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

JUL 20 2017

REPLY TO THE ATTENTION OF:

MEMORANDUM

SUBJECT: Request for Approval and Funding for a Time-Critical Removal Action at the Plating, Inc. Site, 888 North Prior Avenue, St. Paul, Ramsey County, Minnesota (Site ID # C5FE).

FROM: David Morrison, On Scene Coordinator
Emergency Response Section 1

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

TO: Margaret M. Guerriero, Acting Director
Superfund Division

I. PURPOSE

The purpose of this Action Memorandum is to request and document your approval to expend up to $ 1,656,482 to conduct a time-critical removal action at the Plating, Inc. Site (Site) located in St. Paul, Ramsey County, Minnesota. The proposed time-critical removal action herein is necessary to mitigate threats to public health, welfare, and the environment posed by the presence of uncontrolled hazardous substances at the Site. The Site contains unsecured hazardous waste, approximately 76 drums and totes, numerous small containers of hazardous waste and approximately 82 open chemical vats. In addition, due to freezing conditions while vacated, some of the facility floor piping runs are filled with unknown likely hazardous waste, wastes are pooled on the floor under the wastewater line, and asbestos containing materials are broken off tanks and piping. There have also been several recent break-ins, despite re-securement efforts by local officials.

This Action Memorandum would serve as approval for expenditures by the U.S. Environmental Protection Agency (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 present require that this action be classified as a time-critical removal action.

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; 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).

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

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: MND006160014
RCRA ID: MND006160014
State ID: MND006160014
Category: Time-Critical Removal Action

A. Site Description

The Site was in use as a plating shop since approximately 1938. Most recently, the facility specialized in zinc and chromate plating of aluminum. There were 5 plating lines that included both cyanide and alkaline non-cyanide plating processes. In 2013, the State of Minnesota discovered compliance issues during a routine hazardous waste inspection (Administrative Record or 'AR' #s11,12,13).

In April of 2016, the owner/operator of the facility ceased occupancy and abandoned the facility after incomplete efforts to return to compliance (AR#s 12,13,14,15,16). In response, the Minnesota Pollution Control Agency (MPCA) obtained an administrative inspection order from Ramsey County District Court and conducted a site visit on December 16, 2016 (AR #s1,2, 17,18). MPCA staff discovered that many of the open process vats and vessel were left full and there were large quantities of hazardous substances remaining. The facility had to be re-secured due to break-ins and apparent copper theft. Another break-in occurred during the weekend of April 15th, 2017. Local authorities re-secured the building and did not enter it.

1. Removal site evaluation

In December 2016, MPCA and its contractor, Bay West, Inc. conducted a site assessment and inventory (AR #19). MPCA found many containers with toxic, corrosive, oxidizing, and reactive materials. Twenty-four of the vats and containers contained very strong corrosives (D002) with pH levels as high as 14 or as low as 0.

EPA received facility waste information from the Ramsey County Hazardous Waste program and the Minnesota Homeland Security and Emergency Management (HSEM), along with facility maps from the Emergency Planning and Community Right to Know programs. Together, these sources indicated that the facility used many strong acids (nitric, sulfuric, phosphoric, chromic, and hydrochloric); caustics (principally sodium hydroxide), sodium cyanide, trivalent and hexavalent chromium, zinc, cyclohexylamine, bulked plating wastes and numerous small laboratory chemical, etc. Waste container labeling indicated the presence of D007 (Chromium), D008 (lead), F006 (plating sludge wastes) and F008 (cyanide plating waste) hazardous wastes.

On-Scene Coordinator (OSC) Morrison, the MPCA, and the Superfund Technical Assessment and Response Team (START) contractor conducted a site assessment on May 12, 2017. The St. Paul Fire Department, Chemical Assessment Team, accompanied EPA during building entry and initial air monitoring survey. EPA documented waste in drums, tanks, plating vats, and other containers inside the former plating shop (Photos 2x-9x), and collected a limited number of samples for laboratory analysis. Samples collected were characteristic for hazardous waste, including ignitability (D001), corrosivity (D002), and toxicity (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 #25).

- Cyanide was detected in sample STPP 1-8 -51217 at a concentration of 7,470 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 a pH of 14, potentially reactive with acidic materials.

- Chromium was detected in samples STPP 1-13-51217, STPP 3-15-51217, and STPP-3-17-51217 at concentrations of 2,420; 25,100; and 1,260 milligrams per liter (mg/L). One sample analyzed for TCLP metals had a TCLP chromium concentration that exceeded the chromium regulatory maximum concentration of 5 mg/L for the toxicity characteristic (D007), per 40 CFR § 261.24. Six of the other waste samples collected were unable to be analyzed for TCLP metals due to the presence of oils that would not pass equipment filtration. However, the total chromium concentrations measured in several of these samples (up to 26,800 mg/kg) suggest that there is the potential that some of these samples could exceed the chromium regulatory maximum concentration of 5 mg/L for the toxicity characteristic.

- pH was sampled in Standard Units (SU) and pH levels were detected at 14.0 SU and 1.0 SU respectively in samples STPP 1-8-51217 and STPP 3-17-51217. These samples exhibited the characteristic of corrosivity established in 40 CFR § 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.

- Flashpoint was measured at 77.3 and 89.5 degrees Fahrenheit (°F) in samples taken from smaller containers on site; STPP flammability-51217 (1) and (2). A solid waste exhibits the characteristic of ignitability if it has a flashpoint less than 60 °Celsius (140 °F). These samples exhibited the characteristic of ignitability (40 C.F.R. § 261.21).

The removal assessment conducted at the Site revealed evidence of a threat to public health and/or the environment. Numerous open vats in plating process lines, chemical baths, tanks, drums, and containers of various sizes were observed inside the building. These vessels contain large volumes of hazardous liquids.

There is evidence that recent releases inside the facility building have also occurred. Historic waste disposal records for the facility have included multiple hazardous waste streams (D001, D002, D003, D006, D007, D008, D009, D011 & F006, F007, F008, F009), with many potentially still present (AR#19). In addition, two samples of suspected asbestos containing materials (ACM) were found to contain chrysotile asbestos at 8% and 30%. These materials were broken off of tanks and piping and had fallen to the floor of the building.

2. Physical location

The Site is located at 888 North Prior Avenue in St. Paul, Ramsey County, Minnesota 55104. It consists of one 21,100 square-foot commercial building directly abutting another commercial building to the south. It is located in a mixed commercial and residential area on the corner of North Prior Avenue and West Taylor Avenue. It is directly adjacent to a narrow alley on the east with residential homes, yards and garages in very close proximity (See Figure 2). There are commercial buildings and railroad tracks located west across North Prior Avenue and north of the Site. The geographical coordinates for the Site are 44.967800° north latitude and 93.181933° west longitude.

An Environmental Justice (EJ) analysis for the Site is contained in Attachment 1. 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 site at 888 North Prior Avenue, St. Paul, Ramsey County, Minnesota, and determined that there is a moderate potential for EJ concerns at the Site. In response to this, the OSC will ensure that door to door community outreach to the homes and businesses located near the vacated building will occur to notify citizens of the proposed Removal Action and address concerns that they may express to the extent practicable.

3. Site characteristics

Plating, Inc. operators abandoned the Site in April, 2016. Plating process equipment, plating chemicals, and waste were abandoned at the Site when the business closed. According to 2017 records of the Ramsey County Office of Property Records and Revenue, the property is currently tax delinquent. The doors are screwed and locked shut, power and water have been turned off. Potentially hazardous materials have been released and are pooled in the building. In addition, the freeze-thaw winter cycle has broken off asbestos containing materials from pipe and tank insulations (AR #25). The adjacent business is a metal heat treating business with a shipping and

receiving area directly adjacent to Plating Inc. There are several homes within about 65 feet of the building divided by a very narrow alley.

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, 42 U.S.C. § 9601(14), including sodium hydroxide, chromic acid, sodium cyanide, sulfuric acid, hydrochloric acid, nitric acid, chromium, zinc, and characteristic hazardous waste including ignitable, corrosive, and toxic waste; and pollutants and contaminants as defined by Section 101(33) of CERCLA (42 U.S.C.
§ 9601(33)).

The MPCA inventoried approximately 82 open vats; 76 drums, totes and containers; and numerous other containers, confirmed by the EPA during a Site walkthrough. There was standing orange liquid pooled in the floor piping runs located under metal plate covers (most likely to be chromic acid) and wastewater pooled under the wastewater line from a frozen-damaged container/vessel.

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. While residential homes are approximately 65 feet from the Site, the residential yards and garages are located across the alley within 15 feet of the Site.

5. NPL status

This Site is not on the National Priorities List.

6. Maps, pictures and other graphic representations

Figure 1: Site Location Map
Figure 2: Site Neighborhood Map
Figure 3: Site Photographs
Attachment 1: Environmental Justice Analysis

B. <u>Other Actions to Date</u>

1. Previous actions

MPCA, the City of St Paul Environmental Program, Ramsey County Environmental Services, and the Metropolitan Council Environmental Services have all been involved in inspections and permitting of this facility. Facility operations ceased in April, 2016.

2. Current actions

The City of St. Paul Building Inspections/Fire Inspections is providing public safety measures and has revisited the Site in response to break-ins several times, has re-secured doors and roof access, and has posted warning signs on the doors.

C. State and Local Authorities' Roles

MPCA's hazardous waste program conducted compliance enforcement efforts at the Site which are still unresolved. MPCA's Emergency Management Unit subsequently referred the Site to the EPA requesting an emergency removal action in January 2017.

1. State and local actions to date

The following is a brief summary of enforcement activities at the Site.
(AR #s1, 2, 11-21):

April, 2013, MPCA staff along with Ramsey County staff conducted a hazardous waste inspection and discovered non-compliance.

September 4, 2013, MPCA issued an Alleged Violations Letter regarding Hazardous Waste Rule Violations to Plating, Inc.

July 10, 2014, Notice of Violation issued by MPCA. There was a partial return to compliance by Plating, Inc.

March 1, 2016, Administrative Penalty Order (APO) issued by MPCA. MPCA cited violation of 7 hazardous waste rules, ordered corrective actions, and issued monetary penalty.

September 20, 2016, Ramsey County and City of St. Paul inspect the Site. The vacated Site facility building is declared unsafe, "CONDEMNED" signs are posted on the doors, and the building is secured.

October 14 – 18, 2016, MPCA exchanges e-mails with Mr. Ron Glebus (identified as Chief Executive Officer of Plating, Inc.). MPCA states that hazardous materials are now a public safety concern; hazardous materials must be removed. Mr. Glebus replied "operations stopped last April" (2016).

October 20, 2016, additional e-mail received from Ron Glebus regarding requested work. Mr. Glebus replied, "Plating, Inc. has no money. All accounts have been closed by the bank after months of negative balances."

December 14, 2016, After MPCA failure to get access agreement, an Administrative Inspection Order was issued by Ramsey County District Court.

December 16, 2016, MPCA staff, their contractor and City of St. Paul representatives inspected the Site. They observed that vats were left full of plating chemicals. The building's power was off. The Inspectors had concerns regarding freezing damage to pipes and containers.

January 23, 2017, MPCA requested Emergency Removal Action assistance from EPA. MPCA indicated that the State of Minnesota does not have the funds to conduct a removal action.

2. Potential for continued State/local response

Both the State and Local governments have expressed an interest in assisting EPA with a cleanup, but neither has funding available to conduct actual on-site cleanup work. No other funding mechanisms have been identified.

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

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

40 C.F.R. § 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.

Sampling and site assessment efforts identified high concentrations of toxic wastes; Chrome (D007), cyanide (D003 and F008); ignitable wastes (D001); corrosive waste (D002); and other environmental contaminants at the Site in significant uncontrolled quantities at the facility.

These hazardous substances, as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), and pollutants, and contaminants are present in drums, vats, tanks, and other open 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 is also the possibility of releases through floor drains which contain spilled

materials inside the building. There was evidence of trespassing at the Site. Residential properties are located within 65 feet of the Site.

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

Chromium: Exposure to chromium can damage the nose, stomach and intestines, cause anemia and ulcers, and can cause cancer. 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). The U.S. Department of Health and Human Services, 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).

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 #7). Reactive cyanide is potentially present in uncontrolled Site waste and is in close proximity to large volumes of strong acids. Accidental mixture of these incompatible wastes can generate hydrogen cyanide gas.

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 (AR #3). Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

Sodium hydroxide: Spent or abandoned Sodium hydroxide is a corrosive waste. Corrosive wastes (D002) were observed in quantity at the Site in many open containers, some appearing to be in poor condition. Corrosive wastes can cause immediate and irreversible skin and lung burns to exposed populations after just a single exposure. 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 #5).

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 (AR #9). The IARC has determined that occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to humans (AR #s4,9).

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 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 #6).

40 C.F.R. § 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.

During the site assessment, EPA and START documented new releases inside the building from failed containers or piping. The releases present a hazard to public health and safety. It is likely that the floor trenching (piping runs) are filled with reactive chromic acid. Intrusion by vandals and trespassers, continuing infiltration of rainfall through open areas of the roof, and further deterioration of containers presents an on-going and escalating potential for a serious incident or release of hazardous substances. Several of the on-Site containers showed signs of deterioration and corrosion.

40 C.F.R. § 300.415(b)(2)(v). Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

The Site building roof has some leaking. Nitric acid and sulfuric acid, 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 other unknowns, thereby causing an increased threat of fire or a release of acid fumes from the building. There are workers in the building directly adjacent to the Site, as well as nearby residential properties. As such, weather conditions could cause hazardous substances, pollutants, or contaminants to be released that could affect these people.

Winter freezing has apparently caused new releases in the building and may continue to do so if allowed to persist another winter. The past winter freeze/thaw cycle has caused pipes to burst inside the building, dropping some product to the floor. Asbestos containing pipe wrap and larger sections of asbestos containing tank wrap have also fallen to the floor inside the building,

causing safety concerns for anyone moving throughout the building without respiratory protection. It is unknown if summer heat would contribute to volatilization of hazardous substances inside the building, making it unsafe to enter.

40 C.F.R. § 300.415(b)(2)(vi). Threat of fire or explosion.

The quantity of flammable liquids is low at the Site. However, analytical results from the site assessment indicate that one substance had flashpoint at 77.3 ° F and another substance had a flash point of 89.5 ° F, which meets the criteria for ignitibility for RCRA characteristic waste at 40 C.F.R. § 261.21. 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 activities or vandalism result in a fire, nitric acid and sulfuric acid, are water reactive. They react violently with water producing heat, fumes, and spattering. A fire at the facility, mixed with water, could release a toxic or caustic cloud to the neighborhood including hydrogen cyanide gas. Nitric Acid, if released and mixed with organic materials can cause spontaneous combustion of organic materials. A fire in the abutted commercial building could also pose a risk to the community. The Site is without a fire suppression system.

Sodium cyanide, present at the Site, also reacts violently with strong oxidants, such as hydrogen peroxide, causing an explosion hazard.

40 C.F.R. § 300.415(b)(2)(vii). The availability of other appropriate federal or state response mechanisms to respond to the release.

The State of Minnesota has requested EPA assistance with this Site (AR #21). There are no other identified mechanisms to remove the waste from the property. If left, conditions will continue to deteriorate.

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, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action descriptions

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

1. Develop and implement a Site-specific HASP, including an Air Monitoring Plan, and a Site Emergency Contingency Plan;

2. Develop and implement a Site Work Plan and a Site Security Plan;

3. Inventory and perform hazard characterization, in compliance with a Site-specific QA/QC Plan, on all substances contained in vats, containers, drums, tanks and spilled material on the floor and in pits.

4. Consolidate and package all hazardous substances, pollutants and contaminants for transportation and off-site disposal. Clean up all spilled materials, and provide disposal sampling and analyses as necessary;

5. Dismantle and decontaminate process equipment, vats, tanks, piping, and building components associated with plating as necessary;

6. Remove, transport, and dispose of all characterized or identified hazardous substances, pollutants, wastes, or contaminants at a RCRA/CERCLA approved disposal facility in accordance with the EPA Off-Site Rule, 40 C.F.R. § 300.440; and

7. Take any necessary response actions to address any Site-related 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 operations at the Site will result in the generation and storage of large quantities of hazardous waste including cyanide, chromium, various acids and bases, and plating sludge. EPA will also dispose of any unused hazardous materials, pollutants or contaminants, abandoned unused plating chemicals, sludges, or facility equipment as necessary to prevent further releases, loss or theft.

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, 40 C.F.R. § 300.415(l). Elimination of all threats presented by hazardous substances in the buildings is, however, expected to minimize the need for post-removal Site control.

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

2. Contribution to remedial performance:

The proposed action will not impede future actions based on available information.

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

Not Applicable

4. Applicable or relevant and appropriate requirements (ARARs)

All applicable, relevant, and appropriate requirements (ARARs) of Federal and State law will be complied with to the extent practicable considering the exigencies of the circumstances. On April 6, 2017, an e-mail was sent to Dorene Fier-Tucker of MPCA, asking for any State of Minnesota ARARs which may apply (AR #22). No ARARs were identified for this Site.

5. Project Schedule

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

B. Estimated Costs

REMOVAL ACTION PROJECT CEILING ESTIMATE	
Extramural Costs:	
Regional Removal Allowance Costs:	
Total Cleanup Contractor Costs (This cost category includes estimates for ERRS, subcontractors, Notices to Proceed, and Interagency Agreements with Other Federal Agencies. Includes a 20% contingency)	$1,226,605
Other Extramural Costs Not Funded from the Regional Allowance:	
Total START, including 20% multiplier/contingency costs	$153,797
Subtotal Extramural Costs	$1,380,402
Extramural Costs Contingency, 20%	$276,080
TOTAL REMOVAL ACTION PROJECT CEILING	$1,656,482

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, actual or threatened release of hazardous substances and pollutants or contaminants from the Site, failing to take or delaying action 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 Identified

VIII. ENFORCEMENT

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

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be $2,860,994.[1]

Direct Costs	+	(Indirect Costs)	= Estimated Costs for
(Dir. Extramural + Dir. Int.)			a Removal Action
$1,656,482 +110,000	+	(61.96% x $1,766,482)	= ($2,860,994)

IX. RECOMMENDATION

This decision document represents the selected removal action for the Plating, Inc. Site located in St. Paul, Ramsey County, Minnesota, 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 (Attachment II). Conditions at the Site meet the NCP Section 300.415(b)(2) criteria for a removal and I recommend your approval of the removal action proposed in this Action Memorandum.

The total project ceiling if approved will be $1,656,482 of which an estimated $1,502,685 may be used for cleanup contractor costs. You may indicate your approval by signing below.

Approve: _____ 7/21/2017
Acting Director, Superfund Division — Date

Disapprove: _____ _____
Acting Director, Superfund Division — Date

Enforcement Addendum

Figures:

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

1 - Site Location Map
2 - Site Neighborhood Map
3 - Photo Log

Attachments:

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

cc: B. Schlieger, EPA HQ
D. Chung, U.S. EPA 5202G
L. Nelson, U.S. DOI, w/o Enf. Addendum (email: lindy_nelson@ios.doi.gov)
M. Chezik, U.S. DOI, w/o Enf. Attachment
Dorene Fier-Tucker, MPCA, w/o Enf. Addendum

BCC PAGE HAS BEEN REDACTED

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION

ENFORCEMENT ADDENDUM

HAS BEEN REDACTED – THREE PAGES

ENFORCEMENT CONFIDENTIAL

NOT SUBJECT TO DISCOVERY

FOIA EXEMPT

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION

FIGURE 1

SITE LOCATION MAP

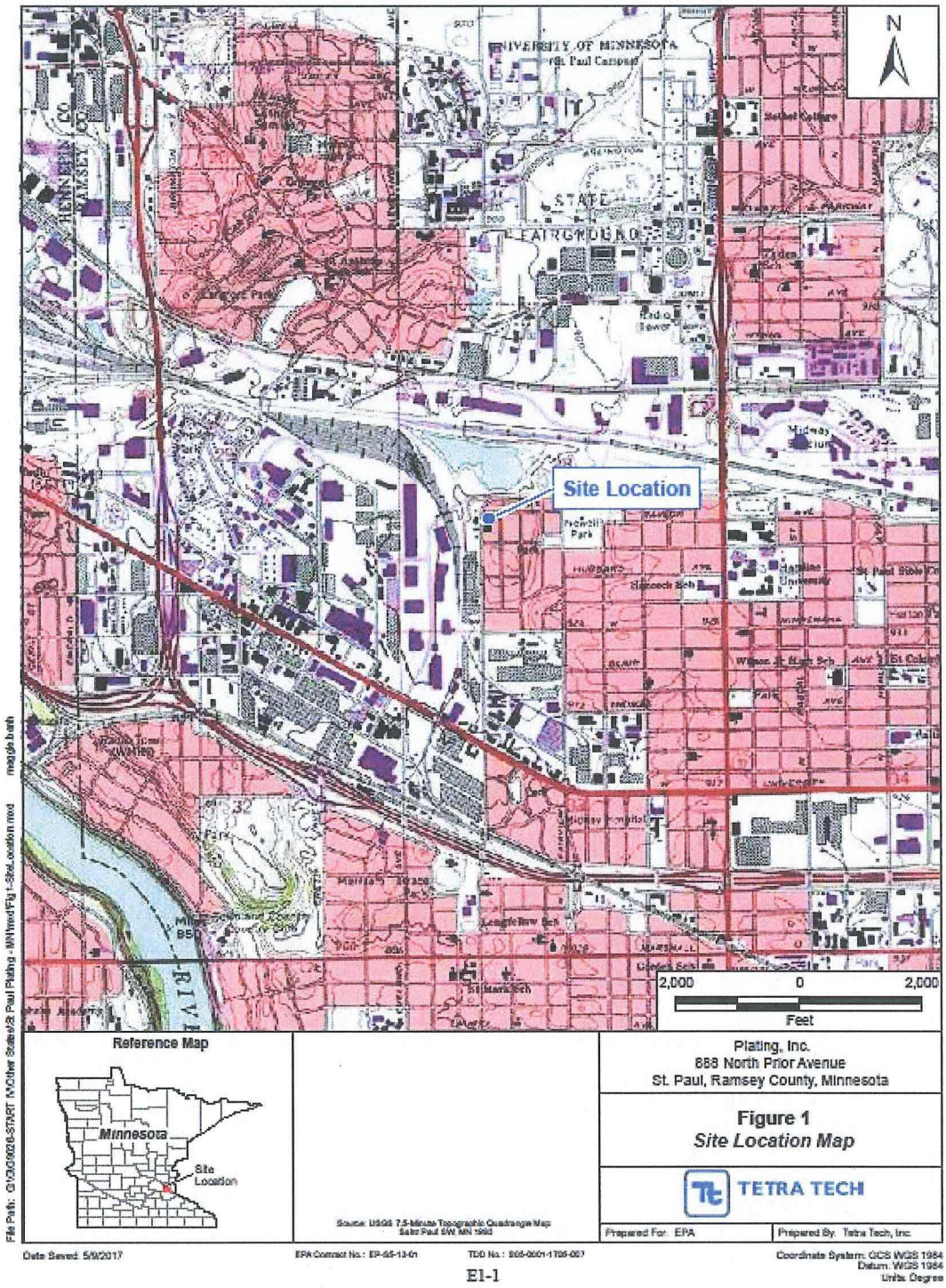
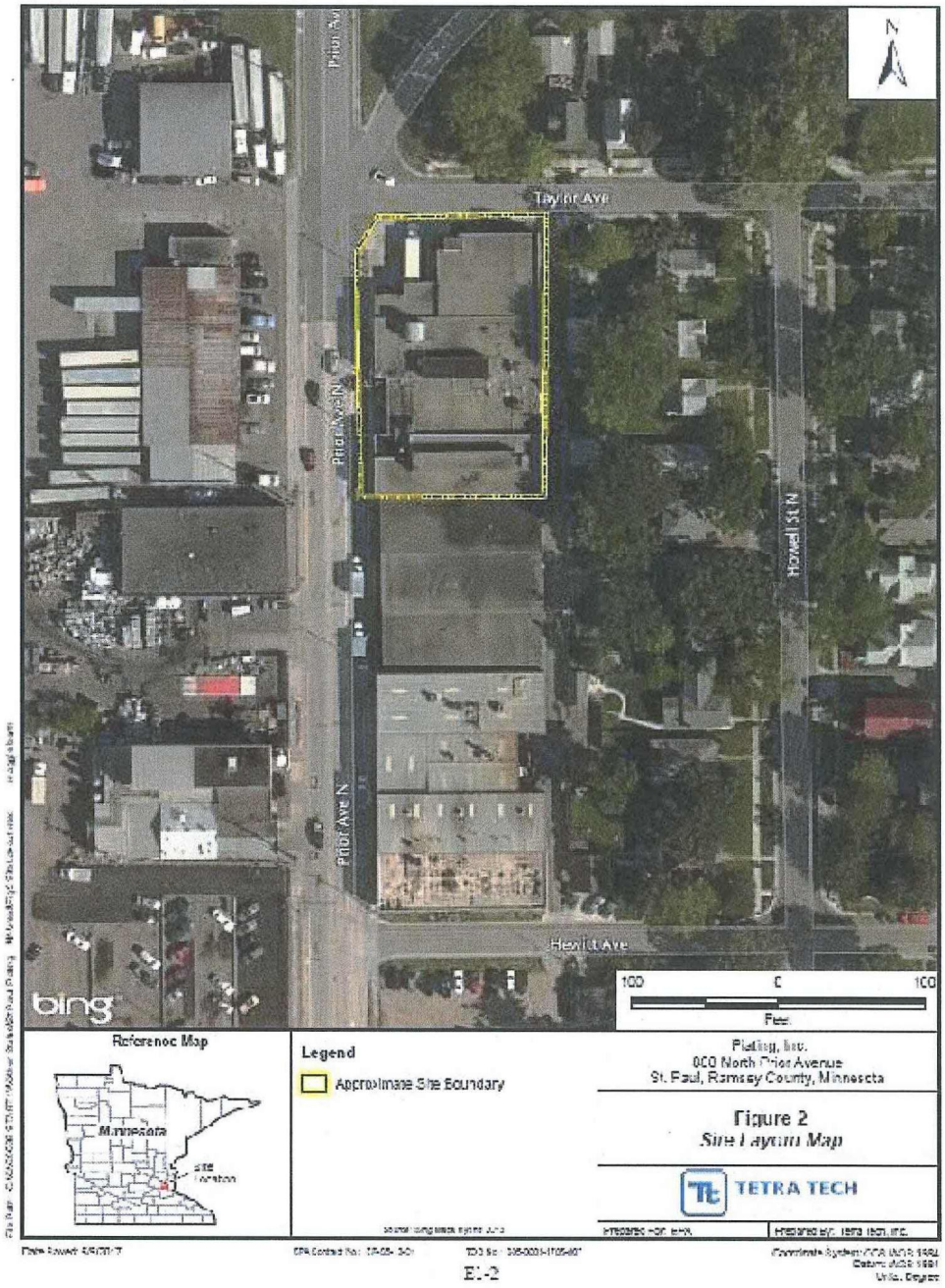


FIGURE 2

SITE NEIGHBORHOOD MAP



E1-2

FIGURE 3

PHOTO LOG

Photographic Documentation

Client: U.S. EPA, Region 5

Site Name: Plating, Inc.

Location: 888 Prior Avenue North
St. Paul, Minnesota

Prepared by: Tetra Tech, Inc.

TDD Number: S05-0001-1705-007

Dates: May 12, 2017

Photograph No. 01 **Photographer:** Elise Steger **Description:** Plating, Inc. building, facing southeast. Prior Avenue in foreground.	
Photograph No. 02 **Photographer:** Elise Steger **Description:** Plating, Inc. building entrance, facing east.	

E4-1

Photographic Documentation

Client: U.S. EPA, Region 5

Site Name: Plating, Inc.

Location: 888 Prior Avenue North
St. Paul, Minnesota

Prepared by: Tetra Tech, Inc.

TDD Number: S05-0001-1705-007

Dates: May 12, 2017

Photograph No. 05

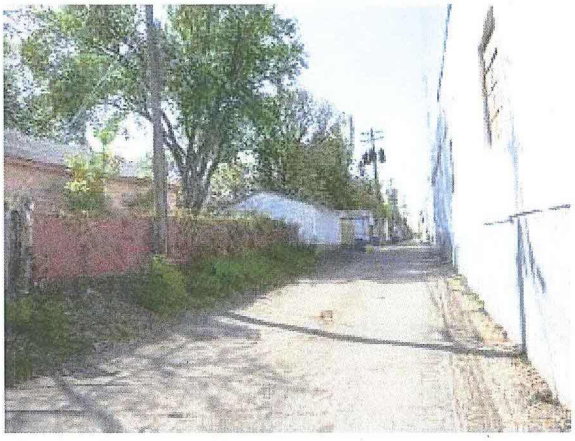
Photographer: Elise Steger

Description: Residential property north of the site, looking north across West Taylor Avenue.

Photograph No. 06

Photographer: Elise Steger

Description: Alley behind the Plating, Inc. building, looking south.



F4-3

Photographic Documentation

Client: U.S. EPA, Region 5

Site Name: Plating, Inc.

Location: 888 Prior Avenue North
St. Paul, Minnesota

Prepared by: Tetra Tech, Inc.

TDD Number: S05-0001-1705-007

Dates: May 12, 2017

Photograph No. 13 **Photographer:** Eise Steger **Description:** Various large containers inside the Plating, Inc. building. Most of the large containers were labelec.	
Photograph No. 14 **Photographer:** Eise Steger **Description:** Poly containers and zinc vat in Plating, Inc. building.	

E4-7

Photographic Documentation

Client: U.S. EPA, Region 5

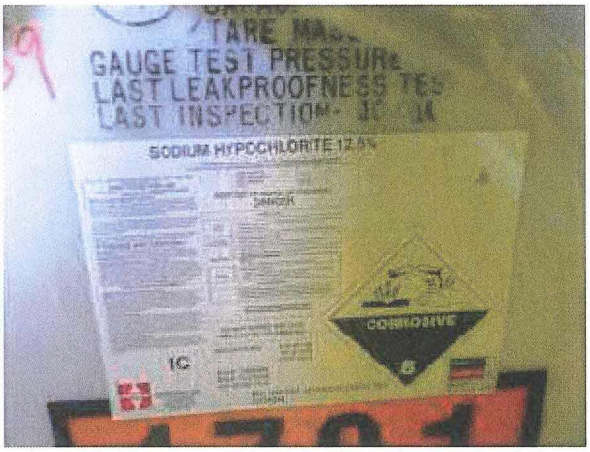
Site Name: Plating, Inc.

Location: 888 Prior Avenue North
St. Paul, Minnesota

Prepared by: Tetra Tech, Inc.

TDD Number: S05-0001-1705-007

Dates: May 12, 2017

Photograph No. 15 **Photographer:** Elise Steger **Description:** Drums labeled as corrosive	
Photograph No. 16 **Photographer:** Elise Steger **Description:** Example of labeled materials in southern end of the Plating, Inc. facility.	

E4-8

Photographic Documentation

Client: U.S. EPA, Region 5

Site Name: Plating, Inc.

Location: 888 Prior Avenue North
St. Paul, Minnesota

Prepared by: Tetra Tech, Inc.

TDD Number: S05-0001-1705-007

Dates: May 12, 2017

Photograph No. 21 **Photographer:** Elise Steger **Description:** Chromate Aluminum – Line #4, looking west.	
Photograph No. 22 **Photographer:** Elise Steger **Description:** Floor opening near waste water treatment line.	

E4-11

Photographic Documentation

Client: U.S. EPA, Region 5

Site Name: Plating, Inc.

Location: 888 Prior Avenue North
St. Paul, Minnesota

Prepared by: Tetra Tech, Inc

TDD Number: S05-0001-1705-007

Dates: May 12, 2017

Photograph No. 23 **Photographer:** Elise Steger **Description:** Chromate Aluminum – Line #4, looking west. Tetra Tech personnel in Level C personal protective equipment (PPE) conducting air monitoring.	
Photograph No. 24 **Photographer:** Elise Steger **Description:** White substance, possibly evaporates from chemicals along plating lines.	

E4-12

Photographic Documentation

Client: U.S. EPA, Region 5

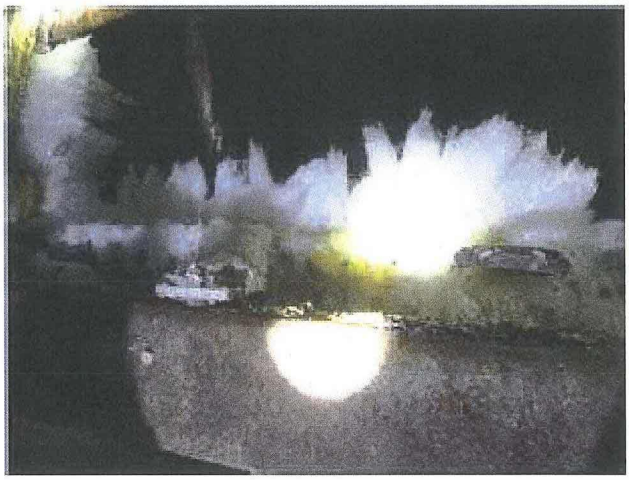
Site Name: Plating, Inc.

Location: 888 Prior Avenue North
St. Paul, Minnesota

Prepared by: Tetra Tech, Inc.

TDD Number: S05-0001-1705-007

Dates: May 12, 2017

Photograph No. 25 **Photographer:** Elise Steger **Description:** Crystals in the zinc plating line vats.	
Photograph No. 26 **Photographer:** Elise Steger **Description:** Crystals in zinc plating vats – most were approximately 8 to 12 inches long.	

E4-13

ATTACHMENT I
Environmental Justice Review

EPA United States Environmental Protection Agency

EJSCREEN Report (Version 2016)

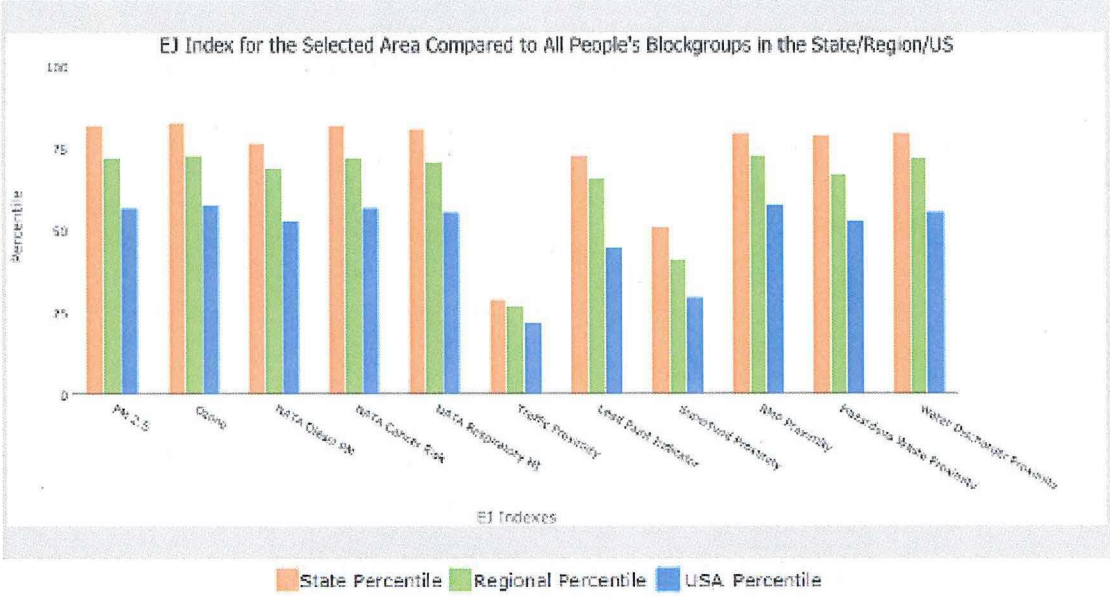
1 mile Ring Centered at 44.967901,-93.181907, MINNESOTA, EPA Region 5

Approximate Population: 11,652

Input Area (sq. miles): 3.14

888 North Prior Avenue

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	82	72	57
EJ Index for Ozone	83	73	58
EJ Index for NATA* Diesel PM	77	69	53
EJ Index for NATA* Air Toxics Cancer Risk	82	72	57
EJ Index for NATA* Respiratory Hazard Index	81	71	56
EJ Index for Traffic Proximity and Volume	29	27	22
EJ Index for Lead Paint Indicator	73	66	45
EJ Index for Superfund Proximity	51	41	30
EJ Index for RMP Proximity	80	73	58
EJ Index for Hazardous Waste Proximity*	79	67	53
EJ Index for Water Discharger Proximity	80	72	56



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.

April 11, 2017 1/3

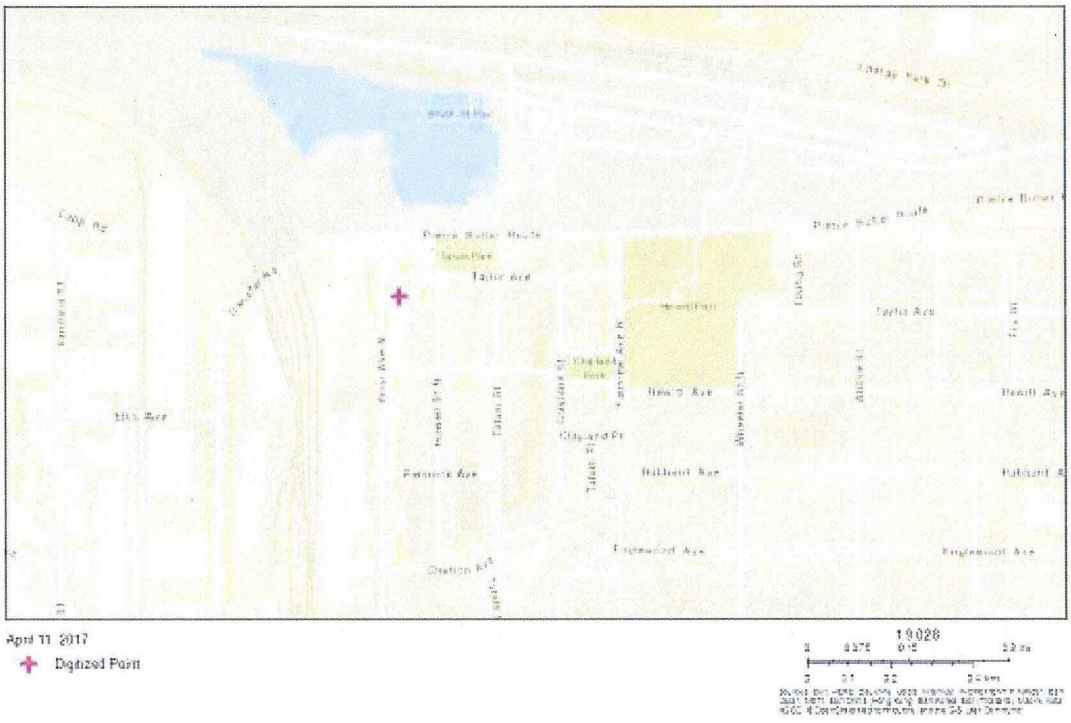
EJSCREEN Report (Version 2016)

1 mile Ring Centered at 44.967901,-93.181907, MINNESOTA, EPA Region 5

Approximate Population: 11,652

Input Area (sq. miles): 3.14

888 North Prior Avenue



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 44.967901,-93.181907, MINNESOTA, EPA Region 5

Approximate Population: 11,652

Input Area (sq. miles): 3.14

888 North Prior Avenue

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 µg/m³)	11.1	9.95	92	10.6	66	9.32	87
Ozone (ppb)	44.4	44.2	35	50.3	5	47.4	28
NATA* Diesel PM (µg/m³)	1.49	0.753	92	0.931	80-90th	0.937	80-90th
NATA* Cancer Risk (lifetime risk per million)	53	36	93	34	95-100th	40	80-90th
NATA* Respiratory Hazard Index	4.3	2.2	93	1.7	95-100th	1.8	95-100th
Traffic Proximity and Volume (daily traffic count/distance to road)	620	350	87	370	85	590	81
Lead Paint Indicator (% Pre-1960 Housing)	0.64	0.33	83	0.39	76	0.3	83
Superfund Proximity (site count/km distance)	0.71	0.18	94	0.12	97	0.13	97
RMP Proximity (facility count/km distance)	0.31	0.5	56	0.51	60	0.43	67
Hazardous Waste Proximity+ (facility count/km distance)	0.17	0.17	76	0.11	86	0.11	85
Water Discharger Proximity (facility count/km distance)	0.16	0.21	64	0.31	49	0.31	52
Demographic Indicators							
Demographic Index	36%	22%	83	29%	73	36%	58
Minority Population	33%	18%	83	24%	74	37%	55
Low Income Population	40%	27%	79	33%	67	35%	63
Linguistically Isolated Population	8%	2%	90	2%	89	5%	79
Population With Less Than High School Education	7%	8%	59	11%	43	14%	37
Population Under 5 years of age	5%	6%	32	6%	38	6%	37
Population over 64 years of age	8%	14%	29	14%	24	14%	28

* 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.

ATTACHMENT II

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR THE
PLATING, INC. SITE
ST. PAUL, RAMSEY COUNTY, MINNESOTA

ORIGINAL
JUNE, 2017

NO.	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	933119	Undated	MPCA	File	Exhibits 1-12	31
2	933120	Undated	MPCA	File	Site Photos	21
3	933981	5/1/94	Centers for Disease Control and Prevention	Public	Fact Sheet - Nitric Acid	1
4	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
5	930032	4/1/02	ATSDR	Public	Tox FAQs Fact Sheet - Sodium Hydroxide - CAS #1310-73-2	2
6	930034	8/1/05	ATSDR	Public	Tox FAQs Fact Sheet - Zinc - CAS #7440-66-6	2
7	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
8	933108	7/7/09	CyPlus	File	Safety Data Sheet for Sodium Cyanide Bricks	14
9	933982	1/1/12	International Agency for Research on	Public	Article re: "Mists from Strong Inorganic Acids"	10
10	919143	10/1/12	ATSDR	Public	Tox FAQs Fact Sheet - Chromium - CAS #7440-47-3	2
11	933114	9/4/13	Gegen, J., MPCA	Saufl, C., Plating, Inc.	Alleged Violations Letter - Plating Incorporated Large Quantity Generator	4

NO.	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
12	933117	7/10/14	Gegen, J., MPCA	Glebus, R., Plating, Inc.	Notice of Violation - Plating, Inc.	8
13	933116	2/25/15	Gegen, J., MPCA	Glebus, R., Plating, Inc.	Notice of Violation - Plating, Inc.	2
14	933115	9/22/15	Sykora, C., MPCA	Glebus, R., Plating, Inc.	Letter re: Approval of Limited Site Investigation Report	1
15	933113	11/18/15	MPCA	File	Case Development Form	11
16	933112	3/1/16	MPCA	Glebus, R., Plating, Inc.	Administrative Penalty Order	9
17	933111	12/6/16	Gegen, J., MPCA	File	Affidavit of Jon Gegen in Re: Application for an *Ex Parte* Administrative Order for Inspection	6
18	933110	12/14/16	Awsumb, R., Minnesota District Court	Plating, Inc.	Administrative Inspection Order	3
19	933121	1/13/17	Gordon, J., and Lazarz, W., Bay West Inc.	Stockinger, J., MPCA	Site Assessment and Chemical Inventory	44
20	933109	1/23/17	Morrison, D., U.S. EPA	Fier-Tucker, D., MPCA	Email re: Response to MPCA Request for Assistance at the Plating, Inc. Site	1
21	933118	1/23/17	MPCA	U.S. EPA	Request for U.S. EPA Emergency Removal Action	5
22	933107	4/6/17	Morrison, D., U.S. EPA	Fier-Tucker, D., MPCA	Letter re: Request for Identification of Applicable or Relevant and Appropriate Requirements (ARARs)	2
23	933106	4/11/17	U.S. EPA	File	Environmental Justice Screening Report	3
24	933375	4/19/17	El-Zein, J., U.S. EPA	Glebus, R., Plating, Inc.	General Notice of Potential Liability	7
25	-	-	Tetra Tech, Inc.	U.S. EPA	Removal Site Assessment Report (*PENDING*)	-
26	-	-	Morrison, D., U.S. EPA	Guerriero, M., U.S. EPA	Action Memorandum re: Request for a Time-Critical Removal Action at the Plating, Inc. Site	-

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 – TWO PAGES

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION