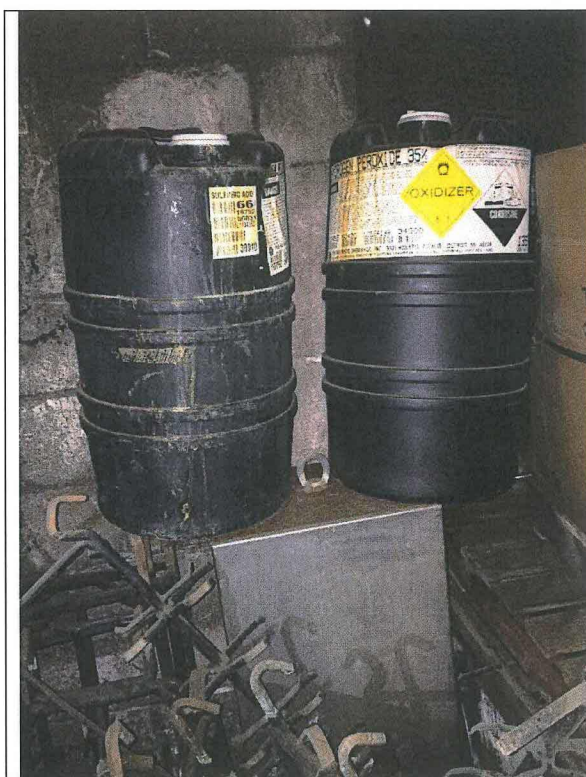


PHOTO LOG

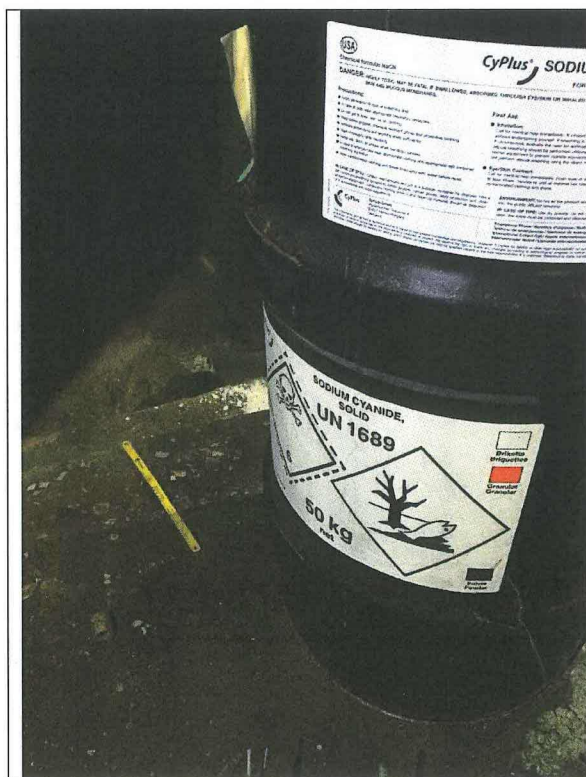


	Number	3
	Description	Leaking drum of acid salts
	Photographer	S. Lam
	Date	10/13/2016

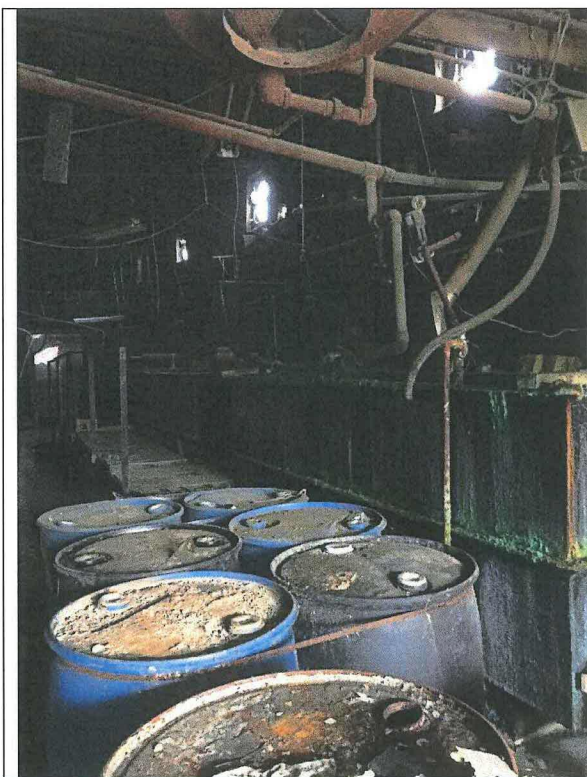
	Number	4
	Description	Leaking drum
	Photographer	S. Lam
	Date	10/13/2016



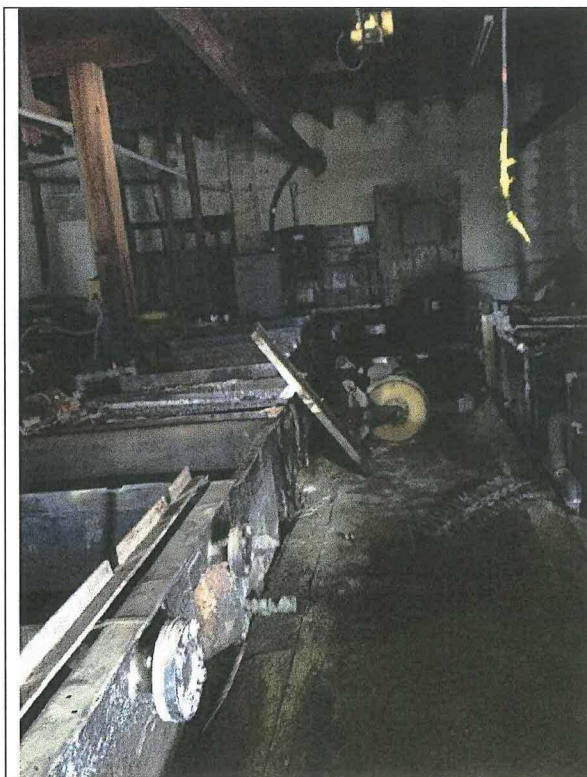
Number	5
Description	Drums including drum of 35% hydrogen peroxide
Photographer	S. Lam
Date	10/13/2016



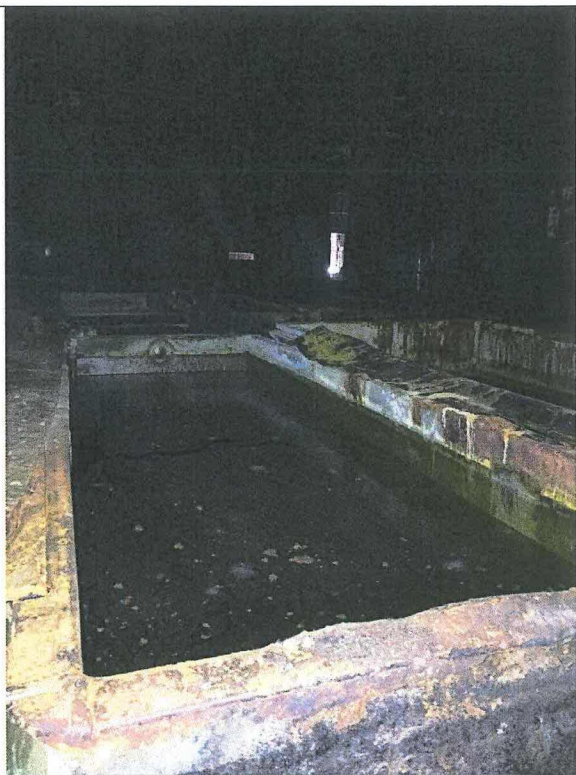
Number	6
Description	Drum of sodium cyanide
Photographer	S. Lam
Date	10/13/2016

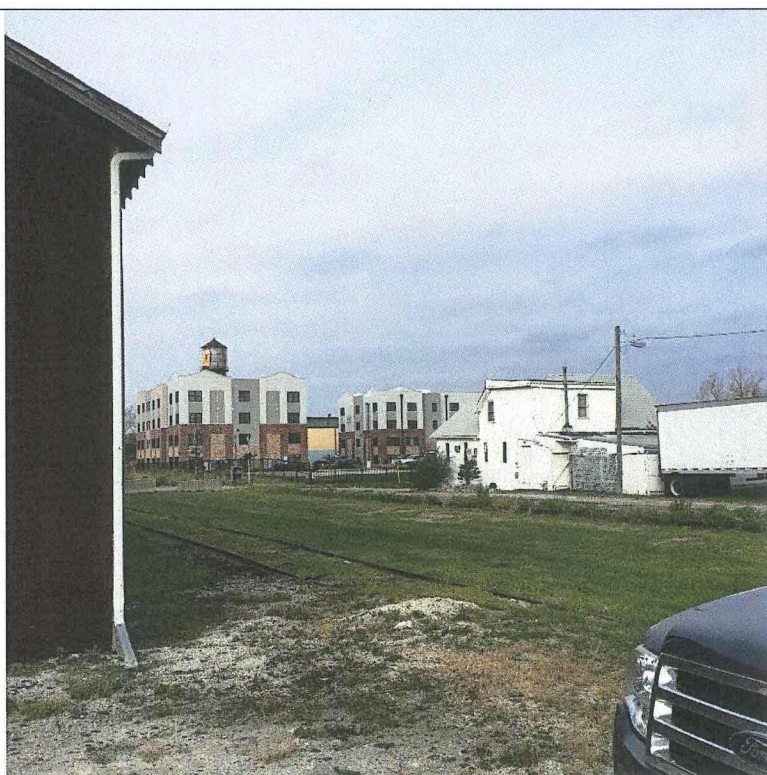


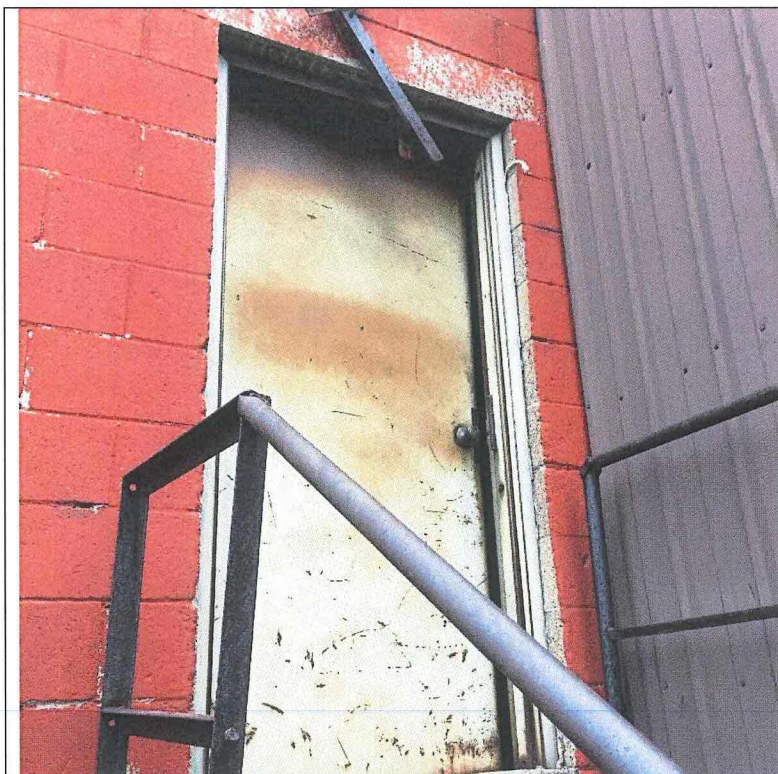
Number	7
Description	Drums and plating vats
Photographer	S. Lam
Date	10/13/2016



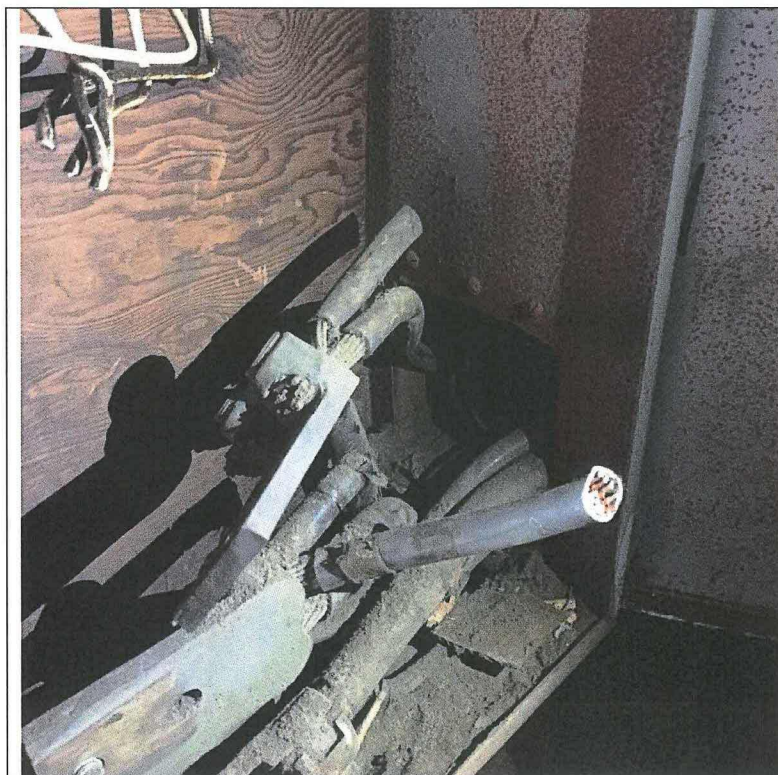
Number	8
Description	Plating line
Photographer	S. Lam
Date	10/13/2016

	Number	9
	Description	Plating vats
	Photographer	S. Lam
	Date	10/13/2016

	Number	10
	Description	Residential properties near the site
	Photographer	S. Lam
	Date	10/31/2016



Number	11
Description	Door opened by trespassers
Photographer	S. Lam
Date	10/31/2016



Number	12
Description	Copper wire cut by metal scavengers
Photographer	S. Lam
Date	10/31/2016

ATTACHMENT I

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

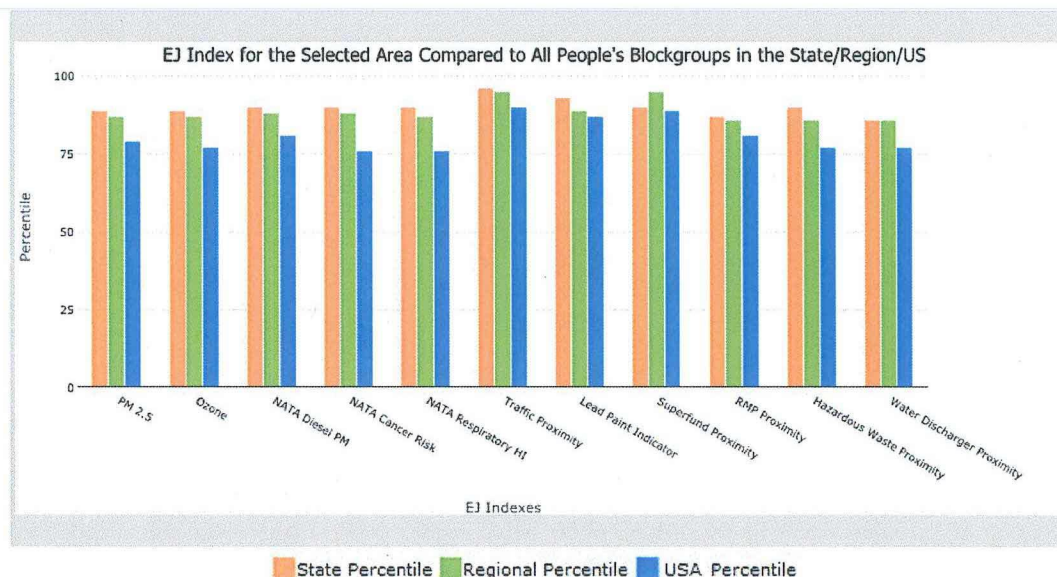
**ENVIRONMENTAL JUSTICE ANALYSIS
FOR
WILLIAMSON POLISHING & PLATING SITE
INDIANAPOLIS, MARION COUNTY, INDIANA**

1 mile Ring Centered at 39.795789,-86.135506, INDIANA, EPA Region 5

Approximate Population: 8,671

Input Area (sq. miles): 3.14

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	89	87	79
EJ Index for Ozone	89	87	77
EJ Index for NATA* Diesel PM	90	88	81
EJ Index for NATA* Air Toxics Cancer Risk	90	88	76
EJ Index for NATA* Respiratory Hazard Index	90	87	76
EJ Index for Traffic Proximity and Volume	96	95	90
EJ Index for Lead Paint Indicator	93	89	87
EJ Index for Superfund Proximity	90	95	89
EJ Index for RMP Proximity	87	86	81
EJ Index for Hazardous Waste Proximity*	90	86	77
EJ Index for Water Discharger Proximity	86	86	77



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

October 27, 2016

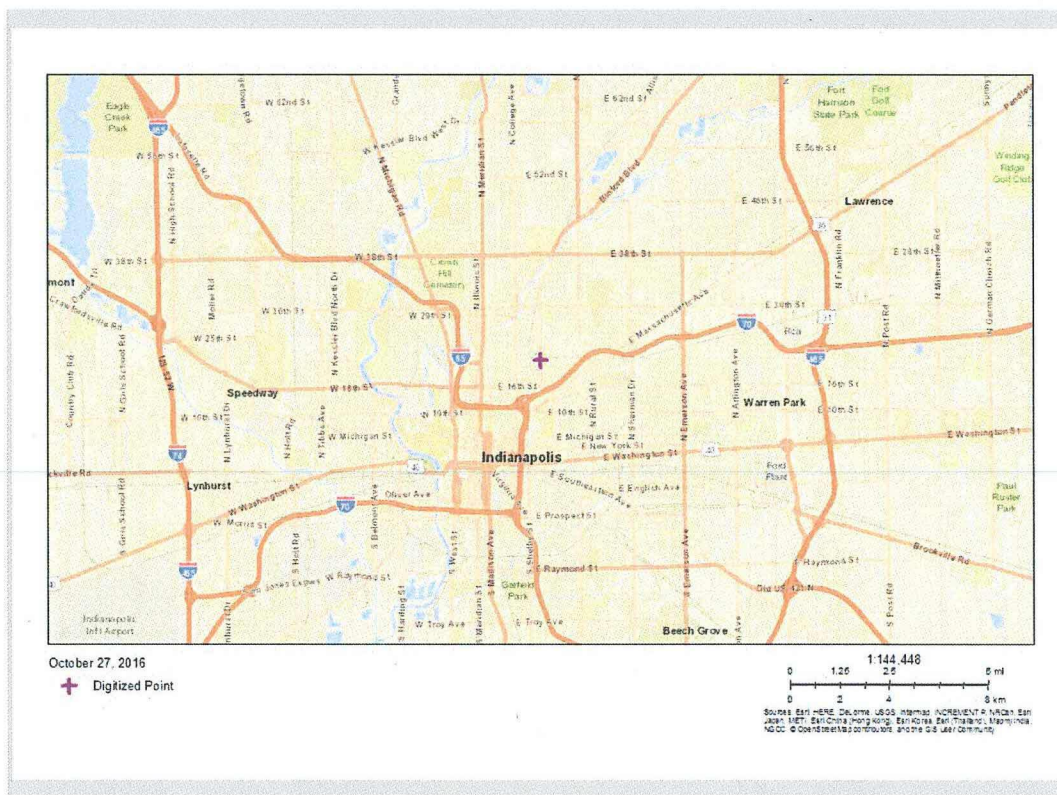
1/3



1 mile Ring Centered at 39.795789,-86.135506, INDIANA, EPA Region 5

Approximate Population: 8,671

Input Area (sq. miles): 3.14



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0
National Pollutant Discharge Elimination System (NPDES)	0

EJSCREEN Report (Version 2016)

1 mile Ring Centered at 39.795789, -86.135506, INDIANA, EPA Region 5

Approximate Population: 8,671

Input Area (sq. miles): 3.14



Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in $\mu\text{g}/\text{m}^3$)	11.6	11	95	10.6	84	9.32	92
Ozone (ppb)	52.1	51.2	72	50.3	75	47.4	75
NATA* Diesel PM ($\mu\text{g}/\text{m}^3$)	1.5	0.835	92	0.931	80-90th	0.937	80-90th
NATA* Cancer Risk (lifetime risk per million)	47	34	97	34	90-95th	40	70-80th
NATA* Respiratory Hazard Index	2.1	1.4	92	1.7	70-80th	1.8	70-80th
Traffic Proximity and Volume (daily traffic count/distance to road)	1200	250	96	370	93	590	89
Lead Paint Indicator (% Pre-1960 Housing)	0.62	0.36	81	0.39	75	0.3	82
Superfund Proximity (site count/km distance)	0.23	0.16	84	0.12	89	0.13	88
RMP Proximity (facility count/km distance)	0.38	0.52	63	0.51	64	0.43	71
Hazardous Waste Proximity* (facility count/km distance)	0.11	0.09	80	0.11	71	0.11	70
Water Discharger Proximity (facility count/km distance)	0.19	0.34	50	0.31	57	0.31	61
Demographic Indicators							
Demographic Index	64%	27%	93	29%	90	36%	84
Minority Population	66%	19%	93	24%	88	37%	77
Low Income Population	61%	35%	86	33%	88	35%	86
Linguistically Isolated Population	1%	2%	65	2%	61	5%	46
Population With Less Than High School Education	20%	12%	80	11%	84	14%	74
Population Under 5 years of age	6%	6%	44	6%	48	6%	46
Population over 64 years of age	10%	14%	34	14%	34	14%	39

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: <https://www.epa.gov/national-air-toxics-assessment>.

+ The hazardous waste environmental indicator and the corresponding EJ index will appear as N/A if there are no hazardous waste facilities within 50 km of a selected location.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

October 27, 2016

3/3

ATTACHMENT II

U.S. ENVIRONMENTAL PROTECTION AGENCY REMOVAL ACTION

ADMINISTRATIVE RECORD FOR THE WILLIAMSON POLISHING & PLATING SITE INDIANAPOLIS, MARION COUNTY, INDIANA

ORIGINAL
NOVEMBER, 2016

<u>NO.</u>	<u>SEMS ID</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	930033	6/1/99	ATSDR	Public	Tox FAQs Fact Sheet - Sulfur Trioxide (SO3) and Sulfuric Acid - CAS #7446- 11-9 and 7664-93-9	2
2	930031	7/1/99	ATSDR	Public	Tox FAQs Fact Sheet - Silver - CAS #7440-22-4	2
3	930029	4/1/02	ATSDR	Public	Tox FAQs Fact Sheet - Hydrogen Peroxide - CAS #7722-84-1	2
4	930032	4/1/02	ATSDR	Public	Tox FAQs Fact Sheet - Sodium Hydroxide - CAS #1310-73-2	2
5	930025	9/1/04	ATSDR	Public	Tox FAQs Fact Sheet - Ammonia - CAS #7664-41-7	2
6	930027	9/1/04	ATSDR	Public	Tox FAQs Fact Sheet - Copper - CAS #7440-50-8	2
7	930030	8/1/05	ATSDR	Public	Tox FAQs Fact Sheet - Nickel - CAS #7440-02-0	2
8	930034	8/1/05	ATSDR	Public	Tox FAQs Fact Sheet - Zinc - CAS #7440-66-6	2
9	930028	7/1/06	ATSDR	Public	Tox FAQs Fact Sheet - Cyanide - CAS #74-90-8, 143-33-9, 151-50-8, 592-01- 8, 544-92-3, 506-61-6, 460- 19-5, 506-77-4	2
10	930024	9/1/08	ATSDR	Public	Tox FAQs Fact Sheet - Chromium - CAS #7440-47- 3	2

11	930026	9/1/08	ATSDR	Public	Tox FAQs Fact Sheet - Cadmium - CAS #7440-43-9	2
12	930011	11/10/14	Lowry, S., IDEM	Williamson, D., Williamson Polishing & Plating Company	Letter re: Violations Discovered During Compliance Evaluation Inspection	16
13	930015	10/3/16	Doerflein, J., Marion County Public Health Department	Fender, K., Marion County Public Health Department	Email re: Williamson Plating Referral	2
14	930014	10/6/16	Fender, K., Marion County Public Health Department	Williamson, D., Williamson Polishing & Plating Company	Emergency Notice of Violation	4
15	930016	10/13/16	Kaufman, E., Marion County Public Health Department	Lam, S., U.S. EPA	Email re: Request for Assistance at the Williamson Polishing and Plating Company Site	1
16	930023	10/13/16	National Response Center	File	Incident Report #1161488	3
17	930018	10/21/16	NOAA	File	Chemical Datasheet - Formic Acid	5
18	930019	10/21/16	NOAA	File	Chemical Datasheet - Nitric Acid, Other than Red Fuming	6
19	930020	10/21/16	NOAA	File	Chemical Datasheet - Potassium Hydroxide [Dry Solid, Flake, Bead, or Granular]	5
20	930021	10/21/16	NOAA	File	Chemical Datasheet - Sodium Chromate	4
21	930013	10/25/16	Lam, S., U.S. EPA	Osborn, R., IDEM	Letter re: Request for Applicable or Relevant and Appropriate Requirements (ARARs)	2
22	930012	10/28/16	Huxhold Fliss, J., IDEM	Lam, S., U.S. EPA	Letter re: Applicable or Relevant and Appropriate Requirements (ARARs)	3
23	930022	11/1/16	Lam, S., U.S. EPA	Distribution List	Pollution Report (POLREP) 1 - Initial	5

24	930017	11/3/16	Pace Analytical	Quality Environmental Professionals	Sample Analytical Results	23
25	-	-	Lam, S., U.S. EPA	Ballotti, D., U.S. EPA	Action Memorandum re: Request for a Time-Critical Removal Action at the Williamson Polishing and Plating Site (PENDING)	-

ATTACHMENT III

DETAILED CLEANUP CONTRACTOR ESTIMATE

HAS BEEN REDACTED – ONE PAGE

**NOT RELEVANT TO SELECTION
OF REMOVAL ACTION**

ATTACHMENT IV

INDEPENDENT GOVERNMENT COST ESTIMATE

HAS BEEN REDACTED – THREE PAGES

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION