



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

US EPA RECORDS CENTER REGION 5



495096

REPLY TO THE ATTENTION OF:

MEMORANDUM

SUBJECT: ACTION MEMORANDUM - Request for Approval of a Time-Critical Removal Action at the Electro Plating Services Site, Madison Heights, Oakland County, Michigan (Site ID #C5ZC)

FROM: Jeffrey A. Lippert, On-Scene Coordinator (OSC)
Emergency Response Branch 1
Emergency Response Section 2

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

TO: Margaret M. Guerriero, Acting Director
Superfund Division

I. PURPOSE

The purpose of this memorandum is to request and document your approval to expend up to \$1,966,114 to conduct a time-critical removal action at the Electro Plating Services Site (the Site), located in Madison Heights, Oakland County, Michigan. The response actions proposed herein are necessary to mitigate threats to public health, welfare, and the environment posed by the presence of uncontrolled hazardous substances there. The Site contains unsecured hazardous waste, including hundreds of totes, drums, vats, and miscellaneous containers. In addition, much of the facility floor is covered with hazardous waste from historic and current releases at the facility and there is a large pit dug into the soil in the basement that had waste draining to it.

This Action Memorandum would serve as approval for expenditures by U.S. EPA, as lead technical agency, to take actions described herein to abate the imminent and substantial endangerment posed by hazardous substances at the Site. The proposed removal of hazardous substances would be taken pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604(a)(1), and 40 C.F.R. § 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

The uncontrolled conditions of the hazardous substances present at the Site, and the potential threats they pose require that this action be classified as a time-critical removal action. The response actions described in this Action Memorandum will require an estimated 65 on-site working days to complete.

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

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: MIN 000507243

RCRA ID: MID 042 444 687

Category: Time-Critical

A. Site Description

Electro-Plating Service, Inc. (EPS) incorporated in 1967, and manufactured-electroplated metals or formed products at the Site until the Michigan Department of Environmental Quality (MDEQ) ordered it to cease operations on December 21, 2016. EPS conducted various types of electroplating operations, including copper, tin, bronze, cadmium, nickel, chrome, gold, silver, zinc, and lead plating. The operations at the EPS facility resulted in the generation and storage of large quantities of hazardous waste, including cyanide, chromium, nickel chloride, trichloroethene (TCE or trichloroethylene), and various acids and bases [Administrative Record Document #22].

1. Removal site evaluation

MDEQ has had extensive issues with the Site for over 20 years. A full history of MDEQ compliance issues with EPS is presented in the "Previous Actions" section below. However, the most recent events leading up to MDEQ's referral of the Site to U.S. EPA began on May 13, 2016. On this day, MDEQ conducted an abbreviated inspection based on a complaint filed by the Madison Heights Fire Department (MHFD). During the inspection, MDEQ verified MHFD's concerns regarding mismanagement of hazardous materials, hazardous wastes, other liquid and solid wastes, and unidentified chemicals. MDEQ issued a Violation Notice on June 6, 2016 [Administrative Record Document #14]. In addition to this Violation Notice, MHFD revoked EPS's occupancy from May 11 to May 27, 2016, due to fire and building code violations [Administrative Document #17].

On November 15, 2016, MDEQ and MHFD conducted a follow-up inspection because EPS did not provide a formal response to the June 6, 2016 violation notice. MDEQ and MHFD documented the site conditions were consistent with the May 13, 2016 inspection and formally documented that the Site posed "an imminent and substantial threat to human health and the environment" [Administrative Document #16]. MDEQ documented the following observations:

- Dilapidated building with missing doors, windows and roof areas resulting in unrestricted access;
- Unstable and makeshift flooring on the plating bath level of the facility;
- Numerous containers (estimated over 5,000) of liquid and solid waste and process chemicals;
- Leaking, unlabeled, open, improperly stored, and/or corroded containers;

- Waste and chemicals on-site including but not limited to acids, bases, metal oxides, cyanide, and chlorinated solvents;
- Unorganized waste and chemical storage without consideration to chemical compatibility;
- A “pit” in the basement which the owner of EPS was said to have excavated in 1993 for the purpose of storing waste;
- Liquids leaking from the plating bath floor accumulating in the basement “pit;” and
- Sludge excavated from the “pit” to an elevated portion of the basement to dry contained by a makeshift berm from sludge listed as hazardous waste (chrome).

Based on the above observations, MDEQ issued a second Violation Notice on December 2, 2016 [Administrative Record Document #15]. MDEQ then recommended the Site be referred to U.S. EPA, Superfund Division, Emergency Response Branch to perform a removal action to secure the facility and properly manage all uncontrolled hazardous waste and materials [Administrative Record Document #22].

On December 16, 2016, the Michigan Department of Health and Human Services (MDHHS) sent an Email to Ms. C. Heidi Grether, Director of MDEQ, determining that the conditions at EPS were an imminent and substantial hazard to public health [Administrative Record Document #16].

In a letter dated December 20, 2016, MHFD deemed the EPS facility at 945 East 10 Mile road unfit for occupancy [Administrative Document #17]. MHFD ordered all operations inside the facility to cease and instituted a 24-hour Fire Watch. The letter also cited numerous violations under the 2015 International Fire Code. Additionally, MHFD again stated a significant and imminent threat to the community due to the unsecured state of the facility with access to various types of hazardous wastes and chemicals.

On December 21, 2016, MDEQ issued an “Order to Cease and Desist Operations” to EPS [Administrative Document #18]. MDEQ issued this Order in response to the information summarized above regarding the unlawful generation, storage and/or disposal of hazardous waste. In a letter dated December 22, 2016, MDEQ officially requested the U.S. EPA Emergency Response Branch, Superfund Division, to perform a time-critical removal action at the Site [Administrative Record Document #19].

U.S. EPA conducted a removal assessment on December 30, 2016 [Administrative Record Document #22].

2. Physical location

The Site is located at 945 East 10 Mile Road, Madison Heights, Michigan 48071 (Figure A-1). The geographical coordinates for the Site are 42°28'36.36" North latitude and -83°5'46.9" West longitude. The Site includes a large four level building with an approximate footprint of 10,000 square feet (ft²). The Site is physically bounded to the north by Heights Drive followed by Interstate 696, to the south by East 10 Mile Road, to the east by Dura Thread Gage business, and to the west by a vacant lot followed by a small storage building owned by EPS, then Advanced

Assembly Products, Inc. The area around the Site is a mix of densely populated residential, industrial, and commercial properties. The residential area lies approximately 500 feet south of the Site with commercial businesses adjacent to the Site.

An Environmental Justice (EJ) analysis for the Site was conducted. Screening of the surrounding area used Region 5's EJ Screen Tool [which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT)]. Region 5 has reviewed environmental and demographic data for the area surrounding the Site at 945 E. 10 Mile Road, Madison Heights, Michigan, and determined there is a low potential for EJ concerns at this location [Attachment III].

3. Site Characteristics

The Site is an industrial property in a mixed commercial, residential and industrial area. As discussed above, a chemical plating business operated on the property until MDEQ ordered the business to cease and desist operations, on December 21, 2016. The building is in very poor condition, with holes documented in the floor, roof and walls.

U.S. EPA observed numerous containers of various hazardous wastes present at the Site, as well as loose waste observed in vats and tanks, on the facility floors, and in corroded drums and other containers. The property is not fenced. MDHHS has deemed the Site an imminent and substantial endangerment to public health [Administrative Record Document #16] due to the current conditions.

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

On December 30, 2016, U.S. EPA conducted a removal assessment at the Electro Plating Services Site located in Madison Heights, Michigan. U.S. EPA representatives collected a total of seventeen samples, of which fourteen had laboratory results meeting hazardous waste criteria [Administrative Record Document #22]. Of these seventeen samples, two sludge samples, three solid samples and twelve liquid samples were collected and submitted for various combinations of Toxicity Characteristic Leaching Procedure (TCLP) Metals, TCLP VOCs, TCLP SVOCs, pH and flashpoint determination analysis.

Analytical results indicate wastes at the Site met the criteria to constitute characteristic hazardous waste under the Resource Conservation and Recovery Act (RCRA) regulations at 40 C.F.R. Part 261. The analytical results for samples collected and analyzed for corrosivity determination by pH indicated six out of seven samples met the characteristic of corrosivity. The result documented liquid having a pH level less than 2.0 standard units which, according to 40 CFR § 261.22, meets the characteristic of a hazardous waste for corrosivity.

The analytical results for the sample collected and analyzed for total and amenable cyanide contained a detectable level of total cyanide. The presence of cyanide in the sample as well as potential cyanide in drums labeled as sodium cyanide, all of which are surrounded and stored next to and among acids, meets the reactivity characteristic of a hazardous waste at 40 C.F.R. §261.23

The analytical results for samples collected and analyzed for TCLP Metals indicated that nine out of 11 samples exceeded the toxicity characteristic at 40 CFR § 261.24 for at least one metal. The highest concentration of chromium documented at the Site is 60,000 ppm.

The analytical result of the sample collected and analyzed for TCLP VOCs indicated an 89 ppm TCE concentration, well above the TCLP concentration of 5 ppm for defining it a characteristic hazardous waste at 40 C.F.R. §261.24.

As EPS received a Cease and Desist notice, containers holding hazardous and toxic material present throughout the building could remain unattended for an extended period of time, resulting in conditions conducive to further deterioration of containers. Based on the proximity of residential, commercial, and industrial properties to the Site, the corrosive, reactive, and toxicity characteristic wastes pose a potential direct contact threat to the public. Additionally, weather conditions and the deteriorated condition of the building and containers pose a threat of release. The building is currently secured with boarded up windows and doors, but they could potentially be removed by trespassers, especially given the recent news article [Administrative Record Document #20]. The presence of hazardous waste such as TCE, chromium, and lead in open containers throughout the facility, as well as the presence of cyanide in drums pose a direct threat to trespassers, who can easily be exposed to these chemicals if they gain access to the building through roof or by breaking through the boarded up windows.

5. NPL status

This Site is not on the National Priorities List (NPL).

6. Maps, pictures and other graphic representations

A figure detailing the location of the Site is included in the attached Site Location Map (Figure A-1). A figure detailing site features such as the footprint of the building and site boundaries is presented in the attached Site Features Map (Figure A-2). Attachment III shows the Environmental Justice analysis data for the Site.

B. Other Actions to Date; State and Local Authorities' Roles

1. Previous actions

MDEQ has encountered substantial compliance issues with EPS for over 20 years, culminating in its December 22, 2016 request for U.S. EPA assistance. The full MDEQ compliance history of EPS is outlined below.

December 20, 1996:

MDEQ issued EPS a Letter of Warning (LOW) identifying violations noted during a November 4, 1996 inspection. Violations included failure to conduct/provide waste characterization analyses; failure to include land disposal restriction notices for waste shipments; failure to submit biennial reporting; failure to properly label containers accumulating hazardous waste (a condition for a RCRA permit exemption

for storage less than 90-days); failure to close hazardous waste/liquid industrial waste containers; failure to perform/document weekly container area inspections; failure to provide documentation of employee training; and insufficient contingency planning [Administrative Record Document #1].

October 25, 2004:

MDEQ issued EPS a LOW identifying the violations noted during an October 12, 2004 inspection. Violations included failure to comply with hazardous waste accumulations/storage requirements (storing hazardous waste without a RCRA permit/license as it did not meet a 90-day accumulation exemption); failure to characterize and/or properly manage/dispose of high intensity discharge lamps; failure to properly label containers accumulating hazardous waste; failure to perform/document weekly container area inspections; failure to provide sufficient documentation of employee training; failure to maintain the facility in a manner that prevents fire, explosion and release of hazardous waste; and insufficient contingency planning [Administrative Record Document #2].

January 24, 2005:

MDEQ issued EPS a LOW due to insufficient information provided to return the facility to compliance [Administrative Record Document #3].

June 7, 2005:

MDEQ issued EPS a LOW due to 535 55-gallon drums of hazardous waste transported illegally from the 945 East 10 Mile Road location and stored illegally at the 5900 Commonwealth location. Violations included operation of an unauthorized hazardous waste storage facility; failure to transport hazardous and/or liquid industrial waste by a licensed transporter; failure to conduct/provide waste characterization analyses and data; failure to complete hazardous waste shipment manifests; failure to label/mark drums in accordance with hazardous waste accumulation and Department of Transportation shipping requirements; and failure to inspect container areas and ensure container compatibility with contents [Administrative Record Document #4].

January 26, 2006:

MDEQ issued EPS a LOW for failure to correct all violations cited in June 7, 2005 and June 30, 2005 letters of warning, as well as a November 14, 2005 signed Plea Agreement. The LOW also served as a final opportunity for EPS to resolve the outstanding violations ahead of MDEQ pursuit of escalated enforcement action and penalty assessments [Administrative Record Document #6].

March 6, 2007:

MDEQ Air Quality Division covering Madison Heights referred a Pollution Emergency Alerting System (PEAS) complaint due to observed drums in basement, portions of basement filled with liquid, and cracked and corroded flooring [Administrative Record Document #7].

August 20, 2007:

MDEQ issued EPS a LOW due to violations noted during the July 24, 2007 inspection at the Madison Height location. Violations included failure to comply with hazardous waste accumulations/storage requirements; failure to characterize waste; failure to provide waste characterization documentation; failure to properly label containers accumulating hazardous waste; failure to perform/ document weekly container area inspections; failure to store hazardous waste in containers that are in good condition; failure to provide adequate training for employees; failure to maintain an adequate contingency plan; failure to manage liquid industrial waste in a closed or covered container; and failure to provide records of liquid industrial waste produced and treated [Administrative Record Document #9].

June 6, 2008:

MDEQ issued a LOW to EPS. Violations included failure to provide waste characterization documentation; failure to perform/document weekly container area inspections; failure to provide documentation of adequate employee training; and failure to maintain an adequate contingency plan [Administrative Record Document #10].

April 13, 2010:

EPS entered Consent Order with the Department of Natural Resources and Environment (a merger of MDEQ and the Michigan Department of Natural Resources between 2009 and 2011). [Administrative Record Document #12].

June 6, 2016:

MDEQ issued Violation Notice to EPS. Violations included failure to comply with hazardous waste accumulation/storage requirements (greater than 90-day storage); failure to provide waste characterization; failure to operate the facility to minimize the possibility of fire, explosion or release; failure to close hazardous/liquid industrial by-product containers; failure to store hazardous waste in containers that are in good condition; and failure to store hazardous waste/liquid industrial by-product protected from weather, fire, physical damage and vandals [Administrative Record Document #14].

December 2, 2016:

MDEQ issued a 2nd Violation Notice to EPS [Administrative Record Document #15].

December 16, 2016:

Michigan Department of Health and Human Services (MDHHS) sent an email to Ms. C. Heidi Grether, Director of MDEQ determining that the conditions at the Site were an imminent and substantial hazard to public health [Administrative Record Document #16].

December 20, 2016:

MHFD deemed the EPS facility unfit for occupancy [Administrative Document #17]. MHFD ordered all operations inside the facility to cease and instituted a 24-hour Fire Watch. The letter also cited numerous violations under the 2015 International Fire Code. Additionally, MHFD again stated a significant and imminent threat to the

community due to the unsecured state of the facility with access to various types of hazardous wastes and chemicals.

December 21, 2016:

MDEQ issued an "Order to Cease and Desist Operations" at the Site. This Order was issued in response to the information summarized above regarding the unlawful generation, storage and/or disposal of hazardous waste [Administrative Document #18].

December 22, 2016:

MDEQ submitted a letter to the U.S. EPA Emergency Response Branch, Superfund Division, formally requesting U.S. EPA to perform a time-critical removal action at the Site [Administrative Record Document #19].

2. Potential for continued State/local response

The State has exhausted their resources with the Site as evidenced by the December 22, 2016 MDEQ referral letter [Administrative Record Document #19].

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

The conditions at the Site present an imminent and substantial threat to public health or welfare, and the environment, and meet the criteria for a time-critical removal action at 40 C.F.R. § 300.415 (b)(2) of the NCP. These factors include, but are not limited to, the following:

- **Actual or potential exposure of nearby human populations, animals, or the food chain to hazardous substances or pollutants or contaminants.**

During the December 30th, 2016, Site investigation, U.S. EPA documented drums and containers at the Site containing material that exhibited the characteristic of corrosivity, reactivity or toxicity set forth in the RCRA regulations at 40 C.F.R. §§ 261.22, 261.23 and 261.24, respectively, and thus met the definition of characteristic hazardous waste. Additionally, U.S. EPA documented drums of sodium cyanide which has the potential to react with acids documented at the Site to produce toxic gases. The building is dilapidated. Inspectors observed several holes in the roof, windows and doors boarded up with plywood, and plastic sheeting used to separate some of the work areas within the building instead of solid walls.

Analytical results of six out of seven samples submitted for pH determination exhibited the characteristic of corrosivity. Samples EPS-3, EPS-7, EPS-10, EPS-13, EPS-14 and EPS-17 documented liquid having a pH level less than 2.0 SU, exhibiting the characteristic of corrosivity. The pH results ranged from less than 1 SU to 1.9 SU. The lowest pH was documented in sample EPS-17 collected from an unlabeled, small diameter, yellow plastic container located next to the plating baths on the second level of the facility (see Photograph 25, Appendix C).

Analytical results for samples submitted for TCLP and Total Metals documented 9 of the 11 samples exhibited toxicity characteristics for at least one of the 8 RCRA metals. Chromium, lead, cadmium, and silver were present at the Site at levels that exceeded their respective regulatory level at Table 1 of 40 CFR § 261.24, Maximum Concentration of Contaminants for the Toxicity Characteristic: 5 mg/L for chromium, 5 mg/L for lead, 1 mg/L for cadmium, and 5 mg/L for silver. Chromium was detected at 60,000 ppm in sample EPS-4, which U.S. EPA collected from an open container; lead was detected at 1,100 ppm in sample EPS-3, from an open 55-gallon drum; cadmium was detected at 210 ppm in sample EPS-2, from an open 5-gallon bucket; and silver was detected at 94 ppm, also from sample EPS-3.

The presence of sodium cyanide drums at the site as well as total cyanide from sample EPS-1 meet the criteria for the reactivity characteristic at 40 C.F.R. § 261.23(a)(5): "a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment." U.S. EPA observed sodium cyanide drums located on the same level as the plating baths full of acids and exposed to precipitation from the holes in the roof of the facility. The plating baths are uncovered and have begun to corrode. Additionally, drums of oxidizers and nitric acid were stored next to each other near the cyanide drums. According the Material Safety Data Sheet (MSDS) for sodium Cyanide, if the sodium cyanide comes into contact with moisture/water and/or acids, it will react to form hydrogen cyanide gas, a toxic and flammable gas. Mixtures of metal cyanides with metal chlorates, perchlorates or nitrates could cause violent explosions (MSDS, 2013). Releases of toxic gases may easily escape the facility through holes in the roof and walls.

The hazardous waste at the Site includes TCE, a volatile organic compound. Volatilization of this hazardous substance within the deteriorating building threatens the surrounding residents with airborne exposure.

According to the Agency for Toxic Substances and Disease Registry's (ATSDR) "ToxFAQ for Chrome" (ATSDR) exposure to chrome can damage the nose, stomach and intestines; cause anemia and ulcers; and can cause cancer [Administrative Record Document #13].

The "ToxFAQ for Lead" (ATSDR) states that exposure to lead can happen from breathing workplace air or dust, eating contaminated foods or drinking contaminated water. The effects of lead are the same whether it enters the body through breathing or swallowing. Lead can affect almost every organ and system in your body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high-levels of exposure to lead may cause miscarriage. High-level exposure in men can damage the organs responsible for sperm production [Administrative Record Document #8].

U.S. EPA observed a large quantity of corrosive wastes at the Site, with several containers appearing to be in poor condition. Low pH wastes can cause immediate and irreversible skin and lung burns to exposed populations.

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

Prior inspections, by MDEQ and MHFD, documented the presence of over 5,000 containers at the Site. During the Site investigation, U.S. EPA observed rusted and deteriorated drums and containers with contents spilled on the floor that possibly could have infiltrated into the soils beneath. U.S. EPA documented open containers and plating baths filled with acids throughout the facility, and observed leaks from the second level (plating bath area) to the basement, corroding the basement floor. Additionally, parts of the basement floor had been excavated for a pit, exposing bare soil and allowing plating waste to pool.

Analytical results of the samples confirmed the presence of corrosive and toxic characteristic hazardous waste at the Site. These containers were deteriorating, with visible spilled material on the ground and floor. U.S. EPA documented at least four drums of sodium cyanide surrounded by acids and exposed to the areas where the roof's integrity has been compromised. A leaking roof may accelerate deterioration of the containers leading to the release of hazardous substances and migration of the hazardous material to off-site locations.

During the site assessment, U.S. EPA observed numerous compromised and opened totes, drums, vats, and small containers in the building. While operations have ceased and the Site is unoccupied, chemicals remain. Several of the containers showed signs of deterioration and corrosion. Additionally, inspectors observed evidence of former releases (staining and puddles, and corrosion) throughout the building.

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

The Detroit, Michigan area receives a substantial amount of precipitation during spring and summer, and winter temperatures are normally below freezing. Weather conditions will contribute to further deterioration of the already severely corroded drums and containers that have been documented to contain corrosive and reactive material and open tanks. The dilapidated condition of the building, including holes in the roof, can act as a conduit for infiltration of rain and snow and aid in contamination migration and release. Additionally, drums of sodium cyanide U.S. EPA documented at the Site could react with water and the acids present at the Site to create high flammability conditions and/or release highly toxic hydrogen cyanide gas.

- **Threat of fire or explosion (40 CFR 300.415(b)(2)(vi))**

Analytical results from U.S. EPA's Site investigation did not document that material in drums and containers met the ignitability criteria for characteristic hazardous waste at 40 C.F.R. § 261.21 or posed a threat of fire or explosion. However, due to the reactive nature of sodium cyanide, there is a potential for a flammable and explosive environment to form, if the sodium

cyanide comes into contact with water or acids present at the Site. Acids from open containers and/or water from precipitation infiltrating through the open portions of the roof could react with the sodium cyanide to create such an environment.

- **The [lack of] unavailability of other appropriate federal or state response mechanisms to respond to the release;**

MDEQ requested U.S. EPA's assistance with a time-critical removal at EPS on December 22, 2016 [Administrative Record Document #19]. There is no other mechanism to remove the waste from the property. MDEQ found EPS noncompliant and issued it an order to cease and desist operations. Unaddressed, conditions will continue to deteriorate. If facility structural walls are breached, waste will likely migrate off-site into the very nearby residential neighborhoods. This would also likely shut down Interstate-696, which lies approximately 200 feet from the Site.

IV. ENDANGERMENT DETERMINATION

Given the Site conditions and the nature of the contaminants there, as described in Sections II and III above, actual or threatened releases of hazardous substances from this Site may present an imminent and substantial endangerment to public health, welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description:

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

1. Develop and implement a site-specific Health and Safety Plan, including an Air Monitoring Plan, and a Site Emergency Contingency Plan;
2. Develop and implement a Site Work Plan and Site Security Plan;
3. Inventory and perform hazard characterization, in compliance with a Site-specific QA/QC Plan, on all substances contained in containers, drums, tanks and spilled material on the floor and in pits;
4. Investigate the potential for soil contamination on the property;
5. Dismantle and decontaminate process equipment, tanks and building components associated with the product process area, as necessary;
6. Remove from the Site and recycle or dispose of vats and waste containers and contaminated process equipment;

7. Consolidate and package hazardous substances, pollutants, and contaminants for transportation and off-site disposal in accordance with U.S. EPA's Off-Site Rule (40 CFR § 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 U.S. EPA OSC determines may pose an imminent and substantial endangerment to the public health or the environment.

The removal action will be conducted in a manner not inconsistent with the 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.

All hazardous substances, pollutants, or contaminants removed off-site pursuant to this removal action for treatment, storage, and disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by U.S. EPA, with the U.S. 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 (ARARs):

All identified applicable or relevant and appropriate requirements (ARARs) of specific federal and state law will be complied with to the extent practicable considering the exigencies of the situation. The OSC sent a letter dated January 13, 2017, requesting ARARs to Mrs. Alex Clark, Senior Environmental Quality Analyst, Office of Waste Management and Radiological Protection, MDEQ [Administrative Record Item #21]. MDEQ responded by correspondence, dated January 25, 2017, which enclosed a table listing Michigan statutes and rules that may present chemical specific ARARs and included comments discussing what activities might trigger the listed citations. Among other things, the State included the authorized State RCRA regulation at Mich. Admin. Code r. 299.9212 (the State analogue to 40 C.F.R. §§261.20 – 261.24), regarding characteristic hazardous waste, promulgated under Part 111 of the Michigan Natural Resources and Environmental Protection Act (NREPA), Mich. Pub. Act 451. EPA plans to evaluate the statutes and rules identified in the correspondence dated January 25, 2017, to determine the State applicable and relevant and appropriate requirements for this Site. As set forth at Section 121(e) of CERCLA, actions conducted on-site are exempt from permitting requirements.

5. Project Schedule:

The response action described in this action memorandum will require an estimated 65 working days to complete.

B. Estimated Costs

REMOVAL ACTION PROJECT CEILING ESTIMATE	
<u>Extramural Costs:</u>	
<u>Regional Removal Allowance Costs:</u>	
Total Cleanup Contractor Allowance Costs	\$ 1,535,130
<u>Other Extramural Costs Not Funded from the Regional Allowance:</u>	
Total START, including multiplier costs	\$ 174,534
Subtotal Extramural Costs	\$ 1,709,664
Extramural Costs Contingency (15% of Subtotal, Extramural Costs)	\$ 256,450
TOTAL REMOVAL ACTION PROJECT CEILING	\$ 1,966,114

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

Given the Site conditions, the nature of the hazardous substances and pollutants or contaminants documented on Site, and the potential exposure pathways to nearby populations described in Sections II, III and IV above, the actual or threatened release of hazardous substances and pollutants or contaminants from the Site presents an imminent and substantial endangerment to public health, welfare or the environment if this action is not taken. This will increase the potential that hazardous substances will be released, thereby threatening the adjacent population and the environment. Delayed or non-action may result in increased likelihood of external exposure, inhalation, ingestion or direct contact to human populations trespassing at or near the Site.

VII. OUTSTANDING POLICY ISSUES

Not applicable.

VIII. ENFORCEMENT

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

Contractor Costs	EPA Costs	R5 Indirect Cost Rate	Total Costs	Eligible Cost Recovery
-----------------------------	----------------------	----------------------------------	------------------------	-----------------------------------


$$(\$1,966,114 + \$61,400) + (61.96\% \times \$2,027,514) = \$3,283,762$$

The total U.S. EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$3,283,762¹.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Electro Plating Services Site, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the administrative record for the Site, see Attachment II. Conditions at the Site meet the NCP § 300.415(b)(2) criteria for a removal action and I recommend your approval of the removal action proposed in this Action Memorandum.

The total removal project ceiling if approved, will be \$1,966,114, of which an estimated \$1,791,580 may be used for the cleanup contractor costs. You may indicate your approval by signing below.

APPROVE: 
Margaret M. Guerriero, Acting Director
Superfund Division

DATE: 2/28/2017

DISAPPROVE: _____
Margaret M. Guerriero, Acting Director
Superfund Division

DATE: _____

Enforcement Addendum

Figures:

- A-1: Site Location Map
- A-2: Site Features Map – Second Level
- A-3: Site Features Map – Basement Level

Attachments:

- I Detailed Cleanup Contractor Cost Estimate
- II Administrative Record Index
- III Region 5 EJ Analysis
- IV Independent Government Cost Estimate

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.

cc: P. Easter, U.S. EPA HQ (Easter.patrick@Epa.gov)
B. Schlieger, U.S. EPA HQ (Schlieger.brian@Epa.gov)
Josh Woodyard, U.S. EPA HQ (Woodyard.joshua@Epa.gov)
L. Nelson, U.S. DOI, w/o Enf. Addendum, (Lindy_Nelson@ios.doi.gov)
C. H. Grether, Director, MDEQ, w/o Enf. Addendum (creaghk@michigan.gov)
Bill Schuette, Michigan AG, w/o Enf. Addendum (SchuetteB@michigan.gov)
J. Walczak, MDEQ, w/o Enf. Addendum (walczakj@michigan.gov)

BCC PAGE HAS BEEN REDACTED

**NOT RELEVANT TO SELECTION
OF REMOVAL ACTION**

FIGURE A-1

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

**SITE LOCATION MAP
FOR
ELECTRO PLATING SERVICES SITE
MADISON HEIGHTS, OAKLAND COUNTY, MICHIGAN**

FEBRUARY 2017

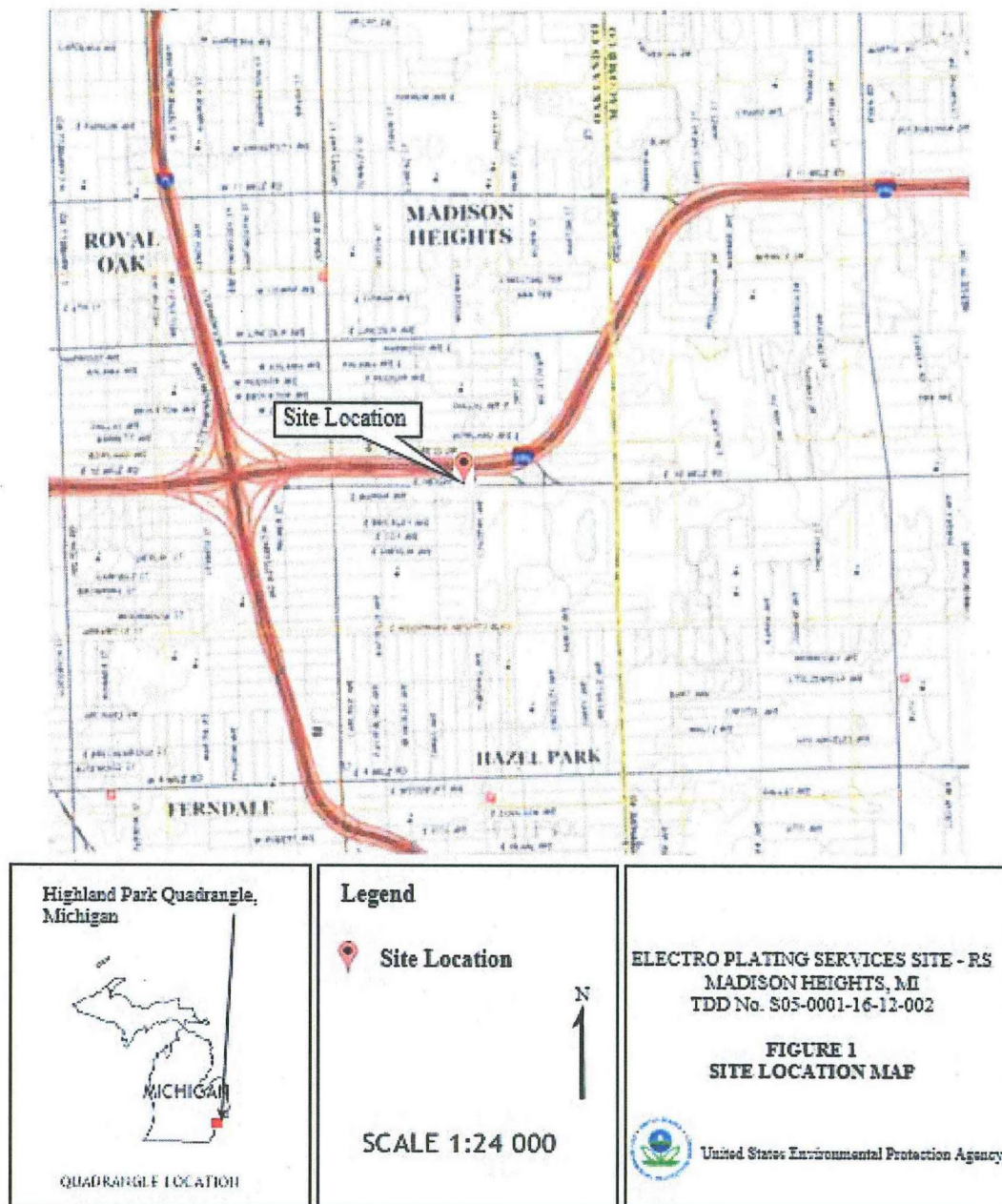


FIGURE A-2

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

SITE FEATURES MAP
SECOND LEVEL
ELECTRO PLATING SERVICES SITE
MADISON HEIGHTS, OAKLAND COUNTY, MICHIGAN

FEBRUARY 2017

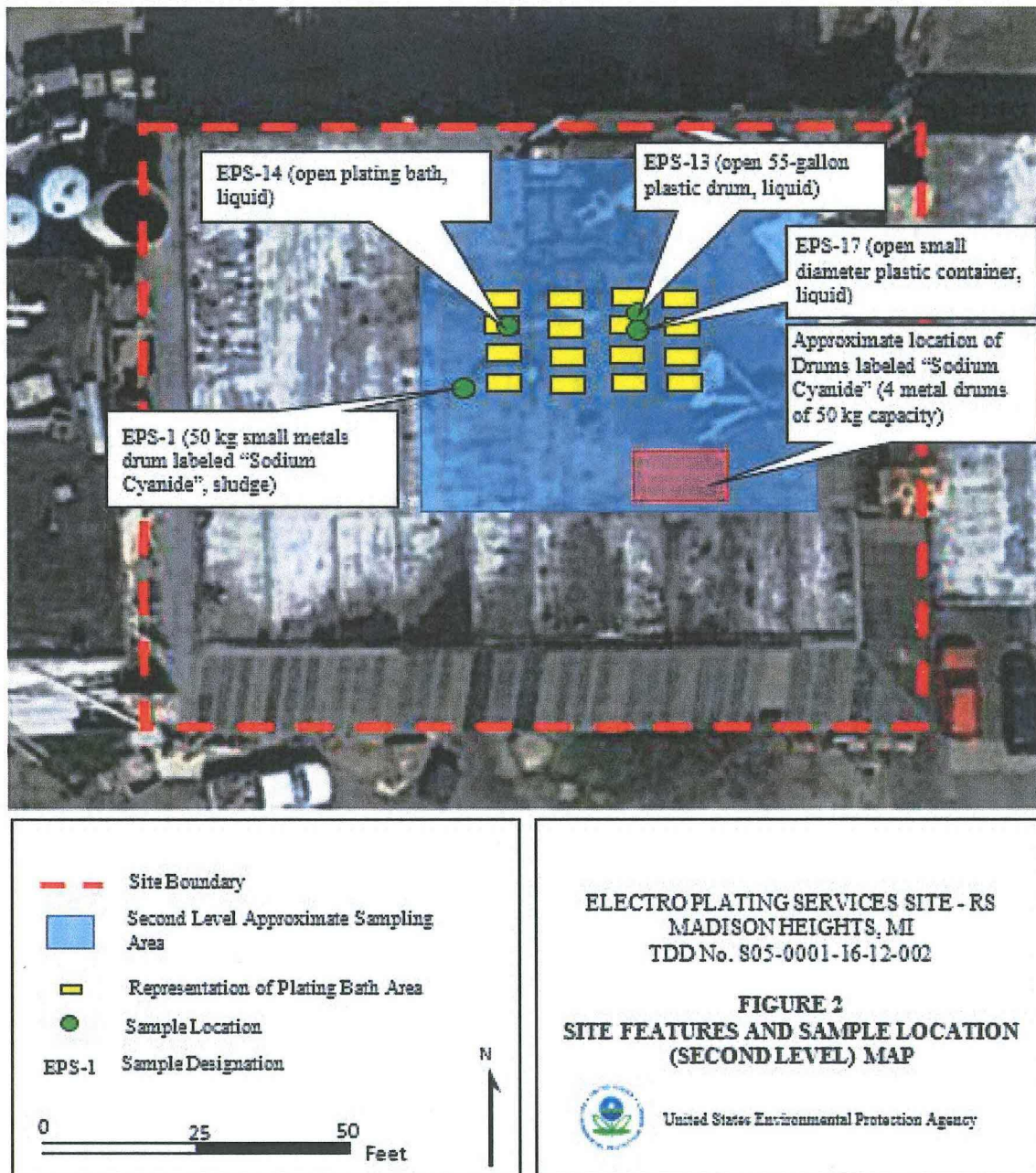
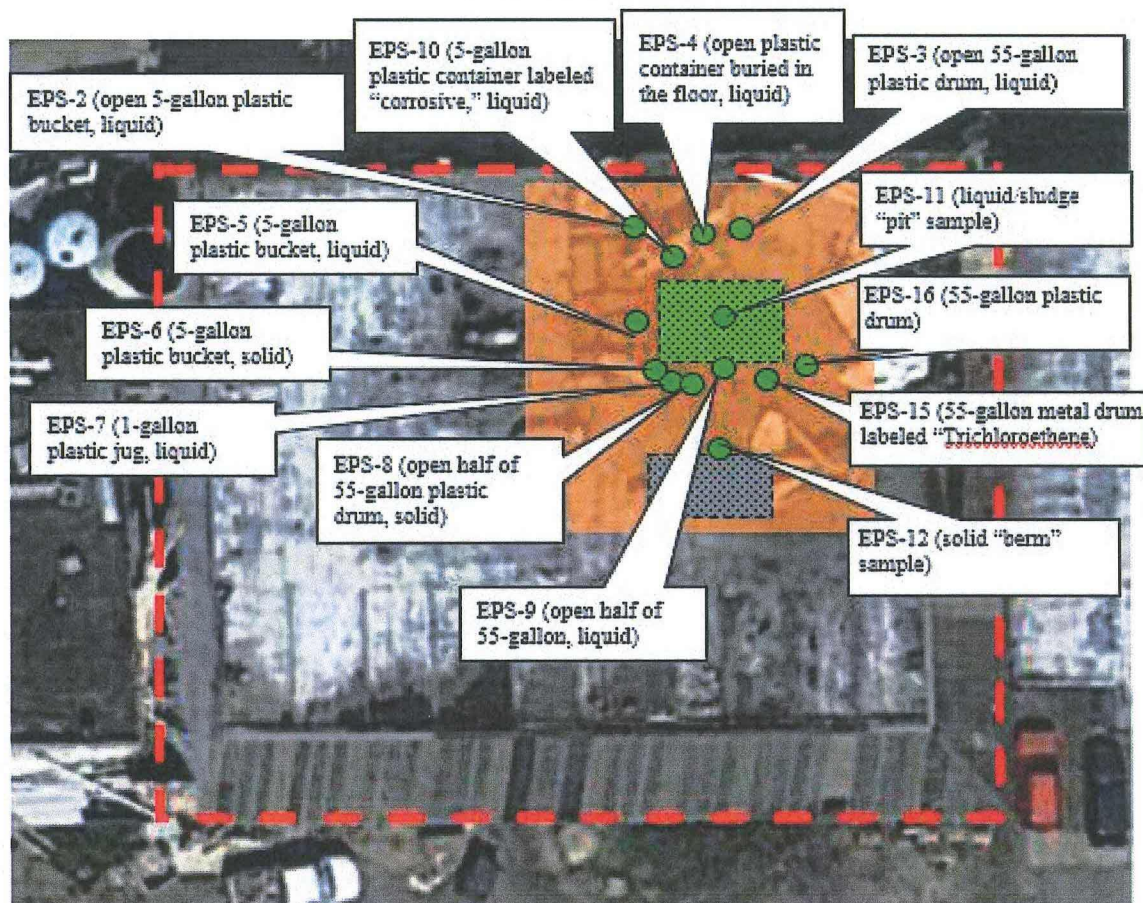


FIGURE A-3

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

SITE FEATURES MAP
BASEMENT LEVEL
ELECTRO PLATING SERVICES SITE
MADISON HEIGHTS, OAKLAND COUNTY, MICHIGAN

FEBRUARY 2017



Legend

- Site Boundary
 - Approximate Sampling Area in Basement
 - Approximate area of dried sludge and "berm"
 - Area of excavated "pit" with liquid/sludge
 - Sample Location
 - EPS-2 Sample Designation
- 0 25 50 Feet
- N

ELECTRO PLATING SERVICES SITE - RS
MADISON HEIGHTS, MI
TDD No. 805-0001-16-12-002

FIGURE 3
SITE FEATURES AND SAMPLE LOCATION
(BASEMENT LEVEL) MAP



United States Environmental Protection Agency

ENFORCEMENT ADDENDUM

HAS BEEN REDACTED – FOUR PAGES

ENFORCEMENT CONFIDENTIAL

NOT SUBJECT TO DISCOVERY

FOIA EXEMPT

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION

ATTACHMENT I

DETAILED CLEANUP CONTRACTOR ESTIMATE

HAS BEEN REDACTED – ONE PAGE

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION

ATTACHMENT II

U.S. ENVIRONMENTAL PROTECTION AGENCY

REMOVAL ACTION

ADMINISTRATIVE RECORD

FOR

ELECTRO PLATING SERVICES SITE

MADISON HEIGHTS, OAKLAND COUNTY, MICHIGAN

FEBRUARY 2017

<u>NO.</u>	<u>SEMS ID</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE DESCRIPTION</u>	<u>PAGES</u>
1	931247	12/20/96	McLaughlin, J., MDEQ	Sayers, G., Electro Plating Services, Inc.	Violation Notice	2
2	931248	10/25/04	Daniels, M., MDEQ	Elswick, J., Electro Plating Services, Inc.	Violation Notice	4
3	931249	1/24/05	Daniels, M., MDEQ	Sayers, G., Electro Plating Services, Inc.	Second Letter of Warning	2
4	932250	6/7/05	Daniels, M., MDEQ	Sayers, G., Electro Plating Services, Inc.	Letter of Warning	4
5	932251	6/30/05	Daniels, M., MDEQ	Sayers, G., Electro Plating Services, Inc.	Letter of Warning	4
6	932252	1/26/06	Aubuchon, L., MDEQ	Sayers, G., Electro Plating Services, Inc.	Second Letter of Warning	3
7	932263	3/6/07	MDEQ	File	Complaint/PEAS Incident Report	1
8	918770	8/1/07	ATSDR	Public	ToxFAQs Fact Sheet - Lead - CAS #7439-92-1	2
9	932253	8/20/07	Daniels, M., MDEQ	Sayers, G., Electro Plating Services, Inc.	Letter of Warning	6

<u>NO.</u>	<u>SEMS ID</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
10	932254	6/8/08	Daniels, M., MDEQ	Sayara, G., Electro Plating Services, Inc.	Letter of Warning	4
11	932255	7/2/09	Craig, J., MDEQ	Sayara, G., Electro Plating Services, Inc.	Enforcement Notice	2
12	932261	4/13/10	Humphries, R., MDEQ	Sayara, G., Electro Plating Services, Inc.	Consent Order	23
13	919143	10/1/12	ATSDR	Public	Tox FAQ: Fact Sheet - Chromium - CAS #7440-47-3	2
14	932256	6/6/16	Kackkassadi, T., MDEQ	Sayara, G., Electro Plating Services, Inc.	Violation Notice	4
15	932257	12/2/16	Kackkassadi, T., MDEQ	Sayara, G., Electro Plating Services, Inc.	Second Violation Notice	5
16	932262	12/16/16	Groetsch, K., Michigan Dept. of Health and Human Services	Grether, C., MDEQ	Memo re: Determination of Imminent and Substantial Hazard at the Electro-Plating Service Site	20
17	932267	12/20/16	Bilin, P., Madison Heights Fire Department	Sayara, G., Electro Plating Services, Inc.	Letter re: Building Unfit for Occupancy	2
18	932258	12/21/16	Grether, C., MDEQ	Sayara, G., Electro Plating Services, Inc.	Unilateral Administrative Order to Cease and Desist Operations	70
19	932260	12/22/16	Kackkassadi, T., MDEQ	Mankowski, M., U.S. EPA	Letter re: Request for Assistance to Perform Removal Action	2
20	932266	12/21/16	Detroit Free Press	Public	Article re: Madison Heights Plating Firm Shut Down Amid Chemical Spill Concerns	3
21	932264	1/13/17	Lippert J., U.S. EPA	Clark, A., MDEQ	Letter re: Request for Applicable, Relevant, and Appropriate Requirements	1
22	932265	1/17/17	ERS	U.S. EPA	Final Removal Assessment Report	108
23	931228	1/19/17	El-Zein, J., U.S. EPA	Sayara, G., Electro Plating Services, Inc.	General Notice and 104(e) Letter	14

24	932259	1/25/17	Kecskemeti, T., MDEQ	Lippert, J., U.S. EPA	Letter re: State of Michigan Applicable, Relevant, and Appropriate Requirements	7
25	-	-	Lippert, J., U.S. EPA	Guerriero, M., U.S. EPA	Action Memorandum re: Request for a Time-Critical Removal Action at the Electro Plating Services Site (PENDING)	-

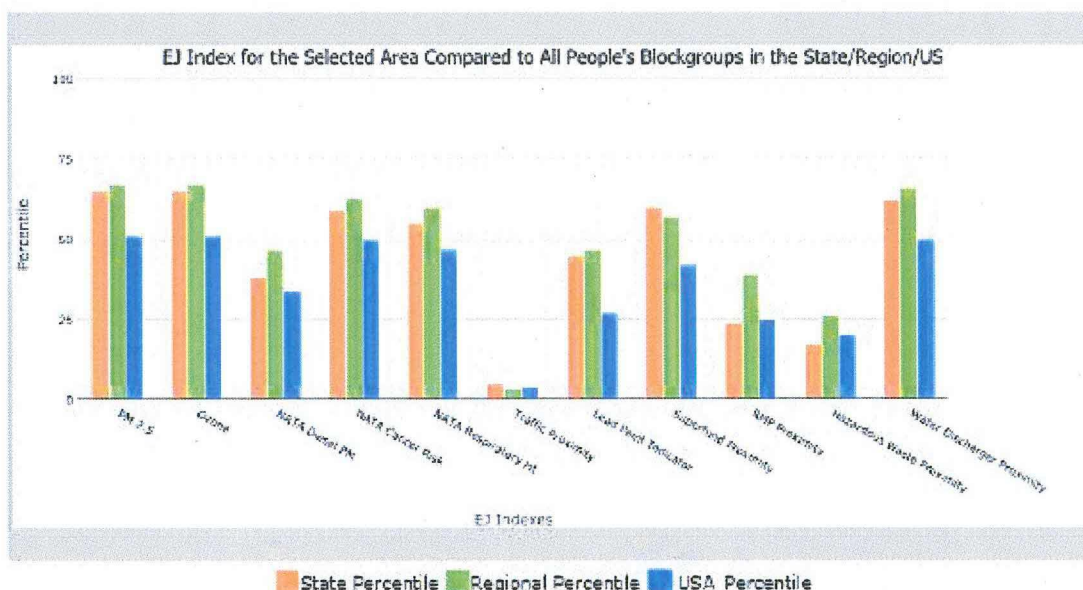
ATTACHMENT III

U.S. ENVIRONMENTAL PROTECTION AGENCY REMOVAL ACTION

REGION 5 SUPERFUND ENVIRONMENTAL JUSTICE ANALYSIS FOR ELECTRO PLATING SERVICES SITE MADISON HEIGHTS, OAKLAND COUNTY, MICHIGAN

FEBRUARY 2017

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	65	67	51
EJ Index for Ozone	65	67	51
EJ Index for NATA* Diesel PM	38	47	34
EJ Index for NATA* Air Toxics Cancer Risk	59	63	50
EJ Index for NATA* Respiratory Hazard Index	55	60	47
EJ Index for Traffic Proximity and Volume	5	3	4
EJ Index for Lead Paint Indicator	45	47	27
EJ Index for Superfund Proximity	60	57	42
EJ Index for RMP Proximity	24	39	25
EJ Index for Hazardous Waste Proximity*	17	26	20
EJ Index for Water Discharger Proximity	62	66	50



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.

ATTACHMENT IV

INDEPENDENT GOVERNMENT COST ESTIMATE

HAS BEEN REDACTED – TWO PAGES

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION