DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)
Current Human Exposures Under Control

Facility Name: **Federated Metals Corporation**
Facility Address: **150 St. Charles Street, Newark, New Jersey 07101**
Facility EPA ID#: **NJD079320495**

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no unacceptable human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all contamination subject to RCRA corrective action at or from the identified facility [i.e., site-wide]).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program, the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, (GPRA). The "Current Human Exposures Under Control" EIs are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

Duration / Applicability of EI Determinations

EI Determination status codes should remain in the RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

Facility Information

Federated Metals Corporation (Federated) is situated on approximately 13.2 acres in the primarily industrial Ironbound Section of Newark, New Jersey, and was originally known as the American Smelting and Refining Corporation/Federated Metal Division. Federated conducted operations at this site from 1943 to 1984. The facility manufactured metal alloys used in radiator manufacturing, including alloys of brass, copper, lead, tin, aluminum, zinc, and other white metals. Other products manufactured include magnesium, aluminum, and zinc cathode protection anodes used on steel structures. Buildings at the site formerly housed a chemical laboratory, shower/locker rooms, maintenance operations, ingot operations, receiving, and a furnace department (at which soil from hearth excavations was stockpiled prior to disposal). The property is currently leased to tenants engaged in a variety of commercial and light-industrial operations, including a recycling facility (paper, glass, and plastics), a freight distributor, a realtor, and a precision tool manufacturer. The property is managed by Bridgeview Management Company, Inc. (Bridgeview), which is located in Perth Amboy, New Jersey. The entire property is covered either by asphalt or buildings with the exception of a small landscaped area located along St. Charles Street. A Declaration of Environmental Restriction (DER) (now known as a Deed Notice) has been filed for the entire property and for the closed lagoon (SWMU 1) to ensure that the site remains non-residential and that the facility-wide asphalt cap is not disturbed. In addition, a groundwater classification exception area (CEA) has been developed to restrict groundwater use at the site and in potential areas where groundwater contamination may migrate.

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

   __X__ If yes - check here and continue with #2 below.

   _____ If no - re-evaluate existing data, or

   _____ If data are not available skip to #6 and enter IN (more information needed) status code

Summary of SWMUs and AOCs: Solid Waste Management Units (SWMU) and Areas of Conern (AOC) identified at the facility are described below. A Site Map is attached as Attachment 1.

SWMU 1, Surface Impoundment/Lagoon: This unit consisted of an unlined earthen settling pond on the eastern portion of the site that received emission control dust and sludge decant from secondary lead smelting (K069 listed waste). In addition, the lagoon received spent phosphoric acid quench water and storm water runoff. This unit was in operation from 1954 to 1983. In 1985, all liquids and sludges were removed from the lagoon, along with an additional 2.5 feet of soil from the lagoon bottom and one foot of soil from each of the sidewalls. Discharges to the lagoon resulted in soil and groundwater contamination of heavy metals. Groundwater has been regularly monitored for heavy metals since June 1985. This unit was closed with a cap on February 29, 2000. Ongoing groundwater monitoring is required pursuant to New Jersey Pollutant Discharge Elimination System (NJPDES) Permit No. NJ0099058 (which is the post-closure permit) and the facility's EPA-issued Hazardous and Solid Waste Amendment (HSWA) permit.

SWMU 2, Thermal Treatment Furnace/Incinerator: This unit was located in the Furnace Department Building in the central portion of the property. This unit was used to recover metals from waste materials. This unit ceased operations in 1984. No known contamination occurred from this unit. This unit was dismantled and closed, requiring no further action.

SWMU 3, Container Storage Area: This unit was located in the Ingot Building in the northern portion of the property, just south of the former Solid Waste Landfill (SWMU 4). This unit was used to store containers of cadmium oxide dust, as well as laboratory and baghouse wastes. This unit was closed in 1984 by removal of all material and physical decontamination of the concrete pad upon which containers were stored. This unit was certified as closed by NJDEP on April 30, 1993. No further action is required for this unit.

SWMU 4, Solid Waste Landfill: This unit is located in the most northern portion of the property and encompassed approximately 2.5 acres. The unlined landfill received magnesium slag waste

from reverb smelting operations, classified by the Bureau of Hazardous Waste Classification as non-hazardous industrial waste. This unit has been inactive since 1980, and NJDEP approved the associated closure and post-closure activity in December 1989. Historical disposal of waste in this landfill has resulted in contamination of soil and groundwater by several heavy metals. A groundwater monitoring program has been in place since June 1985 to monitor metals levels in groundwater.

AOC A, Low Level PCB Area: This AOC consisted of a staging area by the former Chemical Laboratory Building. According to the Final Clean-Up Report, necessary remedial activities were conducted in this area in 1990, and no further action is required.

AOC B, Bulk Oil Impoundment: This AOC consisted of a tank area on the eastern portion of the site where approximately 300,000 gallons of No. 2 fuel oil were stored. According to the Final Clean-Up Report, impacted soil was removed from this area, and the AOC was decommissioned in the 1980s. No further action is required.

AOC C, Light Oil Impoundment: This AOC was located in the central portion of the site, south of the former container storage area (SWMU 3), and contained a tank area where approximately 36,000 gallons of No. 2 fuel oil were stored. According to the Final Clean-Up Report from January 1994, this area was decommissioned and confirmation samples were collected in 1990. Based on available analytical data, no further action is required for this AOC.

In summary, all SWMUs/AOCs at the Federated site, with the exception of SWMU 1 and 4, require no further action. SWMUs 1 and 4 are both inactive and closed units; however, past activities at these two units have impacted soil and groundwater at the site. Contaminated soils at the these two SWMUs have been mitigated by the installation of a facility-wide asphalt cap. Groundwater contamination associated with these two units is addressed by on-going groundwater monitoring required as part of the post-closure activities for both units under the Hazardous and Solid Waste Amendments (HSWA) Permit issues to the facility in 1995.

References:

(1) Letter from Daniel Chen, Princeton Aqua Science, to K. Savage, Federated Metals Corporation, Re: Soil Analysis in "Baseball Diamond" slag area - March 20, 1984.
(2) Preliminary Assessment/Visual Site Inspection Report, prepared by EPA- April 1986.
(3) Walk Through Inspection Report, prepared by NJDEP - July 14, 1986.
(4) Letter form Ernest Kuhlwein, NJDEP, to Barry Harris, Federated Metals Corporation, Re: Closure Certification Approval on Storage of Hazardous Waste in Containers - April 30, 1997.
(5) Letter from Kenneth Siet, NJDEP, to Barry Tornick, EPA, Re: Lagoon Closure - August 26, 1988.
(6) Final Clean-Up Report, prepared by JMZ Geology - January 1994.
(7) Letter from Thomas Spiesman, Porzio, Bromberg & Newman, to Bennett Barnes, NJDEP, Re: Revised Draft Declaration of Environmental Restrictions - August 31, 1994.
(8) Statement of Basis/Fact Sheet, prepared by EPA - September 25, 1995.

(9) Letter from Stephen Maybury, NJDEP, to Thomas Speisman, Porzio, Bromberg & Newman, Re: Review of Final Remedial Action Report - May 1, 1997.

(10) Letter from Theresa Pagodin, NJDEP, to Joel Golumbek, USEPA, Re: O&M Report for Federated Metals Corp., Newark, Essex County - June 10, 1997.

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be "**contaminated**"[1] above appropriately protective risk-based levels (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

Media	**Yes**	**No**	**?**	**Rationale/Key Contaminants**
Groundwater	X			Heavy metals
Air (indoors)[2]		X		
Surface Soil (e.g., <2 ft)	X			Heavy metals, base neutral compounds, PHC
Surface Water		X		
Sediment		X		
Subsurface Soil (e.g., >2 ft)	X			Heavy metals, base neutral compounds, PHC
Air (Outdoors)		X		

_____ If no (for all media) - skip to #6, and enter YE, status code after providing or citing appropriate levels, and referencing sufficient supporting documentation demonstrating that these levels are not exceeded.

__X__ If yes (for any media) - continue after identifying key contaminants in each contaminated medium, citing appropriate levels (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

_____ If unknown (for any media) - skip to #6 and enter IN status code.

Rationale:

Groundwater: Available documentation indicates that groundwater beneath the site has been impacted by heavy metals associated with on-site activities, and chloride due to salt water

---

[1] "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

[2] Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

intrusion. On-site source areas contributing to groundwater contamination include SWMUs 1 and 4. However, numerous off-site potential and known sources of contamination also exist in the area of the site. Analytical data obtained during groundwater monitoring efforts from April 1993 to April 2000 show levels of six monitored inorganic parameters in groundwater above the NJDEP Class IIA Groundwater Quality Criteria (GWQC): arsenic, cadmium, fluoride, lead, selenium, and zinc concentrations.

In addition, several wells showed elevated gross beta levels during routine monitoring conducted between 1991 and 1994, which suggested the potential for increased radioactivity beneath the pavement, enhanced radioactivity in building construction materials, or radioactivity from former or present processes at the site. However, these data were found to be related to the radioactive isotope K-40, which is found in all natural potassium and can also be associated with sea water intrusion or road salts used to de-ice roadways during the winter months.

Air (Indoors): The potential for indoor air problems results from the presence of volatile contaminants in the soil and groundwater underneath structures, which is subject to volatilization into enclosed spaces. Due to the nature of contamination in soil and groundwater at this facility (i.e., heavy metals), exposure to indoor air contamination is not a concern at this facility.

Soils (surface and subsurface): Contaminated surface soil refers to concentrations of constituents that exceed NJDEP's Non-Residential Direct Contact Soil Cleanup Criteria (DCSC). The NJDEP Non-Residential DCSCs are used at this site because a DER precluding residential use has been established at this site to ensure the site remains industrial in the future. Contaminated subsurface soil refers to concentrations of constituents that exceed NJDEP's Impact to Ground Water Cleanup Criteria (DCSC).

Waste or contaminated soils at the site are associated with specific SWMUs as identified below.

> **SWMU 1, Surface Impoundment/Lagoon:** Surface and subsurface soil in this unit was contaminated with heavy metals (i.e., arsenic, barium, cadmium, lead, and selenium), base neutral compounds, and petroleum hydrocarbons above relevant NJ screening criteria. In 1985, two and one-half feet of soil was removed from the bottom of the lagoon and one foot from each side. Despite this removal, levels of heavy metals and petroleum hydrocarbons were still present above relevant NJ screening criteria in the lagoon area and in background samples.
>
> **SWMU 4, Solid Waste Landfill:** Wastes in this unit were classified as non-hazardous. However, sampling in this area detected elevated levels of heavy metals (i.e., arsenic, cadmium) and petroleum hydrocarbons above relevant NJ screening criteria.
>
> **Sitewide:** Historic investigations at this site have revealed a site-wide soil contamination problem. Facility documentation indicates that approximately 120,000 cubic yards of industrial fill material was brought to this site. The fill layer extends approximately ten feet below ground surface. Analysis of this fill material revealed the presence of

elevated concentrations of antimony, arsenic, beryllium, cadmium, copper, lead, zinc, base neutral compounds, and petroleum hydrocarbons. Additional analysis has shown a relative lack of contamination beneath the fill layer, therefore, migration of contaminants from the fill material to surrounding media is believed to be minimal.

Surface Water: Newark Bay is located approximately one mile east of the site. The Passaic River is located approximately one mile north of the site. Groundwater flow beneath the Federated site is to the northwest, towards the Newark Sewer Branch. Due to the distance of the surface water bodies from the site, contaminant mobility via surface runoff into these water bodies is not a concern. Discharge of contaminated groundwater to surface water also does not appear to be a concern due to the Newark Sewer Branch that runs approximately 330 feet to the northwest of this site. This sewer line was installed in the early 1990's and was constructed of brick, which is considered porous and leaky. Groundwater flow from either side of the sewer line has been determined to flow into the sewer line. Therefore, the sewer branch acts as a hydraulic sinck, captureing contaminants migrating from the site and preventing the migration of contaminants towards surface water bodies. In addition, numerous documented off-site potential and known sources of groundwater contamination exist in the area of the site, including upgradient industrial sources and major transportation routes that are adjacent to the facility. (Reference No. 9, p.10.)

Sediment: There has been no documented sediment contamination as a result of site-related activities at the Federated Metals facility.

Air (Outdoors): Due to the nature of contamination at the facility (i.e., heavy metals), and facility documentation indicating that all areas of exposed soil at the facility, with the exception of a small landscaped area located along St. Charles Street, have been covered with a facility-wide asphalt cap, outdoor air quality is not a concern at this facility.

References:

(1) Letter from Daniel Chen, Princeton Aqua Science, to K. Savage, Federated Metals Corporation, Re: Soil Analysis in "Baseball Diamond" slag area - March 20, 1984.
(2) Letter from Kenneth Siet, NJDEP, to Barry Tornick, EPA, Re: Lagoon Closure - August 26, 1988.
(3) Final Clean-Up Report, prepared by JMZ Geology - January 1994.
(4) Letter from J. Mark Zdepski, FMZ Geology, to Mike Kramer, EPA, Re: Area Groundwater Conditions - November 8, 1994.
(5) Statement of Basis/Fact Sheet, prepared by EPA - September 25, 1995.
(6) Letter from J. Mark Zdepski, FMZ Geology, to Mike Kramer, EPA, Re: NJPDES Permit Modification Request - January 16, 1996.
(7) Letter from Stephen Maybury, NJDEP, to Thomas Speisman, Porzio, Bromberg & Newman, Re: Review of Final Remedial Action Report - May 1, 1997.
(8) Letter from Theresa Pagodin, NJDEP, to Joel Golumbek, USEPA, Re: O&M Report for Federated Metals Corp., Newark, Essex County - June 10, 1997.

(9) Proposed Groundwater Classification Exception Area, prepared by JMZ Geology - March 26, 1999.

3. Are there **complete pathways** between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table
*Potential **Human Receptors** (Under Current Conditions)*

"Contaminated" Media	Residents	Workers	Day-Care	Construction	Trespasser	Recreation	Food[3]
~~Groundwater~~	~~No~~	~~No~~	~~No~~	~~No~~	~~--~~	~~--~~	~~No~~
Air (indoor)							
~~Surface Soil (e.g. < 2 ft)~~	~~No~~	~~No~~	~~No~~	~~No~~	~~No~~	~~No~~	~~No~~
Surface Water							
Sediment							
~~Subsurface Soil (e.g., > 2)~~	~~--~~	~~–~~	~~--~~	~~No~~	~~--~~	~~--~~	~~No~~
Air (outdoor)							

Instruction for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated" as identified in #2 above.

2. Enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces. These spaces instead have dashes ("--"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

__X__ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

____ If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

[3] Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.).

____ If unknown (for any “Contaminated” Media - Human Receptor combination) - skip to #6 and enter “IN” status code

Rationale:

Groundwater: As part of the NJDEP approved Cleanup Plan submitted by the facility on December 22, 1992, an asphalt cap was installed over all exposed areas of the site, with the exception of a small landscaped area along St. Charles Street, to prevent infiltration of fill materials into groundwater. Documentation indicates that regional groundwater quality in the vicinity of the facility is contaminated by numerous industrial sources and landfills to the degree that development of the groundwater as a viable potable water source is unlikely. Public water in the area is supplied by the City of Newark. Additionally, a groundwater Classification Exception Area (CEA) was established in 1999, which restricts groundwater use at the site and in potential areas where groundwater contamination may migrate. See Attachment 3 for the area subject to the CEA. During the CEA process a well search was conducted and found no records of any supply well within the designated CEA. In addition, the DER has been established to ensure that the site remains non-residential in the future. Annual groundwater monitoring and reporting is in place at the facility to monitor contaminant concentrations and migration from the areas of SWMU 1 and SWMU 4.

USEPA has determined, and documented, that the presence of contaminants (i.e., heavy metals) in groundwater at the site do not represent a potential threat to human health and the environment based on the fact that the groundwater in the Newark Meadows and the Ironbound Section of Newark is not a viable drinking water source. In addition, groundwater recovery is not a recommended option at the site due to the potential for salt water intrusion into the area from adjacent sources.

With respect to gross radiation from groundwater, an evaluation of the elevated Gross Beta levels in monitoring wells at the site was conducted in 1995 to determine if 1) the asphalt cover was adequate to protect humans from exposure to beta radiation, and 2) what was causing the beta radiation. The study concluded that the radiation levels at the site were marginally greater than natural background but could not result in an individual receiving an exposure greater than the limits established for the general public in 10 CFR 20 (100 mRem/yr). The study also concluded that the asphalt cap was adequate to shield exposures to beta radiation. Additionally, the cause of the elevated levels of Gross Beta activity was found to be the radioactive isotope K-40, which is found in all natural potassium. Based upon this study, human exposure to Gross Beta radiation at this site is not of concern.

Soils: Federated Metals installed an asphalt cap over the exposed soil areas at the site, with the exception of a small landscaped area along St. Charles Street. This asphalt cap is maintained by Bridgeview on a routine basis per the HSWA permit issued in 1995 and the NJDEP approved cleanup plan (Reference No. 4). In addition to capping the site, the DER was put into effect at this site on October 14, 1994, to ensure the site remains non-residential and that the asphalt cap is not disturbed without NJDEP notification to ensure that proper health and safety precautions are implemented. These actions reduce the potential for direct human exposures.

References:

(1) Final Clean-Up Report, prepared by JMZ Geology - January 1994.

(2) Letter from Thomas Spiesman, Porzio, Bromberg & Newman, to Bennett Barnes, NJDEP, Re: Revised Draft Declaration of Environmental Restrictions - August 31, 1994.

(3) Letter from J. Mark Zdepski, FMZ Geology, to Mike Kramer, EPA, Re: Area Groundwater Conditions - November 8, 1994.

(4) Statement of Basis/Fact Sheet, prepared by EPA - September 25, 1995.

(5) Letter from Stephen Maybury, NJDEP, to Thomas Speisman, Porzio, Bromberg & Newman, Re: Review of Final Remedial Action Report - May 1, 1997.

(6) Letter from Theresa Pagodin, NJDEP, to Joel Golumbek, USEPA, Re: O&M Report for Federated Metals Corp., Newark, Essex County - June 10, 1997.

(7) Proposed Groundwater Classification Exception Area Report, prepared by JMZ Geology - March 26, 1999.

(8) Letter from Linda Taylor, NJDEP, to Thomas Spiesman, Porzio, Bromberg & Newman., EPA, Re: Proposed Groundwater Classification Exception Area - June 28, 1999.

(9) Letter from Linda Taylor, NJDEP, to Thomas Spiesman, Esq., Porzio, Bromberg & Newman, Re: Groundwater Classification Exception Area Response Letter - October 18, 1999.

(10) Letter from Linda Taylor, NJDEP, to Thomas Spiesman, Esq., Porzio, Bromberg & Newman, Re: Inspection Results - February 24, 2000.

(11) Letter from Linda Taylor, NJDEP, to Clifford Ng, EPA, Re: Groundwater Classification Exception Area (CEA) - February 29, 2000.

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **significant**[4] (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks?

_____ If no (exposures cannot be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) - continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

Rationale and Reference(s):

This question is not applicable. See response to question #3.

[4] If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

5. Can the "significant" **exposures** (identified in #4) be shown to be within acceptable limits?

_____ If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

_____ If no (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

_____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s):

This question is not applicable. See response to question #3.

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

__X__ YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the former Federated Metals facility, EPA ID # NJD079320485, located at 150 Saint Charles Street, Newark, New Jersey, under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

____ NO - "Current Human Exposures" are NOT "Under Control."

____ IN - More information is needed to make a determination.

Completed by: _original signed by_____ Date: 09/27/00_____

Kristin McKenney
Risk Assessor
Booz Allen & Hamilton

Reviewed by: _original signed by_____ Date: 09/27/00_____

Kathy Rogovin
Sr. Risk Assessor
Booz Allen & Hamilton

_____ _original signed by_____ Date: 09/27/00_____

Clifford Ng, RPM
RCRA Programs Branch
EPA Region 2

_original signed by_____ Date: 09/27/00_____

Barry Tornick, Section Chief
RCRA Programs Branch
EPA Region 2

Approved by: _original signed by_____ Date: 09/28/00_____

Raymond Basso, Chief
RCRA Programs Branch
EPA Region 2

Locations where references may be found:

References reviewed to prepare this EI determination are identified after each response. Reference materials are available at the USEPA Region 2, RCRA Records Center, located at 290 Broadway, 15th Floor, New York, New York, and the New Jersey Department of Environmental Protection Office located at 401 East State Street, Records Center, 6th Floor, Trenton, New Jersey.

Contact telephone and e-mail numbers: Clifford Ng, EPA RPM
(212) 637-4113
ng.clifford@epa.gov

FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.

Attachments

The following attachments have been provided to support this EI determination.

Attachment 1 - Site Map

Attachment 2 - Summary of Media Impacts Table

Attachment 3 - CEA Boundary

Attachments truncated, see facility file (MSS, 06/13/02)