



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

US EPA RECORDS CENTER REGION 5



430016

FEB 23 2012

REPLY TO THE ATTENTION OF:

**MEMORANDUM**

**SUBJECT:** Request for Approval and Funding for a Time-Critical Removal Action at the Baycote Metal Finishing Site, Mishawaka, St. Joseph County, Indiana (Site ID#C5B2).

**FROM:** Paul Atkociunas, OSC  
Emergency Response Section 4

**THRU:** Charles Gebien, Acting Chief  
Emergency Response Branch II

**TO:** Richard C. Karl, Director  
Superfund Division

**I. PURPOSE**

The purpose of this Action Memorandum is to request and document your approval to expend up to \$1,954,970 to conduct a time-critical removal action at the Baycote Metal Finishing Site located in Mishawaka, St. Joseph County, Indiana (Baycote or the Site). The proposed time-critical removal action herein will mitigate the threats to public health, welfare, and the environment posed by the presence of uncontrolled hazardous substances at the Site, a former electroplating facility. The presence of hazardous substances existing at the Site has been documented, including toxic, corrosive, and ignitable waste streams.

The removal action proposed herein is to complete the following: develop and implement a Site Health and Safety Plan and Site Security Plan; develop and implement a Site Work Plan, a Sampling Plan, and Air Monitoring Plan and a Site Emergency Contingency Plan; inventory and perform hazard categorization on substances contained in vats, pits, drums, and other containers; perform sampling and analysis to determine disposal options; consolidate and package hazardous substances, pollutants, and contaminants for transportation and off-site disposal; dismantle and decontaminate process equipment and building components associated with the plating areas, as necessary; transport and dispose of all characterized or identified hazardous substances, pollutants, or contaminants for off-site disposal.

This time-critical response action will be conducted in accordance with Section 104(a)(1) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC 9604(a)(1), to abate or eliminate the immediate threat posed to public health and/or the environment by the presence of hazardous substances at the Site. The uncontrolled conditions of the hazardous substances present at the Site and the potential threats they present require this action be classified as a time-critical removal action. This initial removal action will require approximately 160 days to complete.

There are no nationally significant or precedent setting issues associated with the proposed response at this non-NPL site.

## **II. SITE CONDITIONS AND BACKGROUND**

CERCLIS ID: INN000510688

RCRA ID: IND980680094

State ID: N/A

Category: Time-Critical Removal Action

### **A. Site Description**

#### **1. Removal site evaluation**

The facility electroplated and anodized steel and steel casings with zinc, cadmium, and chromium for the automotive, recreational vehicle, and trailer industries. The facility notified the Indiana Department of Environmental Management (IDEM) they were a hazardous waste generator on March 15, 1988. On February 27, 2004, the facility notified IDEM they were a large quantity generator and changed the ownership to TJAC LLC. The facility ceased operations in January 2008, however according to facility records 110,953 gallons of waste remained on site at the time.

IDEM conducted an inspection of the facility on July 10, 2008. IDEM documented violations including failure to conduct waste determinations; failure to conduct weekly inspections; failure to maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents; and failure to have a contingency plan. On October 20, 2009, IDEM and the owner of the Site (TJAC LLC) entered into an Order to resolve the violations. The Order stipulated that within one hundred and twenty days of the Effective Date of the Order, the Respondent shall remove and dispose of all waste material and/or product from the facility. However, on February 3, 2010, Baycote representatives estimated that 50,799 gallons of waste remained on Site. In March 2010, the Site was purchased by INDDR LLC.

U.S. EPA On-Scene Coordinators (OSCs) Theresa Holz and Jacob Hassan conducted a Site visit on November 21, 2011, with the St. Joseph County Health Department (SJCHD). During the visit, the OSCs documented numerous tanks, drums, containers and spilled material on the floor. The OSCs also observed containers labeled as acid, chromate, nitrate, hexavalent chrome, and cyanide. The Site was in disrepair, with a portion of the roof collapsed inside the facility. The containers were not

organized, secured, or maintained in a manner necessary to prevent spillage, inter-mixture of potentially flammable or combustible materials, and/or release. The containers also were not all properly or sufficiently labeled or identified, for safety purposes

On December 12 and 13, 2011, the Superfund Technical Assessment and Response Team (START) and U.S. EPA OSCs Holz, Hassan, and Atkociunas, performed a Site Assessment including sample collection. Activities performed during the Site Assessment included:

- Documenting Site conditions;
- Conducting air monitoring;
- Inventorying drums and other small containers; and
- Collecting samples from vats, pits, tanks, drums and containers and spilled material.

U.S. EPA collected fifteen samples from drums, plating vats, small containers and spilled material and submitted them for the following analyses (the numbers in parenthesis represent the number of samples analyzed for that parameter):

- Corrosivity (14)
- Target Analyte List Metals (13)
- Toxicity Characteristic Leaching Procedure (TCLP) metals (5)
- Total Cyanide (8)
- Reactive Cyanide (8)
- Volatile Organic Compounds (2)
- Semi-volatile Organic Compounds (2)
- Ignitability (15)
- Total Hexavalent Chromium (2)
- Polychlorinated biphenyls (2)

The Site Assessment documented numerous drums, plating vats, pits, tanks, small containers, and spilled material. Drums and containers were labeled as acid, chrome, and caustic. Numerous plating vats and other process equipment were documented inside the building.

The U.S. EPA Site Assessment sampling results are found in Table B-1. Analytical results from liquid sample BMF-WL02-121211 documented reactive cyanide and total cyanide at concentrations of 8,000 and 15,000 milligrams per liter (mg/L), respectively. The analytical results from liquid sample BMF-WL05-121211 documented reactive cyanide and total cyanide at concentrations of 140 and 30,000 mg/L, respectively. According to 40 CFR § 261.23 (a)(5), these samples represent a cyanide- or sulfide-bearing waste that, when exposed to pH conditions between 2 and 12.5 SUs, could generate toxic gases, vapors, or fumes "in a quantity sufficient to present a danger to human health or the environment." These two samples document cyanide bearing waste, which verifies the characteristic of a hazardous waste for reactivity (D003).

Analytical results from liquid samples BMF-WL04-121211, BMF-WL07-121211, BMF-WL10-121211, and solid sample BMF-WS02-121211 documented pH values of less than 2. According to 40 CFR § 261.22(a), these waste samples represent material that meets the definition of

characteristically hazardous waste for corrosivity (D002) because the pH value is less than or equal to 2 standard units (SU) or greater than or equal to 12.5 SUs.

Analytical results from solid sample BMF-WS01-121211 documented a cadmium concentration of 83 mg/L. This TCLP cadmium concentration exceeds the TCLP cadmium regulatory limit of 1.0 mg/L. Therefore, according to 40 CFR § 261.24(b), this sample represent materials that meet the definition of characteristically hazardous waste for toxicity (D006).

Analytical results from solid samples BMF-WS-02-121211, BMF-WS-03-121211, and BMF-WS-04-121211 documented chromium concentrations of 20,000, 420, and 300 mg/L, respectively. These TCLP chromium concentrations exceed the TCLP chromium regulatory limit of 5.0 mg/L. Therefore, according to 40 CFR § 261.24(b), these samples represent materials that meet the definition of characteristically hazardous waste for toxicity (D007).

Analytical results from liquid sample BMF-WL08-121211 showed a flashpoint of less than 32 degrees Fahrenheit (°F). According to 40 CFR § 261.21 (a), this waste sample represents material that meets the definition of characteristically hazardous waste for ignitability (D001) because the flashpoint is below 140 °F.

## **2. Physical location**

The Baycote Metal Finishing Site is located at 1302 Industrial Drive in Mishawaka, St. Joseph County, Indiana 46544. The geographical coordinates for the Site are 41°39'0.03" North latitude and 86°09'57.11" West longitude. The Site is bordered by industrial properties to the north, east, and south and Industrial Drive and industrial properties to the west (Figure A-1). Residential properties are located approximately 700 feet to the west. Approximately 10,000 people live within 1 mile of the Site. Seven churches and two schools are located within 1 mile of the Site. The St. Joseph River, a major surface water body that terminates in Lake Michigan, is located 0.85 mile northwest of the Site.

The area surrounding the Baycote Metal Finishing Site was screened for Environmental Justice (EJ) concerns using Region 5's EJ Assist Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT)). Census tracts with a score of 1, 2, or 3 are considered to be high-potential EJ areas of concern according to Region 5. The Baycote Metal Finishing Site is in a census tract with a score of 6. Therefore, Region 5 does not consider this site to be a high-priority potential EJ area of concern. Please refer to the attached analysis for additional information (Attachment 1).

## **3. Site characteristics**

The Site contains an asphalt parking area and a building measuring approximately 250 by 250 feet. The one-story building is constructed of sheet metal and cement blocks. The facility ceased operations in January 2008, however, according to facility records 110,953 gallons of waste remained on site at the time. On October 20, 2009, IDEM and the owner of the Site (TJAC LLC) entered into an Order to resolve the violations. The Order stipulated that within one hundred and twenty days of the Effective Date of the Order, the Respondent shall remove and dispose of all waste material and/or

product from the facility. On February 3, 2010, Baycote representatives estimated that 50,799 gallons of waste remained on Site.

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

A threat or release of hazardous substances, pollutants, or contaminants is present at the Site. U.S. EPA confirmed the presence of hazardous substances as defined by Section 101(14) of CERCLA including hazardous waste, sodium cyanide, chromium, cadmium and characteristic hazardous waste including ignitable, corrosive, and reactive waste streams; and pollutants and contaminants as defined by Section 101(33) of CERCLA. START's report documenting these findings is part of the Administrative Record for the Site.

**5. NPL status**

The Site is not on the NPL.

**6. Maps, pictures and other graphic representations**

Figure A-1 Site Location Map, Figure A-2 Site Layout Map, Figure A-3 Sampling Location Map, Attachment 1 – Environmental Justice (EJ) Analysis, and Attachment 2 –Photograph Log are included as attachments.

**B. Other Actions to Date**

**1. Previous actions**

This Action Memo documents previous actions in the Background Section.

**2. Current actions**

There are no actions currently being conducted at the Site.

**C. State and Local Authorities' Roles**

**1. State and local actions to date**

On October 20, 2009, IDEM and the (then) owner of the Site (TJAC LLC) entered into an Order to resolve the violations. The Order stipulated that within one hundred and twenty days of the Effective Date of the Order, the Respondent shall remove and dispose of all waste material and/or product from the facility. On February 3, 2010, Baycote representatives estimated that 50,799 gallons of waste remained on Site.

**2. Potential for continued State/local response**

No other Local, State, or Federal agency was in the position or had the resources to mitigate the threat of release. In a letter, dated November 21, 2011, Marc F. Nelson of the

St. Joseph County Health Department requested assistance from the U.S. EPA.

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

The current conditions remaining at the Baycote Metal Finishing 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:

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

The Site is located in an industrial and residential area. During the site assessment, it was noted that the Site borders industrial properties to the north, east, and south and Industrial Drive and industrial properties to the west. Residential properties are also located nearby, approximately 700 feet to the west. Seven churches and two schools are located within 1.0 mile of the Site. The St. Joseph River, a major surface water body that terminates in Lake Michigan, is located 0.85 mile northwest of the Site.

During the site assessment, it was noted that the Site is fenced on the north, east, and south sides but not along the west side next to Industrial Drive. Access to the building appeared to be restricted. A section of roof in the Wastewater Treatment Room had collapsed, exposing the room and its contents to weather. Water flooded the floor in the Line 4-7 Room. Abandoned and unknown waste in vats, pits, tanks, drums and containers was located throughout the building. Many vats, pits, tanks and containers were open with contents exposed. Animal prints were observed in material piles on the building floor. Incompatible materials were observed stored next to each other in the Solids Room. Several drums were corroded and leaking onto the floor. Evidence of previous spills was noted in the Solids Room and Line 4-7 Room. Based on these conditions, nearby populations and the environment could be exposed to potentially hazardous materials if contaminants migrate off site.

Analytical results from the Site Assessment indicate that hazardous substances as defined by CERCLA § 101(14), pollutants, and contaminants are present at the Site and represent an actual or potential threat to nearby human populations. These include toxic, ignitable, corrosive, and reactive materials. Analytical results from liquid sample BMF-WL02-121211 documented reactive cyanide and total cyanide at concentrations of 8,000 and 15,000 milligrams per liter (mg/L), respectively. The analytical results from liquid sample BMF-WL05-121211 documented reactive cyanide and total cyanide at concentrations of 140 and 30,000 mg/L, respectively. Analytical results from solid samples BMF-WS-02-121211, BMF-WS-03-121211, and BMF-WS-04-121211 documented chromium concentrations of 20,000, 420, and 300 mg/L, respectively. Analytical results from solid sample BMF-WS01-121211 documented a cadmium concentration of 83 mg/L. Analytical results from liquid samples BMF-WL04-121211, BMF-WL07-121211, BMF-WL10-121211, and solid sample BMF-WS02-121211 documented pH values of less than 2.

Cyanide

Exposure to small amounts of cyanide can be deadly regardless of the route of exposure. The severity of the harmful effects depends in part on the form of cyanide. Exposure to high levels of cyanide for a short time harms the brain and heart and can even cause coma and death. Cyanide produces toxic effects at levels of 0.05 milligrams of cyanide per deciliter of blood (mg/dL) or higher, and deaths have occurred at levels of 0.3 mg/dL and higher. Individuals who have inhaled 546 parts per million (ppm) of hydrogen cyanide have died after a 10-minute exposure; 110 ppm of hydrogen cyanide was life-threatening after a 1-hour exposure. Ingestion of small amounts of cyanide compounds in a short time may result in death unless antidote therapy is given quickly. Some of the first indications of cyanide poisoning are rapid, deep breathing and shortness of breath, followed by convulsions (seizures) and loss of consciousness. These symptoms can occur rapidly, depending on the amount eaten. The health effects of large amounts of cyanide are similar, whether ingested or inhaled; cyanide uptake into the body through the skin is slower than these other types of exposure. Skin contact with hydrogen cyanide or cyanide salts can irritate and produce sores. Workers who inhaled hydrogen cyanide as low as 6-10 ppm over a period of time developed breathing difficulties, chest pain, vomiting, blood changes, headaches, and enlargement of the thyroid gland. [Agency for Toxic Substances and Disease Registry (ATSDR), 2006]

#### Chromium / Hexavalent Chromium

Inhalation of 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. Chromium (VI) is more toxic to humans and therefore causes these effects at much lower concentrations 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. The Department of Health and Human Services (DHHS), the International Agency for Research on Cancer (IARC), and the U.S. EPA have determined that chromium (VI) compounds are known human carcinogens. Inhalation of chromium (VI) has been shown to cause lung cancer in both humans and animals. An increase in stomach tumors was observed in humans and animals exposed to chromium (VI) in drinking water. (ATSDR, 2008)

#### Cadmium

Breathing high levels of cadmium can severely damage the lungs. Eating food or drinking water with very high levels severely irritates the stomach, leading to vomiting and diarrhea. Long-term exposure to lower levels of cadmium in air, food, or water leads to a buildup of cadmium in the kidneys and possible kidney disease. Other long-term effects are lung damage and fragile bones. A few studies in animals indicate that younger animals absorb more cadmium than adults. Animal studies also indicate that the young are more susceptible than adults to a loss of bone and decreased bone strength from exposure to cadmium. (ATSDR, 2008)

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

The Site contains over 332 drums, totes, vats, and miscellaneous containers and several

spill areas. During the site assessment, some drums were in poor condition and open, and incompatible materials were observed stored next to each other. Several drums were corroded and leaking onto the floor. Containers identified during the site assessment contain various materials, including the following: zinc cyanide solution, chloride zinc acid, yellow chromate, acid copper bath, black hexavalent chromate postdip, sulfuric acid, hydrochloric acid, and unlabeled and unidentified materials.

A release of materials from the Site is possible because of the potential for trespassing and impacts from stormwater. Trespassers could cause a direct release of contaminants and subsequent dispersion of airborne contamination. During the site assessment, a collapsed roof in the Wastewater Treatment Room and large amounts of standing water on the floor of the Line 4-7 Room were observed. Public areas near the Site could be exposed to potentially hazardous materials if contaminants migrate off site.

Laboratory results documented that sampled materials were characteristic for hazardous waste, including toxic, ignitable, corrosive, and reactive waste streams. Many of the vats, pits, tanks, drums and containers were in deteriorating condition and open to the atmosphere. There is a very high potential of a release of hazardous substances from drums, and other bulk storage containers.

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

Mishawaka receives an average yearly precipitation of 36.59 inches. The average temperatures range from 11 to 86 °F. The Site ground surface is relatively flat. During the site assessment, no storm or sanitary sewers or drainage ditches were observed on or around the Site. However, the collapsed roof in the Wastewater Treatment Room and large amounts of standing water on the floor of the Line 4-7 Room were observed. In addition, some drums and containers were in poor condition and open, with visible evidence of past spills. Due to the structural condition of the building and presence of containers in poor condition or open, a weather related release or migration of hazardous materials is possible.

**Threat of fire or explosion.**

Analytical results from the Site Assessment indicate that one sample had a Flashpoint less than 32 °F, which meets the definition of a characteristic hazardous waste for ignitability. Therefore, the potential for a fire/explosion exists. Approximately 10,000 people live within 1 mile of the Site. If an event occurs, contaminants could become airborne and may affect the nearby population.

**The availability of other appropriate federal or state response mechanisms to respond to the release.**

On November 21, 2011, SJCHD requested assistance from U.S. EPA to secure hazardous waste left at the Site.

#### **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 description**

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

- i. Develop and implement a Site Health and Safety Plan and Site Security Plan;
- ii. Develop and implement a Site Work Plan, a Sampling Plan, Air Monitoring Plan and a Site Emergency Contingency Plan;
- iii. Inventory and perform hazard categorization on substances contained in vats, pits, drums, and other containers;
- iv. Perform sampling and analysis to determine disposal options;
- v. Consolidate and package hazardous substances, pollutants, and contaminants for transportation and off-site disposal;
- vi. Dismantle and decontaminate process equipment and building components associated with the plating areas, as necessary;
- vii. Transport and dispose of all characterized or identified hazardous substances, pollutants, or contaminants to a RCRA/CERCLA-approved disposal facility in accordance with U.S. EPA Off-Site Rule (40 CFR § 300.440); and
- viii. Take any other response actions to address any release or threatened release of a hazardous substance, pollutant and 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. Elimination of all threats presented by hazardous substances in the buildings is, however, expected to minimize the need for post-removal Site control.

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

Detailed cleanup contractor costs are presented in Attachment I.

**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 January 25, 2012, an e-mail was sent to Gabrielle Hauer of Indiana Department of Environmental Management asking for any State of Indiana ARARs which may apply.

**5. Project Schedule**

The estimated costs to complete the activities outlines above are summarized below. These activities will require an estimated 160 on-site working days to complete.

**B. Estimated Costs**

REMOVAL ACTION PROJECT CEILING ESTIMATE	
<b><u>Extramural Costs:</u></b>	
<b><u>Regional Removal Allowance Costs:</u></b>	
Total Cleanup Contractor Costs (This cost category includes estimates for ERRS, subcontractors, Notices to Proceed, and Interagency Agreements with Other Federal Agencies. Include a 10-20% contingency)	\$1,360,022
<b><u>Other Extramural Costs Not Funded from the Regional Allowance:</u></b>	
Total START, including multiplier costs	\$269,120
Subtotal Extramural Costs	\$1,629,142
Extramural Costs Contingency (20% of Subtotal, Extramural Costs rounded to nearest thousand)	\$325,828
<b>TOTAL REMOVAL ACTION PROJECT CEILING</b>	<b>\$1,954,970</b>

**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.

## VIII. ENFORCEMENT

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 \$3,453,263.<sup>1</sup>

$$(\$1,954,970 + \$166,720) + (62.76\% \times \$2,121,690) = \$3,453,263$$

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

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<sup>1</sup> 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 August 1, 2011. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

## IX. RECOMMENDATION

This decision document represents the selected removal action for the Baycote Metal Finishing Site, Mishawaka, St. Joseph County, Indiana, 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 4). 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 \$1,954,970 of which an estimated \$1,685,851 may be used for cleanup contractor costs. You may indicate your approval by signing below.

Approve: Richard C. Kel 2-23-12  
Director, Superfund Division Date

Disapprove: \_\_\_\_\_  
Director, Superfund Division Date

### Enforcement Addendum

#### Figures:

- A-1 Site Location Map
- A-2 Site Layout Map
- A-3 Sampling Location Map

#### Tables:

- B-1 Laboratory Analytical Results

#### Attachments:

1. Environmental Justice Analysis
2. Photograph Log
3. Detailed Cleanup Contractor Cost Estimate
4. Independent Government Cost Estimate
5. Administrative Record Index

cc: S. Fielding, U.S. EPA 5104A  
V. Darby, U.S. Department of Interior, **w/o Enf. Addendum**  
H. Atkinson, IDEM, **w/o Enf. Addendum**  
G. Hauer, IDEM, **w/o Enf. Addendum**  
J. Lankowicz, SJCHD, **w/o Enf. Addendum**

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**ENFORCEMENT CONFIDENTIAL ADDENDUM**

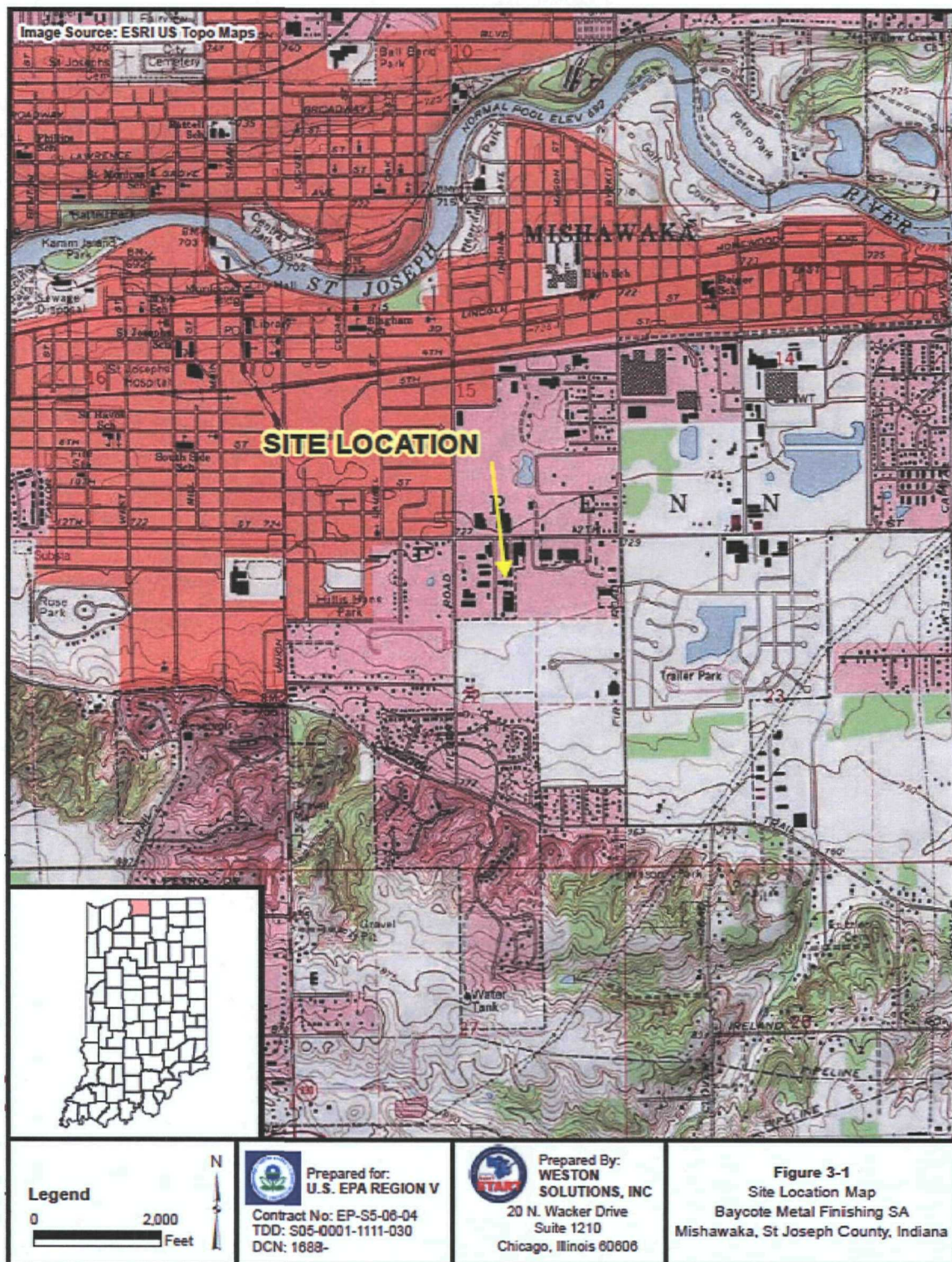
**BAYCOTE METAL FINISHING SITE  
MISHAWAKA, ST. JOSEPH COUNTY, INDIANA**

**(REDACTED 4 PAGES)**

**ENFORCEMENT CONFIDENTIAL  
NOT SUBJECT TO DISCOVERY**

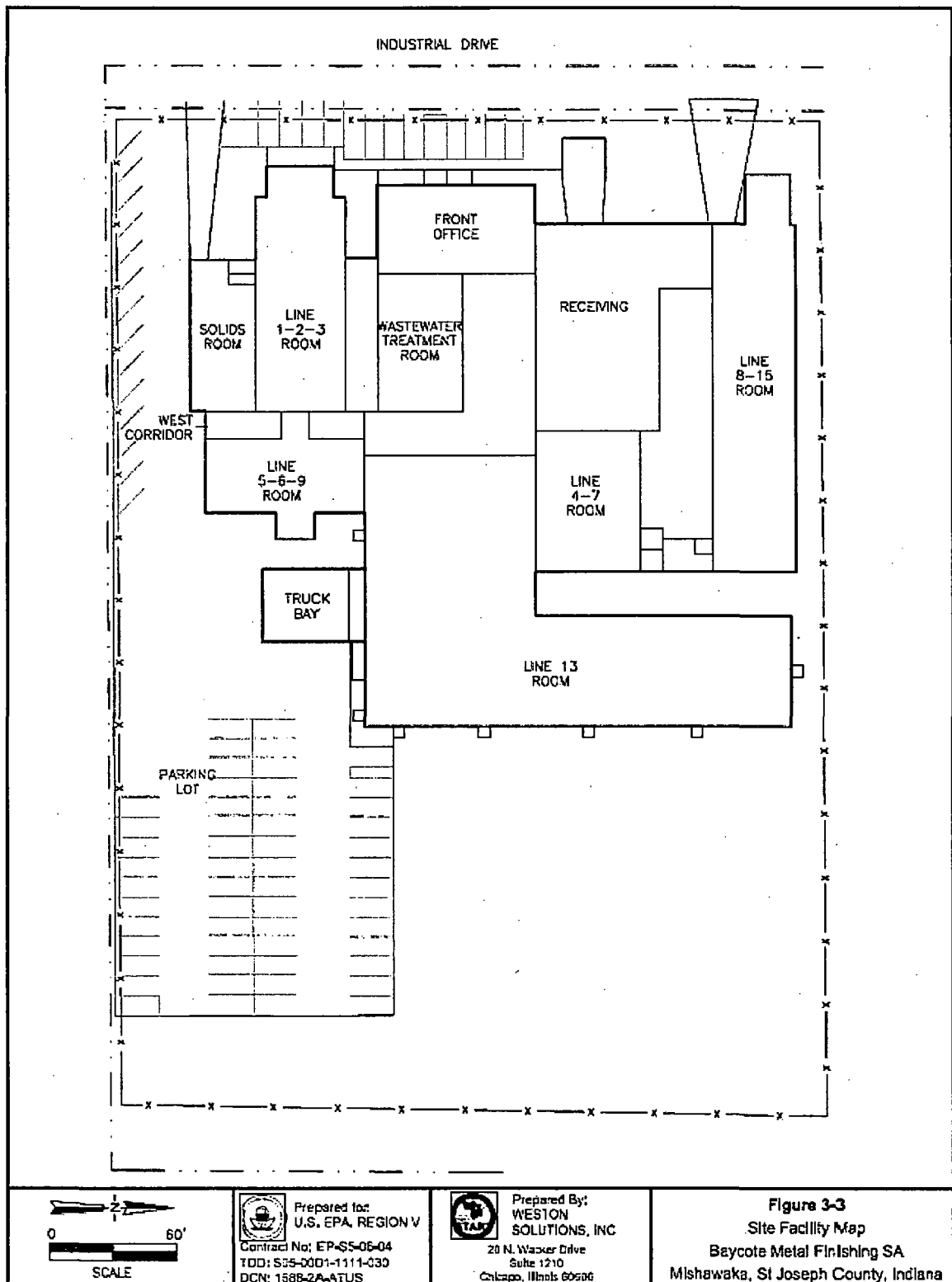


**FIGURE A-1**  
**SITE LOCATION MAP**

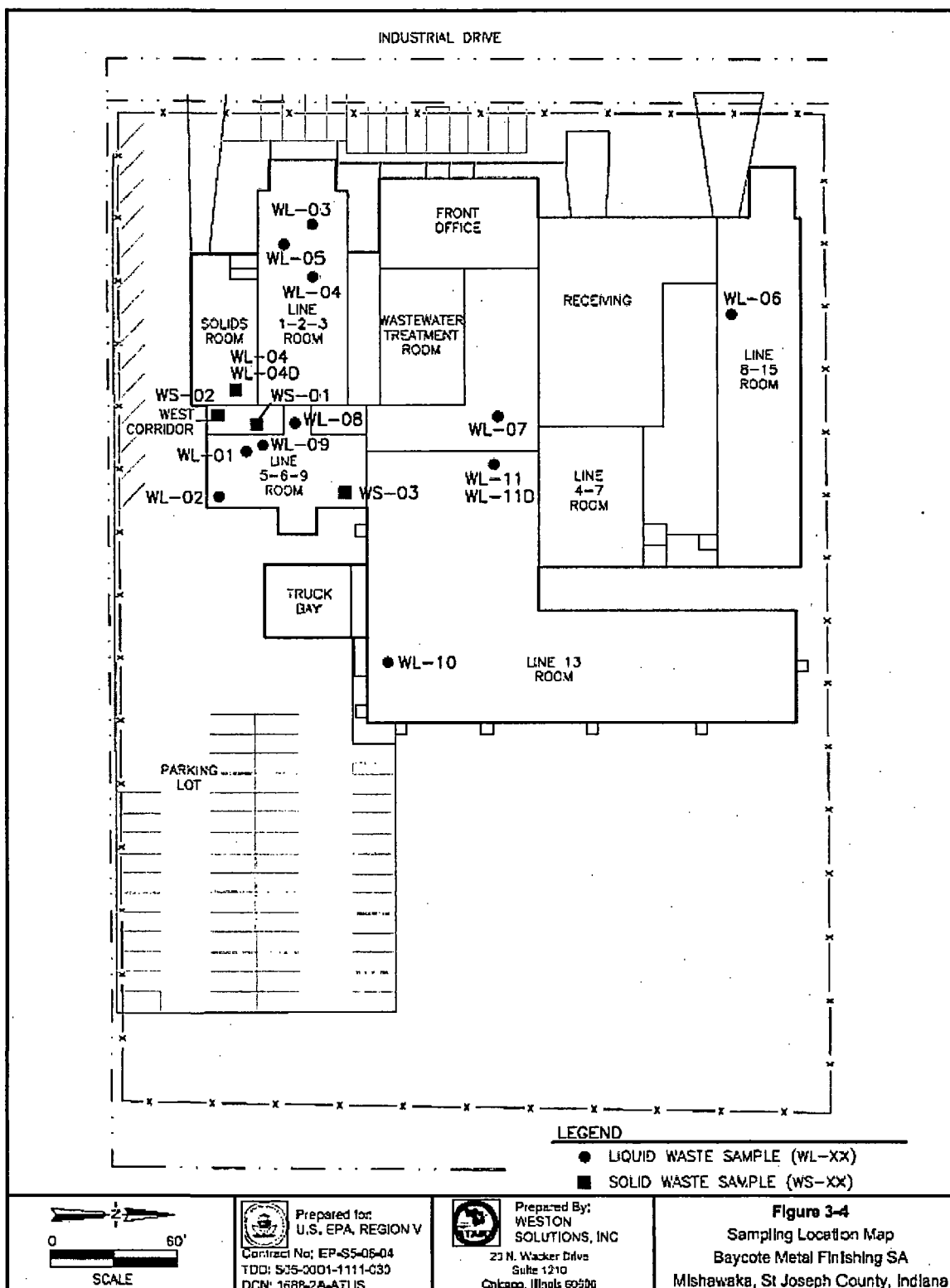




**FIGURE A-2**  
**SITE LAYOUT MAP**



**FIGURE A-3**  
**SAMPLING LOCATION MAP**



**TABLE B-1**  
**LABORATORY ANALYTICAL RESULTS**

Parameter	Unit	Regulatory Limit	Sample Designation					
			BMF-WL-01-121211	BMF-WL-02-121211	BMF-WL-03-121211	BMF-WL-04-121211	BMF-WL-05-121211	BMF-WL-06-121211
pH	SU	≤2 or ≥ 12.5	10.6	12.1	2.4	<2	11.2	8
Flashpoint	°F	<140	>212	>212	>212	>212	>212	>212
Reactive Cyanide	mg/L	NA	1 U	8,000	1 U	NA	140	1 U
Total Cyanide	mg/L	NA	4.5	15,000	73	NA	30,000	0.25 U

Parameter	Unit	Regulatory Limit	Sample Designation				
			BMF-WL-07-121211	BMF-WL-08-121211	BMF-WL-09-121211	BMF-WL-10-121211	BMF-WL-11-121211
pH	SU	≤2 or ≥ 12.5	<2	4.7	NA	<2	6.9
Flashpoint	°F	<140	>212	<32	>212	>212	NA
Reactive Cyanide	mg/L	NA	NA	NA	NA	NA	1 U
Total Cyanide	mg/L	NA	NA	NA	NA	NA	0.45

Notes:

SU =Standard Units

°F =Degrees Fahrenheit

mg/L =Milligrams per liter

NA =Not Analyzed or not applicable

U =Not detected; the associated numerical value is the reporting limit

Regulatory limit refers to 40 CFR Part 261, Subpart C.

Bold results indicate samples above regulatory limits.

TABLE B-1 (continued)

## LABORATORY ANALYTICAL RESULTS

Parameter	Unit	Regulatory Limit	Sample Designation			
			BMF-WS-01-121211	BMF-WS-02-121211	BMF-WS-03-121211	BMF-WS-04-121211
pH	SU	$\leq 2$ or $\geq 12.5$	8.8	<2	3.2	6.9
Flashpoint	°F	<140	>212	>212	>212	>212
Reactive Cyanide	mg/L	NA	5 U	NA	5 U	NA
Total Cyanide	mg/L	NA	1.3 U	1.3 U	27	170
<b>TCLP RCRA Metals</b>						
Arsenic	mg/L	5	0.2 U	50 U	0.5 U	0.5 U
Barium	mg/L	100	10 U	2,500 U	25 U	25 U
Cadmium	mg/L	1	<b>83</b>	25 U	0.25 U	0.29 U
Chromium	mg/L	5	0.2 U	<b>20,000</b>	<b>420</b>	<b>300</b>
Lead	mg/L	5	0.25	25 U	0.25 U	0.25 U
Mercury	mg/L	0.2	0.0012 U	0.0012 U	0.25 U	0.25 U
Selenium	mg/L	1	0.2 U	50 U	0.5 U	0.5 U
Silver	mg/L	5	0.2 U	50 U	0.5 U	0.5 U

## Notes:

SU =Standard Units

°F =Degrees Fahrenheit

mg/L =Milligram per liter

TCLP =Toxicity Characteristic Leaching Procedure

RCRA = Resource Conservation and Recovery Act

NA =Not Analyzed or not applicable

U =Not detected; the associated numerical value is the reporting limit

Regulatory limit refers to 40 CFR Part 261, Subpart C.

Bold results indicate samples above regulatory limits.

## ATTACHMENT 1

### ENVIRONMENTAL JUSTICE ANALYSIS BAYCOTE METAL FINISHING SITE MISHAWAKA, ST. JOSEPH COUNTY, INDIANA January 2012

The area surrounding the Baycote Metal Finishing Site was screened for Environmental Justice (EJ) concerns using Region 5's EJ assist Tool (which applies the interim version of the national EJ strategic Enforcement Assessment Tool (EJSEAT)). Census tracts with a score of 1, 2, or 3 are considered to be high-priority potential EJ areas of concern according to U.S. EPA Region 5. The Cassilly Street Mercury Site is in a census tract with a score of 6. Therefore, Region 5 does not consider this to be a high-priority potential EJ area of concern.

**Baycote Metal Finishing** Map Showing EJ SEAT Values For Surrounding Area



**ATTACHMENT 2**

**PHOTOGRAPH LOG  
BAYCOTE METAL FINISHING SITE  
MISHAWAKA, ST. JOSEPH COUNTY, INDIANA**



**Site:** Baycote Metal Finishing Site  
**Photograph No.:** 1  
**Direction:** North  
**Subject:** Plating line in Line 1-2-3 Room

**Date:** 12/13/11  
**Photographer:** Jonathan Colomb



**Site:** Baycote Metal Finishing Site  
**Photograph No.:** 2  
**Direction:** East  
**Subject:** 350-Gallon poly tote containing suspected cyanide liquid waste

**Date:** 12/13/11  
**Photographer:** Jonathan Colomb





**Site:** Baycote Metal Finishing Site  
**Photograph No.:** 3  
**Direction:** North  
**Subject:** 30-gallon steel drum of sodium cyanide

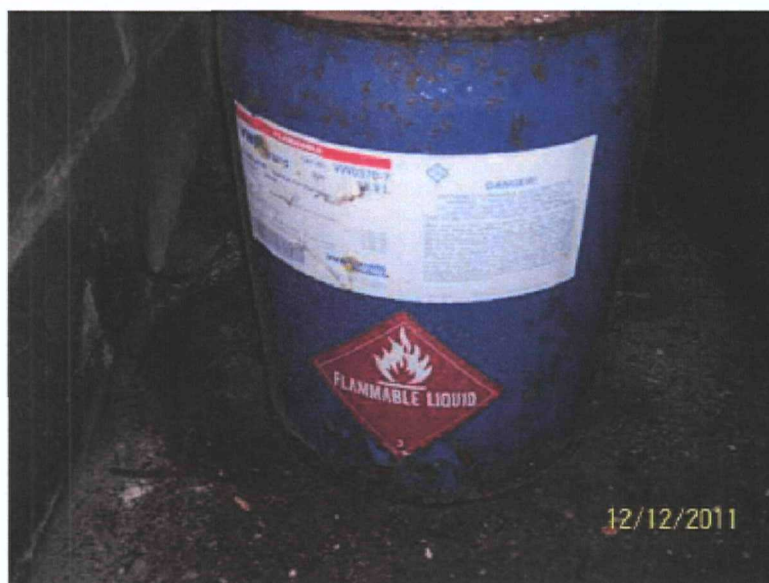
**Date:** 12/12/11  
**Photographer:** Jonathan Colomb



**Site:** Baycote Metal Finishing Site  
**Photograph No.:** 4  
**Direction:** East  
**Subject:** Vat labeled "Line 15 Black Hexavalent Chromate Postdip"

**Date:** 12/12/11  
**Photographer:** Jonathan Colomb





**Site:** Baycote Metal Finishing Site

**Photograph No.:** 5

**Date:** 12/12/11

**Direction:** West

**Photographer:** Jonathan Colomb

**Subject:** 5-gallon container of flammable liquid (sample BMF-WL08-121211)



**Site:** Baycote Metal Finishing Site

**Photograph No.:** 6

**Date:** 12/12/11

**Direction:** North

**Photographer:** Jonathan Colomb

**Subject:** Corroded steel drum stacked on broken pallet



Site: Baycote Metal Finishing Site

Photograph No.: 7

Direction: Southeast

Subject: Yellow powder observed on floor of Solids Room

Date: 12/12/11

Photographer: Jonathan Colomb



Site: Baycote Metal Finishing Site

Photograph No.: 8

Direction: Southeast

Subject: Sample taken from yellow powder (BMF-WS04-121211)

Date: 12/12/11

Photographer: Jonathan Colomb





Site: Baycote Metal Finishing Site

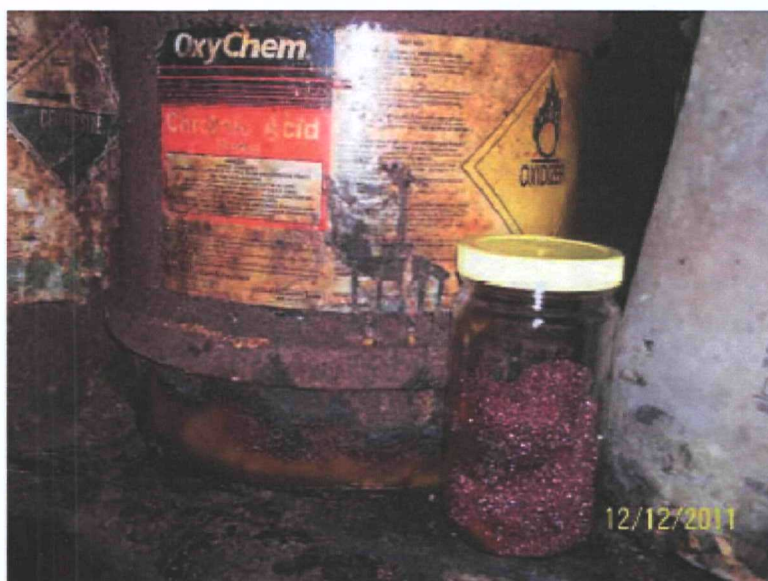
Photograph No.: 9

Direction: East

Subject: Deteriorated chromic acid drum in Solids Room

Date: 12/12/11

Photographer: Jonathan Colomb



Site: Baycote Metal Finishing Site

Photograph No.: 10

Direction: East

Subject: Sample taken from drum labeled "Chromic Acid" (BMF-WS02-121211)

Date: 12/12/11

Photographer: Jonathan Colomb

### ATTACHMENT 3

#### DETAILED CLEANUP CONTRACTOR COST ESTIMATE BAYCOTE METAL FINISHING SITE MISHAWAKA, ST. JOSEPH COUNTY, INDIANA

The estimated cleanup contractor (ERRS) costs are necessary to complete the removal action at the Baycote Metal Finishing Site are as follows:

Personnel Costs	\$743,634
Transportation and Disposal	\$253,728
Other Field Costs	\$135,990
Total	\$1,133,352
Plus 20% Contingency	\$226,670
<b>Total ERRS Contractor Costs</b>	<b>\$1,360,022</b>

**ATTACHMENT 4**

**INDEPENDENT GOVERNMENT COST ESTIMATE**

**BAYCOTE METAL FINISHING SITE  
MISHAWAKA, ST. JOSEPH COUNTY, INDIANA**

**(REDACTED 3 PAGES)**

**NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION**

## ATTACHMENT 5

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

#### ADMINISTRATIVE RECORD FOR BAYCOTE METAL FINISHING SITE MISHAWAKA, ST. JOSEPH COUNTY, INDIANA

ORIGINAL  
FEBRUARY 22, 2012

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	07/00/06	ATSDR	File	ToxFAQs Sheet for Cyanide CAS# 74-90-8, 143-33-9, 151-50-8, 592-01-8, 544-92-3, 544-92-3, 506-61-6, 460-19-5, 506-77-4	
2	09/00/08	ATSDR	File	ToxFAQs Sheet for Chromium CAS# 7440-43-9	
3	09/00/08	ATSDR	File	ToxFAQs Sheet for Cadmium CAS# 7440-47-3	
4	10/21/09	Kizer, B., IDEM	Hennessy, J., U.S. EPA	Letter re: Adoption of Agreed Order, Commissioner, IDEM v. TJAC LLC, d.b.a. Baycote Metal Finishing Case No. 2008-18035-H W/Attached Order	
5	02/15/10	Howard, J., IDEM	Smith, B., Baycote Metal Finishing	Letter re: Summary Letter for February 4, 2010 In- spection of Baycote Metal Finishing Facility w/Attached Report	
6	11/21/11	Nelson, M., St. Joseph County Health Dept.	Gebien, C., U.S. EPA	Letter re: Request for U.S. EPA Assistance with Unsecured Hazardous Waste at the Abandoned Baycote Facility	
7	01/25/12	Atkociunas, P., U.S. EPA	Hauer, G., IDEM	Letter re: Request for IDEM to Identify any ARARs for the Baycote Metal Finishing Site	
8	00/00/00	Weston Solutions	Atkociunas, P., U.S. EPA	Site Assessment Report for the Baycote Metal Site (PENDING)	

9      00/00/00      .Atkociunas, P.,      Karl, R.,  
                         U.S. EPA              U.S. EPA

Action Memorandum:  
Request for Approval and  
Funding for a Time-Critical  
Removal Action at the  
Baycote Metal Finishing  
Site (PENDING)