United States Environmental Protection Agency
Region IV
POLLUTION REPORT

Date: Friday, October 15, 2004
From: Art Smith

Subject: POLREP Number 4 and FINAL
Universal Plating
135 Industrial Road, Morganfield, KY

POLREP No.:	4	**Site #:**	A4FM
Reporting Period:	Sept. 8-Sept. 18	**D.O. #:**	0204-F4-026
Start Date:	6/9/2004	**Response Authority:**	CERCLA
Mob Date:	6/10/2004	**Response Type:**	Time-Critical
Demob Date:	9/18/2004	**NPL Status:**	Non NPL
Completion Date:	9/18/2004	**Incident Category:**	Removal Action
CERCLIS ID #:	A4FM	**Contract #**	68-S4-0204
RCRIS ID #:			

Site Description
Universal Plating is located at 135 Industrial Road in Morganfield, KY, and operated a custom electroplating and powder coating business from the late 1990s until October 2002.

In April, 2004, the Kentucky Department for Environmental Protection (KYDEP) conducted an initial investigation of the facility. The building was found to be locked, unoccupied, and abandoned. The inspection report noted the presence of numerous tanks and other open containers of suspected plating solutions and a "significant acrid/sulfuric acid" odor emanating from a building opening.

On June 8, 2004, the OSC and the Region 4 Superfund Technical Assessment and Response Team (START) accompanied KYDEP Superfund Branch personnel and conducted a removal site evaluation (RSE) pursuant to Section 300.410 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The OSC noted that the site was abandoned and detected the odor of acid fumes in areas outside the plating building. Once inside, the investigation team documented the presence of suspected plating solutions in over 20 open tanks inside the building. Two of the tanks were labeled "muriatic acid", and had a measured pH of less than 2. Based on the previous detection of odors by the OSC in areas outside of the building, a direct reading instrument was deployed and evidence of acid gases was detected within the fan housing exiting the building, verifying that an airborne release into the environment is ongoing. Further investigation was halted at this point, and the RSE was concluded by the OSC.

On June 9, 2004, the OSC issued a verbal Task Order to the Emergency and Rapid Response Services (ERRS) contractor (CMC, Inc.) for purposes of stabilizing immediate hazards at the Site. On June 10, 2004, work was performed to cover all open containers and to secure the building. All parties demobilized the Site on June 10.

EPA and it's contractors re-mobilized to the site on July 26, 2004 to complete the initial phase of the removal action. Activities included hazard characterization for wastestream identification of plating baths and other miscellaneous chemicals found throughout the building. Field compatibility testing was performed and test bulking schemes were prepared. The primary wastestream is over 14,000 galllons of an acid liquid with a pH of less than 1.0 units. A cyanide liquid wastestream of up to 3,500 gallons and up to 6 tons of a caustic solid wastestream (pH 12) will require disposal/treatment at an off-site facility. After samples of liquid, solids, and soils were sent to an offsite lab for analyses, all parties demobilized the Site on July 28.

On August 22, EPA and its contractors re-mobilized to the facility to begin Phase 2 of the time-critical removal action. From August 23-Sept. 3, ERRS contractors intiated bulking of liquid and soild hazardous wastes, and waste disposal profiles were approved. EPA, START, and ERRS demobilized the site for the Labor Day holiday on September 3.

On September 7, 2004 EPA and its contractors re-mobilized to the facility to complete Phase 2 of the time-critical removal action. On September 8 and 9, ERRS contractors continued the bulking of liquid

waste streams from the chemical vats into the 5,000-gallon stainless steel reaction vessel. START performed downwind air monitoring for chlorine and hydrogen cyanide; air monitoring did not produce any significant readings. In addition, crews decontaminated and staged empty chemical vats.

On September 10, 2004 ERRS contractors bulked liquid cyanide waste streams from the chemical vats into poly tanks. START performed downwind air monitoring for hydrogen cyanide and chlorine gas; air monitoring did not produce any significant readings. In addition, crews decontaminated and staged empty chemical vats; and pumped liquid waste from the 5,000-gallon stainless steel vessel into a tanker truck for transportation to the appropriate disposal facility.

On September 11, 2004 ERRS contractors continued decontamination of the chemical vats and poly tanks; and dismantled concrete block containment area around the west plating deck area. Crews identified an additional sump area within the west plating deck containment area. Liquid waste in the sump was transferred into the 5,000-gallon reaction vessel and the sump was later filled with concrete.

On September 13, 2004 ERRS contractors completed the bulking of liquid waste; continued decontamination of the chemical vats and poly tanks; and continued dismantling the concrete block containment area around the west plating deck area.

On September 14, 15, and 16, 2004 ERRS contractors pumped liquid waste from the stainless steel reaction vessels and poly tanks into tanker trucks for transportation to the appropriate disposal facilities. START performed downwind air monitoring for hydrogen cyanide and chlorine gas; air monitoring did not produce any significant readings. In addition, crews decontaminated and staged emptied chemical vats; cleaned and cut poly tanks for disposal; and decontaminated building floors using a steam cleaner. START tested the pH of the floors, walls, and ceiling with pH paper and distilled water. Results indicated pH values ranging from 6 to 8. A pH value of 7 is considered neutral.

On September 17, 2004 ERRS contractors loaded the stainless steel reaction vessels onto a flatbed truck for transportation to the contractor's equipment yard. EPA and START demobilized from the site. On September 18, 2004, ERRS contractors demobilized from the site, marking the completion of the removal action.

Current Activities
None

Planned Removal Actions
None

Next Steps
None

Key Issues
The goal of the removal action was to restore the building to a condition where it could be re-used in a manner consistent with the past light industrial land use of the property. There was evidence of spillage on the floor beneath the plating decks in many locations throughout the building. There was also some corrosion of the concrete floor in one location. During the cleanup, an area where liquid wastes collected (a "sump") was found in the concrete floor under the former wood decking plating decks on the west side of the building.

However, in all areas where spillage was dicovered and liquids were found to have accumulated, there was no evidence of cracks which would have suggested a pathway to the ground beneath the building. Spillage on the floors, and all liquid wastes found in sumps were collected and disposed of with the spent plating solutions. All corroded surfaces were sealed with a new concrete patch. All building surfaces, including the floors, were pressure washed to remove any residue or film. Tests using pH paper applied to the wet surfaces after cleaning showed a pH of about 7 or neutral.

During the course of the removal action, EPA discovered 2 areas onsite where releases of hazardous substances to the environment were suspected. Surface soil samples were collected beneath a fan housing immediately adjacent to the east side of the former plating building, and surrounding a trailer parked to the south of the building. It appeared as if these were residues from mechanical activities (e.g., buffing/grinding and sandblasting) conducted in conjunction with the plating/powdercoating operations. The samples were composited together and analyzed for total metals. While results showed evidence of elevated concentrations of lead, nickel, and zinc above that which may be expected as

background levels, none of the analytes exceeded EPA's screening criteria for hazardous substances in soils via a direct contact exposure pathway. The results indicated concentrations of metals such as lead, nickel and zinc above background levels. These areas were scraped clean with an excavator to an extent where no visual evidence of the material remained. The soils were combined with other solid wastes generated during the removal action and disposed of at an approved offsite location.

Disposition of Wastes

Waste Stream	Quantity	Manifest #	Disposal Facility
acid liquids	4,500 gallons	20261	Envirite Of Ohio, Canton, OH
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acid liquids	4,950 gallons	20263	Envirite Of Ohio, Canton, OH
cyanide liquids	3,125 gallons	20264	EQ Detroit, Detroit, MI
Sodium Cyanide	85 gallon drum	20265	EQ Detroit, Detroit, MI
Poison Solids	5 tons	20266	EQ Michigan Disposal Waste Treatment Plant, Belleville MI
Non Haz Solid Waste Debris/PPE/Contaminated Soils	27.6 tons	UP001 through UP004	Republic Industries, Morganfield, KY